



**AGRICULTURAL EXTENSION SOCIETY OF NIGERIA (AESON)**  
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**Sub-Themes**

- A. New perspectives in the practice of agricultural extension
- B. Adaptive research and innovations in agriculture during emergencies
- C. Institutional adaptations during emergencies
- D. Farm husbandry adjustments during emergencies
- E. Financing agricultural extension during emergencies
- F. Health and safety issues in the practice of agricultural extension during emergencies
- G. ICTs and new media deployment in extension practice during emergencies
- H. Gender Issues in agricultural extension practice during emergencies

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(AESON)

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## Programme of Event

DATE/TIME	ACTIVITIES	RESPONSIBLE	VENUE	
Day 1 Monday, 26 <sup>th</sup> April, 2021	Arrival of NEC/LOC		Royal Greens, Ibara, Abeokuta	
DAY 2 Tuesday, 27 <sup>th</sup> April, 2021				
10.00 – 11.30	<b>Formal Opening Ceremony</b>		<b>Google meet</b>	
<b>Join:</b> <a href="https://meet.google.com/rz-xvrn-tbj">https://meet.google.com/rz-xvrn-tbj</a>	Introduction	AESON National Secretary		
	Welcome address	Chairman LOC		
	Opening remarks	AESON President		
	Lead Paper Presentation by <b>Engr. Frank S. Kudla, Director, Federal Department of Agricultural Extension</b>			
	Honorary Award presentation to: 1. Alhaji Mohammed Sabo Nanono, <i>Hon. Minister of Agriculture</i> 2. Engr. Frank S. Kudla, <i>Director, Federal Department of Agricultural Extension</i>		AESON President	
	Goodwill messages			
	Vote of thanks		AESON VP	
	Announcement	AESON National Secretary		
11:30am- 11:45am	TEA BREAK			
11.45am-1:45 pm	<b>FIRST TECHNICAL SESSION (A – F)</b>		<b>Google meet</b>	
A	<b>Chairman – Prof Prof Yusuf Idrisa</b> <b>Rapporteur – Dr Seye Ogunjimi</b>			
<b>Join:</b> <a href="https://meet.google.com/xf-tswx-pey">https://meet.google.com/xf-tswx-pey</a>	A1	Agricultural Extension And Advisory Services Amidst Covid-19 Pandemic in Nigeria: The Policy Options	Fadlullah Olayiwola Issa	
	A2	Alternative Approaches For Agricultural Extension Services Delivery During Conflict Situations in Benue and Nasarawa States, North-Central, Nigeria	Adzenga Jacobs Ior and Zumar Isah Sheshi	
	A3	Indian Agricultural Extension System: An Overview	Kareem, O.W. <sup>1</sup> , Adefalu, L.L. <sup>1</sup> , Daudu, A.K. <sup>1</sup> and Bello, O.G. <sup>2</sup>	
	A4	Contributions Of Extension Services To Farming Communities' Adaptation to Covid-19 Pandemic in Akwa Ibom State Ekanem, Jemimah Timothy and Umoh, Idongesit Michael	Ekanem, Jemimah Timothy and Umoh, Idongesit Michael	
	A5	Factors Influencing Training Needs of Agricultural Extension	<i>Sulaiman Umar,<sup>1</sup>Bashir G. Muktar,<sup>2</sup>ahmed G.</i>	

		Personnel: A Systematic Review	<i>Abdullahi,<sup>1</sup>abdulshakur M. Mahmud<sup>1&amp;3</sup>and Rasheed K. Olaifa<sup>4</sup></i>
	A6	Constraints to the Effectiveness of Training of Cassava Processors in Oriire Local Government Area of Oyo State, Nigeria	<i>Ojo, O. M.<sup>1</sup>, Oladosu, I. O.<sup>1</sup>, Alaka, F. A.<sup>2</sup>, Oyediran, W. O.<sup>3</sup>, And Adeniran, A. A<sup>4</sup></i>
	<b>Comments, Questions and Answers</b>		
B	<b>Chairman – Prof. Lawal-Adebowale Rapporteur – Dr Matthew Oose</b>		
Join: <a href="https://meet.google.com/xo-rfmp-drg">https://meet.google.com/xo-rfmp-drg</a>	B1	Self-Esteem of Agriculture Students in Conventional and Agriculture Based Universities In Southwestern, Nigeria	<i><sup>1</sup>Badiru Idris Olabode, <sup>1</sup>Oguntala Funmilola Omolola and <sup>2</sup>Sanusi Mohammed Kabiru</i>
	B2	Development Of Artisans' Fish Smoking Machine: Innovation in Agriculture	<i><sup>1</sup>Adesanya A. S., <sup>2</sup>Otufale G. A. and <sup>3</sup>Orenaiya J. O. G</i>
	B3	Knowledge of Extension Agents on Climate Smart Agricultural Initiatives in South West Nigeria: Implication For Emergency Rural Advisory Services Readiness	<i><sup>1</sup>Olorunfemi O. D., <sup>2,3</sup>Olorunfemi, T. O., <sup>4</sup>Oladele, O. I and <sup>5</sup>Malomo, J. O</i>
	B4	Soil Suitability Assessment for <i>Citrus Sinensis</i> in some parts of Lower Watari River, Kano State, Nigeria	<i>*Bappah, M. T<sup>1</sup>, Mahmoud B. A<sup>3</sup>, Chilo, A.A<sup>1</sup>. Musa I. A<sup>2</sup>, Sani. M, <sup>1</sup> Ibrahim I<sup>2</sup>. and Gadzama N.S<sup>2</sup></i>
	B5	Introduction of Improved Variety of Onions (Red Creole) and Storage Techniques in Kwadon Village of Yamaltu-Deba Local Government Area Of Gombe State, Nigeria	<i>Yakubu S. A.*, Mohammed T., and Aina O. S</i>
	B6	Storage Technologies Usage Among Maize Farmers in Kwara State	<i>Sani M. Y., Muhammed T. B., <sup>1</sup>Ajibowu, S. A., <sup>1</sup>Ogunleye K. Y., <sup>1</sup>Okunade, E.O. and <sup>2</sup>Adebayo, B. O</i>
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C	<b>Chairman – Prof. Ekwe Agwu Rapporteur – Dr. Ayinde</b>		
Join: <a href="https://meet.google.com/yvn-uico-vor">https://meet.google.com/yvn-uico-vor</a>	C1	Covid-19 Pandemic: A Review of its Implication on the Nigeria Agriculture and the Role of Extension	<i>Undiandeye<sup>1</sup>, U. C. and Ayi<sup>2</sup>, N. A</i>
	C2	Performance of Agricultural Extension Services at Enhancing	<i>Akinwale, J. A</i>



		Market-Oriented Cocoa Farmers in Ife-East Local Government Area of Osun State, Nigeria	
	C3	Factors Influencing Community Participation in the Conservation of Forest Resources in Enugu North Senatorial Zone of Enugu State, Nigeria	<i>Mbah. G. O., And Njoku, J.I. K</i>
	C4	Extension Methods Utilized by Agricultural Development Programmes in South West Nigeria: Implications for Extension Delivery In Emergencies	Fasina, O.O. and Ariyo O. C.
	C5	Nigeria's Preparedness and Policy Responses to Mitigating the Impact of Covid-19 on Rural Livelihoods	<i>Cecy Edijala Balogun</i>
	C6	Effects of Workplace Conditions on Employees' Job Performance: Evidence from Agricultural Organizations in Oyo and Ogun State, Nigeria	<i>Abiona, B. G., Ajayi, M.T., Odunifa. T.M., Fapojuwo, O.E., Adeogun, E.O. and Fakoya, E.O</i>
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D	<b>Chairman – Prof. Adewale Rapporteur – Dr. Alabi</b>		
<b>Join:</b> <a href="https://meet.google.com/vmb-upri-sdr">https://meet.google.com/vmb-upri-sdr</a>	D1	Enterprise Training Needs of Poultry Farmers' During COVID-19 Pandemic in Enugu State, Nigeria	Ohagwu, Violet. A., Onwubuya, E. A. and Nwobodo, Cynthia E.
	D2	Effectiveness of Coping Strategies Used by Poultry Farmers during COVID-19 Pandemic in Enugu State, Nigeria	Ohagwu, Violet. A., Nwobodo, Cynthia E. and Onwubuya, E. A
	D3	Assessment of West Africa Agricultural Productivity Programme benefits to Fisherfolks in Kainji Lake Basin, Nigeria	<i>Faleke, Sunday. A.<sup>1</sup> Nwabeze, Godfrey. O.<sup>1</sup> and Buhari, Habeeb. L.<sup>2</sup></i>
	D4	Knowledge and Utilisation of Indigenous Practices in Small Ruminant Production among Rural Women During Emergencies in Southwestern Nigeria	Abu, J.Z. and L.A. Akinbile
	D5	Contribution of Goat Products to the Wellbeing of Rural Women in Ogun State, Nigeria	Owolade, E.O., Adetayo, O.A., Fadairo, A.O., Daramola, B.O., Tasanmi, V.T., Adebisi, G.L. and Adegbojii, U.O.
	D6	Perception of Herdsmen-Farmers Conflict among Arable Crop Farmers in Ondo State	<i>Olokuntoye, R. A, Adeeko, A; *Ishola, O. O., Kolapo, O and Kolawole, N. J</i>
	<b>Comments, Questions and Answers</b>		

1:45pm – 2:00pm	LUNCH BREAK			
2:00pm – 4:00pm		<b>SECOND TECHNICAL SESSION</b>		<b>Google meet</b>
E		<b>Chairman – Prof. Stella Odebode</b> <b>Rapporteur – Dr. Adekola</b>		
<b>Join:</b> <a href="https://meet.google.com/urp-jvgt-pnh">https://meet.google.com/urp-jvgt-pnh</a>	E1	Marketing Determinants of Raw Cashew Nuts for Income Generation among Farmers in Kogi State of Nigeria	<i>Agbongiarhuoyi, A.E., Orimogunje, O.A., Awodumila, D.J.</i>  <i>Uwagboe., E.O., Lawal, J.O. And Ibiremo, O.S</i>	
	E2	Transportation Challenges and Marketing Strategies of Fish in Kainji Lake Basin, Niger State, Nigeria	<i>Aguihe, O.E, Sule, A.M, Manuwuike, Q.M, Eбенuwah, O.P,</i>  <i>Mogaji, O.Y, Adejumo, A.A, and Chilaka, N.M</i>	
	E3	Effect of Cooperative Loan on Food Security Status of Fish Farming Households in Ido Local Government Area of Oyo State, Nigeria	<i>abOke, F. O., acKareem I.A., adSanni, S.A and eOose M.O</i>	
	E4	Determinants of Labour Allocation Decisions among Cocoa Farmers during Emergencies in Rural Areas of Ondo State, Nigeria	<i>*Ibidapo, I. And Oso, O. P</i>	
	F1	Analysis of HIV/AIDS among Crop Farmers in Jema'a and Zango Kataf Local Government Area of Kaduna State, Nigeria	<i>1Michael H.Y and 2Adamu, B.D.</i>	
	F2	Perception of Arable Crop Farmers on Self Medication as Alternate Health Care Treatment to Cope with Emergencies in Rural Communities of Ogun State, Nigeria	<i>Ashimolowo, O.R, Soetan, O.J, Adetarami, O., Ogunjinmi, K.O,</i>  <i>Oyebamiji, B.A, Dada, O.E and Ajala, O.B</i>	
	<b>Comments, Questions and Answers</b>			
F		<b>Chairman – Prof. Nkiru Meludu</b> <b>Rapporteur – Dr. Oluwatosin Adeyeye</b>		
<b>Join:</b> <a href="https://meet.google.com/sr-gnsq-tqy">https://meet.google.com/sr-gnsq-tqy</a>	F3	Poultry Farmers' Awareness Level on Biosafety Practices against Infectious Diseases in Kano State, Nigeria	<i>1Bello, O. G., 2Abdulrahman, O.L,</i> <i>3Kayode, A.O, 3Busari, I.Z and 4Koloche, I.M</i>	
	F4	Analysis of Knowledge Level of Corona Virus (COVID – 19) Preventive Measures by Crayfish Marketers in Akwa ibom State.	<i>Etuk, U. R</i>	

	F5	Compliance of Rural and Urban Food Vendors to Food Safety Regulations in Oyo State	<i>Iyiola, Damilola F., Ologundudu, Oluwatoyin M. and Adegbite, Motunrade B</i>
	F6	The Use of Traditional Medicine for Livestock Disease Control among Small Ruminant Farmers in Adavi Local Government of Area of Kogi State	<i>Usman Kabir</i>
	F7	Perception of the Effects of Fire Wood Usage on Rural Women`s Health in Ogun State, Nigeria	<i><sup>1</sup>Wole-Alo F.I., <sup>2</sup>Alokan A.O. and <sup>1</sup>Ogundele E.K</i>
	F8	Impact of Flooding On Food Calorie Intake and Health Outcomes Among Small Holder Farm Households in Koton Karfe Local Government Area of Kogi State, Nigeria	<i><sup>1</sup>Ekenta, C. M., <sup>2</sup>Lyocks, S. W. J and <sup>3</sup>Ahmed, S</i>
<b>Comments, Questions and Answers</b>			
A		<b>Chairman – Prof Ogunwale Rapporteur – Dr. Aromolaran</b>	
Join: <a href="https://meet.google.com/ztf-rdpf-rsu">https://meet.google.com/ztf-rdpf-rsu</a>	A7	Analysis of Factors Affecting Adoption of new Cocoa Farming Techniques in Ondo State, Nigeria	<i>Jibrin, S., Abdullahi, A. ., Mohammed, Y, Umaru, A. and Ayegbusi, O.</i>
	A8	Effect of Selected Training and Visit Based Capacity Building activities on Productivity and Food Security of Cassava Farmers in Imo State, Nigeria	<i>Nwaneri, T.C., Chukwu, O.A., Nsodukwa, A., Onu, N., Ajah, C and Ukpai P</i>
	A9	Effect Of Farmers' Socio-Economic Factors In Extension Delivery Services for Sustainable Land Use for Crop Production  in Kano State, Nigeria	<i>Danguguwa, D.D.<sup>1</sup>, Abdullahi, A<sup>2</sup>. Ibrahim, U. S.<sup>3</sup> Sani, U<sup>2</sup>, and Kurawa, K.M.<sup>2</sup></i>
	A10	The Roles Of Forestry Extension Service In Forest Conservation In Cross River State, Nigeria	<i><sup>1</sup>Agube, Ejeje Igwe, <sup>2</sup>Edwin M. Igbokwe and <sup>2</sup>Ojo, Oluwasegun Felix</i>
	A11	Stakeholder's Willingness to Use Ice-Fish Box in Lagos, Nigeria	<i>Ajayi, A. O., *Benson, O. B. And Agboola, A.A</i>
	A12	New Perspectives in the Practice of Agricultural Extension Suitable For Addressing Emergencies Arising in the Field of Agriculture	<i>R.O. Sanusi<sup>1</sup>, R.M. Adebayo<sup>2</sup>, E.I. Isegbe<sup>3</sup>, A.O. Ibrahim<sup>4</sup>, O.B. Ajayi<sup>5</sup>, A.S. Ajibade<sup>6</sup> and O.O. Oke</i>
<b>Comments, Questions and Answers</b>			
B		<b>Chairman – Prof. Lawal-Adebowale, O.</b>	

		<b>Rapporteur – Dr. Alarima</b>	
Join: <a href="https://meet.google.com/uyt-cytz-iqq">https://meet.google.com/uyt-cytz-iqq</a>	B7	Perceived Effects of Migration Types on Farm Labour Availability among Rice Farmers in Mamou, Guinea Conakry	Thomas, K. A <sup>1</sup> , Oyebode Lukman Abiodun <sup>2</sup> and Siaka Toure <sup>3</sup>
	B8	Awareness of Root Knot Nematode Infestation and Management Strategies Utilised by Small Holder Tomato Farmers in South West Nigeria	<sup>1</sup> Akinbile L.A, <sup>2</sup> Claudius-Cole, A.O. and <sup>1</sup> Adejumo A.A.
	B9	Contribution of Bamboo ( <i>Bambusa Vulgaris</i> ) Production to Household Income and Revenue Generation in Edo State	*Adeleye, A.S. <sup>1</sup> , Omoghie, E.S. <sup>1</sup> , Simpson, V.B. <sup>2</sup> , Aliboh, U.F. <sup>2</sup> , and Fadoyin, A.S. <sup>1</sup>
	B10	Climate Variability Mitigation and Adaptation Measures Utilized by Arable Farmers in Southeast Nigeria	Ogbonna Nnenna
	B11	Effect of Climate Change: Rainfall Distribution and Rice Production in Afikpo North Local Government Area of Ebonyi State, Nigeria	<sup>1</sup> Oga, I.O, <sup>2</sup> Oga, M.O., <sup>3</sup> Uche-Nwachi M.N
	B12	Use of Management Practices for Climate Variation among Rice Farmers in Niger State, Nigeria	Omotesho, K. F., Kayode, A. O., *Akinrinde, A. F., Adegboye, A. I. and Oba, O
<b>Comments, Questions and Answers</b>			
C		<b>Chairman – Prof. Olajide Rapporteur – Dr. Ayinde</b>	
Join: <a href="https://meet.google.com/ktu-dgtd-aim">https://meet.google.com/ktu-dgtd-aim</a>	C7	Perceived Effects of Workplace Conflict on Employees' Performance in Agro-Services Corporation (Ogasc), Ogun State, Nigeria	Ayinde, Adefunke F. O., Bolarinwa, Kamilu K., Alarima, Cornelius I.,  Kazeem, Saheed Oluwatobi, Hakeem Kareem T
	C8	Effects of Leadership Styles on Employees' Turnover in Federal Institute of Industrial Research, Lagos State	Ayinde Adefunke F. O., Ayansina, Simeon O., Ibrahim, Shakirat B.,  Buhari, Fatimah A., and Oladipupo, Funminiyi G
	C9	Adaptation Strategies To Land Grabbing among Agripreneurs in Lagos Nigeria	Yusuf-Oshoala M. A. Okeowo T.A. Umunnah M.O. Orowole P.F. Adebayo C. O. and Agbajuni O.M
	C10	Assessment of Agricultural Extension Service Capacity	Ekanem, Jemimah Timothy and Akpan, Maria Inyang

		Adaptation and Maintenance of Critical Services during Pandemic in Akwa Ibom State	
	C11	The role of development agencies in sustainable fisheries in Kainji Lake Basin, Nigeria: A Review	Faleke, Sunday. A. Nwabeze, Godfrey. O. Buhari, Habeeb. A.
	C12	Effects of Covid-19 Pandemic on Poultry Farmers in Oyo State: Adaptation Strategies and Role of Institutions	Adeniyi, R. T., Adetunji, T.A., Olumoyegun, B. A., Fanifosi, G. E. and Odozi, J.C
<b>Comments, Questions and Answers</b>			
4:00pm - 4:15pm	<b>SHORT BREAK</b>		
4:15pm - 6:15pm	<b>THIRD TECHNICAL SESSION</b>		Google meet
D		<b>Chairman – Prof. Madueke</b> <b>Rapporteur – Dr. Oyekunle</b>	
Join: <a href="https://meet.google.com/mob-cazy-rik">https://meet.google.com/mob-cazy-rik</a>	D7	Sustained Level of Adopted Improved Practices among Maize Farmers in Ibarapa Area of Oyo State	Oyelere, G. O., Adisa, J. O. And Yekeen, K. A
	D8	Assessment of Socioeconomic Factors Affecting Use of Indigenous Climate Adaptation Strategies by Crop Farmers in Sokoto State, Nigeria	Yakubu, D.H <sup>1</sup> , Maidoki, L <sup>1</sup> , Shettima, D.A <sup>1</sup> , Abubakar, H.N <sup>2</sup> , and Ali, M.B <sup>3</sup>
	D9	Constraints to Adoption of Cocoa Rehabilitation in Southern Nigeria	Solomon Adebiji <sup>1</sup> , James Olaniyi Okunlola <sup>2</sup> , and Oluwale Mathew Akinnagbe <sup>2</sup>
	D10	Perceived Effects of Climate Variability on Crop Production among Arable Crop Farmers in Ife North Local Government Area, Osun State, Nigeria	<sup>1</sup> Ajayi Francis Oluwadamilare, <sup>1</sup> Bamiwuye, Olubunmi Ayotola and <sup>2</sup> Owolabi, Kehinde Elijah
	D11	Analysis of Rural Households' Attitude to Diversification into Non-Farm Enterprises in Katsina State, Nigeria	N. Musa <sup>1</sup> , D.H. Yakubu <sup>1</sup> , B.Z. Abubakar <sup>1</sup> and M.S.M. Jabo <sup>2</sup>
	D12	Perceived Effects of Covid-19 Pandemic on Agricultural Production Activities among Rural Households in Ogbomoso Agricultural Zone, Oyo State, Nigeria	Alabi <sup>1</sup> , A.A, Busari A.O <sup>2</sup> , Olanrewaju, K.O <sup>1</sup> , and Orimaf <sup>3</sup> , P.K
<b>Comments, Questions and Answers</b>			
F/G		<b>Chairman – Prof. Adebayo, K.</b> <b>Rapporteur – Dr. Tijani, S.A.F.</b>	
Join: <a href="https://meet.google.com/nqo-mbyk-psz">https://meet.google.com/nqo-mbyk-psz</a>	F9	The Role of Agricultural Biotechnology in Food Security and Safety	Yahaya, U*, Anamayi, S.E., Sirajo, A. And Maina, M.A
	G1	Review on Use of ICTs and New Media Technologies in Agricultural Extension Practice during Emergencies to Ensure Development Communication amongst Rural Farmers	Malabe, K. M., Mustapha, S. B. And Bola, Y.I
	G2	Review Of Digital Agriculture In Benue State, Nigeria	<sup>1</sup> Kughur, P.G., <sup>2</sup> Makarau, S.B. and <sup>3</sup> Adiel, B.K
	G3	Creating Horticultural Training Video/Audio Content to Improve Quality Impact for Farmers and other Stakeholders	David O. Ojo
	G4	Information Needs of Cassava Farmers on Cassava Value Addition Technologies In Oyo State	Olajide, B. R <sup>1</sup> , Sanni, L. O., <sup>2</sup> Atser, G. <sup>2</sup> , Dixon, A. <sup>2</sup> and Oladokun, I. O <sup>1,2</sup>
	G5	Vegetable Farmers' Accessibility to Information and Communication Technology in Karasuma Local Government, Yobe State, Nigeria	Malabe, K. M., Burabe, B.I., Bzugu, P.M. and Idrisa, Y. L

	G6	Fish Famer's Willingness to Pay for Improved Information Communication Technologies (ICTs) in the Wake of COVID-19 Pandemic	<sup>1</sup> Adebote, E.E., <sup>2</sup> Omega, S., <sup>3</sup> Adelakin, C.S. and <sup>4</sup> Yusuf, A.T
		<b>Comments, Questions and Answers</b>	
H		<b>Chairman – Prof. Anthony Ani Rapporteur – Dr. Alabi</b>	
Join: <a href="https://meet.google.com/nu-e-hgdi-cap">https://meet.google.com/nu-e-hgdi-cap</a>	H1	A Review on Gender Accessibility to Agricultural Production Resources and Extension Services amongst Rural Farmers in the Crisis Regions of Northern Nigeria	Aliyu M.K. <sup>1</sup> , Ibrahim A.L. <sup>1</sup> , Garuba H.S. <sup>2</sup> ; A.M Umar. <sup>3</sup> , Muhammad K. <sup>1</sup> and Lawal .A. <sup>1</sup> &Abdulshakur M.M <sup>1</sup> , S. B.
	H2	Gender Gap In Access to Palliative Measures on COVID-19 Pandemic among Rural Households in Ogbomoso Agricultural Zone of Oyo State, Nigeria	*Kayode,A. O <sup>1</sup> , Adebayo, S.A <sup>1</sup> , Awoyemi, A.O <sup>1</sup> , Orimafo, P.K <sup>2</sup> and Alabi, A.A <sup>3</sup>
	H3	An Appraisal of Entrepreneurship Competences of Women Farmers in Agribusiness in Ika South Local Government Area of Delta State, Nigeria	Belonwu, N. E <sup>1</sup> ., Ifejika, P. I <sup>2</sup> ., Onyemekonwu, R.C <sup>3</sup>
	H4	Gender Analysis of Attitude of Youth towards Agriculture in Selected Secondary School Of Maiduguri Metropolitan Council Borno State, Nigeria	*Burabe, B. I., Malabe, K. M., Idrisa, Y. L and Bzugu, P. M
	H5	Gender Access to Farm Labour and Coping Strategies: Implication to Food Productivity in Benue State, Nigeria.	<sup>1</sup> Kanu R.U. and <sup>2</sup> Mazza. M
	H6	Climate Change Adaptation Measures Used by Women Garden Egg Farmers in Enugu State, Nigeria	*Nnadi O.I <sup>1</sup> , Ogbodo F.N <sup>1</sup> , Ohagwu, A.V <sup>1</sup> , Onyia C.C <sup>2</sup> , Ozioko R.I and Nnadi U.V <sup>1</sup>
		<b>Comments, Questions and Answers</b>	
F		<b>Chairman – Prof. Adebayo, K. Rapporteur – Dr. Tijani, S.A.F.</b>	
Join: <a href="https://meet.google.com/buz-noaz-faw">https://meet.google.com/buz-noaz-faw</a>	F1	The Use of Garret Ranking Technique in Assessing Constraints affecting Farmers Livelihood Strategies in Varanasi District of Eastern Uttar Pradesh, India	Gwandi, O.
	F2	Analysing the Determinants of Adoption of Bio-Herbicide Technology for Sustainable Food Production in Adamawa State, Nigeria	Adewuyi, K. A. and Martins, G. B.
	F3	COVID-19 Lockdown and Emotional Wellbeing of School Teachers in Ogun State, Nigeria: Implications for Workplace Re-Integration	Oose, M. O., Adebayo, K. and Mojeed, A. M.
	F4	Impact of Flooding on Food Calorie Intake and Health Outcomes among Small Holder Farm Households in Koton Karfe Local Government Area of Kogi State, Nigeria	Ekenta, C. M. and Ahmed, S. and Lyocks, S.W.J
	F5	Implications of coronavirus on food systems in Ikwerre Local Government Area Rivers State, Nigeria	Aroyehun, A.R., and Abuta, C.M.

	F6	Perceived Effect of Covid-19 on the Health of Charcoal Producers in the Derived Savannah Agro-Ecological Zone of Nigeria.	Eniola, P. O
<b>Comments, Questions and Answers</b>			
6:15 – 6:30pm	Announcement and closing		
<b>DAY 3</b> <b>Wednesday 28<sup>th</sup> April, 2021</b>			
9.00am - 10.00am	<b>ANNUAL GENERAL MEETING</b> <b>Chairman –National President</b> <b>Secretary – National Secretary</b>		<b>Google meet</b>
Join: <a href="https://meet.google.com/uk-gfgds-iar">https://meet.google.com/uk-gfgds-iar</a>	Introduction		
	Adoption of last minute		
	Reports		
	Matters Arising		
	Election of officers: e-voting		
	AOB		
	Adjournment		
	Closing remarks		
10:00 – 10:15am	<b>TEA BREAK</b>		
10:15pm - 12:15pm	<b>FOURTH TECHNICAL SESSION</b>		Google meet
A	<b>Chairman – Prof Ogunwale</b> <b>Rapporteur – Dr. Osuntade</b>		
Join: <a href="https://meet.google.com/vuy-yqof-aiu">https://meet.google.com/vuy-yqof-aiu</a>	A13	Assessment of Training Needs of N-Power Agro-Beneficiaries in Kwara State, Nigeria	<sup>1</sup> Aderinoye-Abdulwahab, S. A., <sup>1</sup> Mohammed, M. J., and <sup>2</sup> Issa, F. O
	A14	Information Needs of Cassava Farmers in Ibarapa Area Of Oyo State, Nigeria	Taiwo, A. O <sup>1</sup> , Adebayo, O.A <sup>1</sup> , Ogungbaro, O.O <sup>2</sup> and Ajiboye I.E <sup>1</sup>
	A15	Cocoa Farmers' Preferred Training Design Programme on Good Agricultural Practices (GAP) in Ondo State, Nigeria	<sup>1</sup> Akinmolafe, Abiodun Oladele and <sup>2</sup> Ajayi, Adedayo Olufemi
	A16	Connectivity Between Farmers And Value Chain Actors: A Case Study of How Herbaceous Plant Farmers are Connected to Groceries Stores in Ondo State	<sup>1</sup> Wole-Alo F.I. and <sup>2</sup> Alokan A.O
	A17	Assessment of Household Consumption of Cassava Products in Afikpo North Local Government Area Of Ebonyi State, Nigeria	Nwaneri, T.C., Chukwu, O.A.,Nwafor, S.U., Aroh, J.E and Igwe-Aroh, U
	A18	Assessment of Non-Farm Activities among Crop Farmers in Egebeda Local Government Area Of Oyo State	<sup>1</sup> Agbontale, A.O., <sup>1</sup> Owolade, E.O., <sup>2</sup> Adetayo, O.A., Alonge, G.O., <sup>1</sup> Makinde F.O, <sup>1</sup> Ayanda, O.E, Adejinmi, O.E., <sup>1</sup> Adegbuji, U.O. and <sup>1</sup> Tasanmi, V.T.
<b>Comments, Questions and Answers</b>			



B	<b>Chairman – Prof. Ani</b> <b>Rapporteur – Dr Fadilat AYINDE</b>		
Join: <a href="https://meet.google.com/xko-awq-q-mof">https://meet.google.com/xko-awq-q-mof</a>	B13	Constraints in Utilization of Cassava Processing Techniques Amongst Agro-Forestry Farmers In Edo State, Nigeria	Yusuf.A.S., Omoghie,E.S., Adeleye .A.S., Mangodo. C., Akhideno, L.O, and Akemien, N.N
	B14	Determinants of Socio-Economic Status of Rural Households in Southwestern Nigeria	Adebesin Raulat Oluwakemi
	B15	Arable Crop Farmers' Perception of Involvement in Non-Farm Activities in Ondo State, Nigeria.	Abulude, I.A., Kolawole, E.A., and Ajala A.O
	C13	Assessment of Use of Agroforestry in Ensuring Food Security In Ileoluji/Okeigbo Local Government Area Of Ondo State, Nigeria	Ayanwuyi, E., Tiamiyu, A.O. and Oladipo S.O
	D13	Perceived Effect of Oil Pipeline Vandalization on Farmers' Agricultural Activities and Farming Environment in Rivers State, Nigeria	Anyoha, N. O. Godson-Ibeji, C.C. and Aja, O.O
	D14	Analysis of Capture Methods and Constraints Associated with <i>Chrysichthys Nigrodigitatus</i> (Silver Catfish) Capture from the Wild in Epe LGA, Lagos State, Nigeria	Ikoyo-Eweto, Gloria Omogho, Okoro, Chukwuma Bede, Achilike, Nkechi Mariam and Olurole, Aderonke Oluwadamilola
<b>Comments, Questions and Answers</b>			
D	<b>Chairman – Prof. C.I. Sodiya</b> <b>Rapporteur – Dr. Adeleke. O.A</b>		
Join: <a href="https://meet.google.com/qeh-ixfq-zno">https://meet.google.com/qeh-ixfq-zno</a>	D15	Challenges of Pig Marketing during Emergencies in Kaduna State, Nigeria	Abiyong, P.A., <sup>1</sup> Lyocks, S.W.J. <sup>2</sup> And Bidoli, T.D. <sup>3</sup>
	D16	Effect of Land Tenure System on Climate Change Adaptation among Rice Farmers in North-West, Nigeria	Yakubu, Danlami Haruna <sup>1</sup> , Akpoko, Joseph Gambo <sup>2</sup> , Akinola, Mathew <sup>2</sup> and Oluwatuyi, Abdulsalam, Zakari <sup>3</sup>
	D17	Inorganic Fertilizer Use On Rice Production: Implications On Food Security During Emergencies In Nigeria.	Juliana Chinasa Iwuchukwu, Sunday Alagba Obazi, Patience Ifeyinwa Opata, Michael Chukwunke Madukwe
	D17	Effects of Climate Variability on Arable Crop Farmers' Socio-Economic Status in Southwest Nigeria	Sadiq, M.M <sup>1</sup> and Adeola, R.G <sup>2</sup>
	D18	Deforestation and Reforestation Activities in Community Forests in Anambra State, Nigeria	<sup>1</sup> Ozioko, R. I., <sup>2</sup> Enwelu, I. A. and <sup>1</sup> Okafor C.C
	D19	Comparative Analysis of the Profitability of Dry Season Farming of <i>Corchorus Ollitorius-Amaranthus Cruentus</i> Intercrop and Sole Crops	Ayodeji, O.O <sup>1</sup> ., Atungwu, J.J <sup>1,2</sup> , Fadeyi, O.J <sup>2</sup> ., Ifezue, D. U <sup>1</sup> . and Okoye, H. O <sup>1</sup>
<b>Comments, Questions and Answers</b>			



LUNCH BREAK			
12:15 – 13:00pm			
13:00 – 15.00pm	<b>FIFTH TECHNICAL SESSION</b>		<b>Google meet</b>
G		<b>Chairman – Prof. Lawal- Adebowale</b> <b>Rapporteur – Dr. Oyelere</b>	
Join: <a href="https://meet.google.com/zsa-yjdr-ubj">https://meet.google.com/zsa-yjdr-ubj</a>	G7	Digitization of Agricultural Extension System for Effective Management of Emergency in Nigeria	<i>Olagunju, O.<sup>1</sup>, Adetarami, O.<sup>2</sup>, Nabara, I. S.<sup>3</sup>, Koledoye, G. F.<sup>4</sup> and Olumoyegun, T. A.<sup>5</sup></i>
	G8	Use of Advertising Media by Small Scale Agricultural Entrepreneurs in Odeda Local Government Area of Ogun State, Nigeria	<i><sup>1</sup>Oyekunle, O. <sup>2</sup>Oose, M. O. and <sup>3</sup>Amusat, A. S.</i>
	G9	Factors Influencing the Use of Social Media in Information Dissemination by Extension Agents in Lagos State Agricultural Development Programme	<i>*Fapojuwo, O.E., *Okubena, B.A. *Alabi, S.O., *Abiona, B.G., and **Lawal, F.D</i>
	G10	Review of the Challenges of Agricultural Extension Service Delivery Using Social Media during COVID-19 Pandemic in Northern Nigeria	<i>Bala, Jamilu<sup>1</sup>, Ibrahim, Yakubu<sup>2</sup>, Turaki, Momammed Abdullahi<sup>3</sup>, Munimi, Musayahaya<sup>1</sup>, and Magaji, Aliyu<sup>4</sup></i>
	G11	Content Analysis of Youtube Videos on Cassava Production and Processing In Nigeria	<i>Banmeke, T. O. A.,<sup>1</sup> Eniola, O. C.,<sup>1</sup> Akeredolu-Ale, B. I.,<sup>2</sup> Kareem, R.F.<sup>1</sup> and Hussain, L.A.<sup>3</sup></i>
	G12	Awareness and Usage of Information and Communication Technology By Agricultural Extension Workers In Oyo State	<i>Oladiran S. S., Adepoju O. A., Adeniran A. A. And Ogunleye T. B</i>
	<b>Comments, Questions and Answers</b>		
H		<b>Chairman – Prof Fapojuwo</b> <b>Rapporteur – Dr Osuntade, B.</b>	
Join: <a href="https://meet.google.com/rwg-zgwb-ykp">https://meet.google.com/rwg-zgwb-ykp</a>	H7	Assessment of Women’s Involvement in Cassava Processing in Ijebu Ode Local Government Area, Ogun State, Nigeria	<i>Ibitunde Ibadun O. and Sulaiman Olalekan A</i>
	H8	The Role of Development Exchange Centre Microcredit in Women Empowerment and Poverty Alleviation in Kaduna State, Nigeria	<i><sup>1</sup>Adamu, B. D;<sup>2</sup>Michael H.Y, <sup>3</sup>Adejoh, E.U and <sup>4</sup>Barnabas T.M</i>
	H9	Livelihood Outcomes of Rural Women Participating in Cooperative Societies during Emergencies in Akinyele Local Government Area of Oyo State, Nigeria	<i>Oyebamiji, B. A., Sodiya, C. I., Dada, O. E., Adetarami, O. and Ijeh, M. O</i>
	H10	Gender Roles in Sustaining Social Values among Rural Households in Oyo State, Nigeria	<i>Adeleke, O.A, Adelokun, O. E and Badewo, T.K</i>
	H11	Assessment Of Extension Services and the Livelihood Practices of Women in Obafemi Owode, Abeokuta, Ogun State	<i>Adubi K.O, Adewara Rafiat Adedayo &amp; Tolu Adebayo</i>
	H12	Traditional Salt Processing Activities of Rural Women in Ebonyi State, Nigeria	<i><sup>1</sup>Juliana Chinasa Iwuchukwu, <sup>2</sup>Clement Okechukwu Attamah and <sup>3</sup>Charles Ubani Chukwuonu</i>
<b>Comments, Questions and Answers</b>			
A		<b>Chairman – Prof. Meludu</b> <b>Rapporteur – Dr. Badiru, I.O.</b>	
Join: <a href="https://meet.google.com/gdr-fxpt-pcq">https://meet.google.com/gdr-fxpt-pcq</a>	A19	Utilization of Modern Oil Palm Processing Techniques by Women in Akinyele Local Government Area, Oyo State, Nigeria	<i>Okanlawon Adedayo and Adelokun Olufolake E</i>
	A20	Adoption of Smart Farming Practice among Water Melon Farmers in Yamaltu-Deba L.G.A, Gombe State, Nigeria.	<i>*Chilo, A.A<sup>1</sup>., Bappah, M. T<sup>1</sup>., Sani, M. Y<sup>1</sup>, Musa I. A<sup>2</sup>., Ibrahim I<sup>2</sup>.,</i>

			Gadzama N.S. <sup>2</sup> and Mahmoud, B. A <sup>3</sup>
	A21	The Role of Development Agencies in Sustainable Fisheries In Kainji Lake Basin, Nigeria: A Review	Faleke, Sunday. A. <sup>1</sup> , Nwabeze, Godfrey. O. <sup>1</sup> , Buhari, Habeeb. L. <sup>2</sup> , and Omeje, Julius. E. <sup>3</sup>
	A22	Challenges of the Agricultural Entrepreneurship Training for National Youth Corps Members In Anambra And Enugu State	Okoronkwo, C.D, Chah, J. M and Dimelu, M.U
	A23	Climate Information Needs of Smallholder Arable Crop Farmers in Ogun State: Lessons For Climate Information Dissemination	Adesanya, O. S <sup>1</sup> , Omotayo, A. M <sup>2</sup> , Oyedepo J. A <sup>3</sup> , Lawal-Adebowale O. A <sup>2</sup> . and Sodiya, C. I. <sup>2</sup>
<b>Comments, Questions and Answers</b>			
2:30 – 3:15PM	<b>BREAK</b>		
3:15pm – 5:15pm	<b>SIXTH TECHNICAL SESSION</b>		Google meet
G	<b>Chairman – Prof Esther Okunade</b> <b>Rapporteur – Dr Alabi</b>		
Join: <a href="https://meet.google.com/qgqj-wdbw-bws">https://meet.google.com/qgqj-wdbw-bws</a>	G13	Agricultural News Coverage in Print Media: Implications For Creating Awareness of Organic Farming in Nigeria	Atoma Charity Nwamaka and Igoruh Ebruphiyor
	G14	Analysis of the Factors Influencing Kambuwa Cultural Agricultural Show in Yauri Emirate, Ngaski Local Government Area of Kebbi State Nigeria	S. Umar <sup>1</sup> , Suleiman Y. Sheriff <sup>2</sup> , J. Alhassan <sup>3</sup> , A. Abubakar <sup>4</sup> , I. D. Sanchi <sup>5</sup> and M. A. Muhammad <sup>6</sup>
	G15	Awareness in the Use of ICT among Extension Agents and Agroforestry Farmers in Edo North Senatorial Districts of Edo State, Nigeria	Omoghie, E.S. <sup>1</sup> , Aliboh, U.F. <sup>2</sup> , Simpson, V.B. <sup>2</sup> , Adeleye, A.S. <sup>1</sup> and Yusuf, A.S. <sup>1</sup>
	G16	Availability and Utilization of Information and Communication Technology for Accessing Agricultural Information on Rice Production among Women Farmers in Ogun State, Nigeria	Ogunkunle Tajudeen <sup>1</sup> , Olaniyi, O.A <sup>2</sup> and Taiwo, A.O <sup>3</sup>
	G17	Harnessing Perceptions and Activities of Agriculture Students on Social Media for Usefulness during Emergencies in Enugu State, Nigeria	Iwuchukwu, Juliana Chinasa <sup>1</sup> , Asogwa Sunday Michael <sup>1</sup> , Obazi, Sunday Alagba <sup>1</sup> , Agube, Ejeje Igwe <sup>2</sup> and Ozioko, Remigius Ikechukwu <sup>1</sup>
	G18	Roles of Information Communication and Technology (ICT) In Agroforestry Service Delivery In Edo State Nigeria	Omoghie, E.S <sup>1</sup> , Ibikunle, K.Y. <sup>2</sup> , Adeleye, A.S. <sup>1</sup> , Isibor, J.I. <sup>1</sup> and Aliboh, U.F. <sup>3</sup>
	<b>Comments, Questions and Answers</b>		
H	<b>Chairman – Prof Comfort Onifade</b> <b>Rapporteur – Dr Adekola</b>		
Join: <a href="https://meet.google.com/tfo-ftec-kvd">https://meet.google.com/tfo-ftec-kvd</a>	H13	Constraints to Women’s Empowerment in Agriculture in Rural Farming Areas In Oyo State, Nigeria	Ayodeji, A.O. <sup>1,2*</sup> , Rauf A.J. <sup>3</sup> , Fapojuwo, O.E. <sup>2</sup> , Joshua Y. <sup>2</sup> and Alabi S.O. <sup>2</sup>
	H14	Assessment of Gender Roles in Agricultural Extension Programme Delivery in Abakaliki LGA of Ebonyi State, Nigeria	Orji J.E <sup>1</sup> and Orji H.C <sup>2</sup>
	H15	Gender Analysis of Urban Vegetable Production in Ojo Local Government Area, Lagos State, Nigeria	Fapojuwo, O.E., *Ayodeji, A. O., *Ajayi, M.T., *Okubena, B.A. and **Idris, O
	H16	Determinants of Youths’ Participation in Agricultural Activities in Ogun State, Nigeria	<sup>1*</sup> Coster, A.S, <sup>2</sup> Oyebamiji, B.A, <sup>3</sup> Sebiomo, A.A and <sup>4</sup> Akintunde, K. O

	H17	Gender, Generational Involvement and Sustainability Likelihood of Community and Social Development Projects in South-West, Nigeria	Obar, E.E. And Adekoya, A.E
<b>Comments, Questions and Answers</b>			
G		<b>Chairman – Prof Gbemiga Adewale</b> <b>Rapporteur – Dr. Oose</b>	
Join: <a href="https://meet.google.com/hin-vyho-tnm">https://meet.google.com/hin-vyho-tnm</a>	G19	Extension Practices and the Use of Information and Communication Technologies under COVID-19 in Akwa Ibom State, Nigeria	Nkeme, K. K., Ekanem, J. T., and Umoh, I. U
	G20	COVID-19 Pandemic-Farmers' Readiness for Social Media as a Tool for Agro-Information Reception in Ondo State, Nigeria	Fasina O. O, Tehinloju O. A*, and Ikuerowo J. O
	G21	Categorization of Poultry Farmers Based on Extent of Mobile Phone Usage for Accessing Agricultural Information in Oyo State, Nigeria	Oladipo, I.F <sup>1</sup> , Olaniyi, O.A <sup>1</sup> , Ogunkunle, T <sup>2</sup> And Taiwo, A.O <sup>3</sup>
	G22	Farmers' Perception of Video-Mediated Extension Learning Platform in Enugu State, Nigeria	Ifeonu, C. F., Agwu, E.A., and Anugwa, I.Q
	G23	Perception of Youth Farmers on Information Communication Technology for Sustainable Agricultural Production in Oyo State, Nigeria	Owolade, E.O., Adetayo, O.A., Alonge, G.O., Agbontale, A.O. Adebisi, G.L., Adewole, A.O., Adejinmi, O.E., Martins, M.O., Adegboju, U.O. and Tasanmi, V.T
	G24	Rural Farmers' Readiness To Access Agricultural Information from the National Farmers Helpline Center NAERLS, Abu Zaria, Kaduna State, Nigeria	Oyekunle, O. and Amusat, A. S
<b>Comments, Questions and Answers</b>			
5:00pm - 5:30 pm	<b>Announcement and Closing remarks</b>		<b>WhatsApp</b>
Day 4 Thursday, 29 <sup>th</sup> April, 2021			
7:00am – 9am	Departure		
9:00am – 5:00pm	Presentation of certificates		WhatsApp/Email

**SUB THEME - A NEW PERSPECTIVES IN THE PRACTICE OF AGRICULTURAL  
EXTENSION**

**AGRICULTURAL EXTENSION AND ADVISORY SERVICES AMIDST COVID-19 PANDEMIC  
IN NIGERIA: THE POLICY OPTIONS**

**Fadlullah Olayiwola ISSA**

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**ABSTRACT**

With the daily expansion of the global impact of the COVID-19 pandemic, the outbreak has generated extreme vulnerability in the agriculture sector. What policy instrument and options are available for Agricultural Extension and Advisory Services (AEAS) to function efficiently in order to avert the looming food crises? This remains the hub of this article. This paper explores the policy options targeted at preventing extreme hunger after surviving the COVID-19 pandemic. The paper is segmented into sections. First, the introduction section provides basis for understanding provision of AEAS and the COVID-19 pandemic. The way forward was discussed, while key policy options were drawn to serve as a way out of hunger crises when the pandemic would have been over. Major recommendations are that, in response to the stay-at-home order in the wake of the COVID-19 pandemic, AEAS should explore virtual means to reach the clientele. To this end, farm operations and new techniques should be packaged into short clips and shared via various platforms. Also, legislative means to consider AEAS as essential services should be sought. Hence, extensionists should be trained and provided with personal protection equipment (PPE) to enable them reach farmers. Such field officers should be insured and provided with adequate tangible mobility.

**Keywords:** Agricultural Extension and Advisory Services, COVID-19 pandemic, Agricultural policy, Nigeria

**ALTERNATIVE APPROACHES FOR AGRICULTURAL EXTENSION SERVICES DELIVERY  
DURING CONFLICT SITUATIONS IN BENUE AND NASARAWA STATES, NORTH-  
CENTRAL, NIGERIA**

**<sup>1</sup> Adzenga Jacobs Ior and <sup>2</sup>Umar Isah Sheshi**

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<sup>2</sup>Department of Agricultural Extension and Rural Development, Federal University of Technology, Minna, Nigeria

**ABSTRACT**

The study examined alternative approaches to be employed for agricultural extension services delivery by field extension workers of Agricultural Development Programmes (ADPs) to farmers during insecure situations in Benue and Nasarawa States, Nigeria. A total of 121 extension personnel were selected through stratified sampling technique. Data were collected with structured questionnaire and analysed using descriptive statistics. The results revealed that delivery of extension services to farmers in Internally Displaced Persons camps (90.90 %) and delivering services in secured zonal offices (38.01%) were identified as alternative approaches while radio programmes (85.95%) and mobile phones (51.23%) were the preferred ICT components for extension services delivery to farmers in insecure areas. The study recommended the institutionalization of agricultural extension services by extension agencies in the country in IDPs camps like every other essential services so as to facilitate access to knowledge and productive resources that will increase their productivity and wellbeing upon return to their communities when peace is restored.

**Keywords:** Communal Conflicts; Services; Extension Workers; Approaches

## **INDIAN AGRICULTURAL EXTENSION SYSTEM: AN OVERVIEW**

**Kareem, O.W.<sup>1</sup>, Adefalu, L.L.<sup>1</sup>, Daudu, A.K.<sup>1</sup> and Bello, O.G.<sup>2</sup>**

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Phone Number - +2348032151063

### **ABSTRACT**

Agricultural extension system in India is coordinated by Indian Council of Agricultural Research, an apex body at the national level that regulates research and extension activities to evolve effective transfer of technology models. The paper explores the history of agricultural extension system in India from pre-independence to post-independence era in which numerous developmental programmes and projects were emerged to provide extension services to farmers through regular training/workshop. Mandates of extension are to develop dairy farming, farmers' education, help rural people to establish cottage industries and increase crop production. Some of the programmes and projects discussed are ideal village project, Sri Niketan project, grow more food campaign, Marthan dam project, Lab to land scheme, Etawah project, Nilokheri project, Green revolution including training and visit model of agricultural extension service delivery. The key roles played by Directorate of extension, Krishi Vigyan Kendra, State Agricultural Universities, Agricultural Technology Information Centre, Agricultural Technology Management Agency and Non-Governmental Organisations were also reviewed. Agriculture is the main stay of the economy and India's 600,000 villages with 750 million people and 550 million youth population is the greatest strength that drives extension system in Southeast Asian country.

**Keywords:** Agriculture, Extension, Technology, Training, Economy.

**CONTRIBUTIONS OF EXTENSION SERVICES TO FARMING COMMUNITIES'  
ADAPTATION TO COVID-19 PANDEMIC IN AKWA IBOM STATE**

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**ABSTRACT**

The study offers insight into how farming communities are coping with COVID-19 pandemic in Akwa Ibom State. It specifically examined how the farmers are affected, their coping strategies, contributions of extension service towards their adaptation and the supports they need to adapt to the pandemic. Multistage sampling procedure was used in selecting 300 respondents across the agricultural zones for the study. Descriptive statistics was used to analyse data gotten from the respondents through a well-designed questionnaire. From the findings, majority of the respondents have experienced limited access to agricultural inputs (87.9%), limited access to market (79.6%), unavailability of labour force at critical times of agricultural production and harvesting (68.7%), health risk and fear (72.6%), increased transportation cost (87.4%), unavailability of facemasks and hand sanitizers (89.1%), dwindling and uncertain finances (92.4%) limited and other necessary services. Majority of the farmers asserted that they had to rely more on radio (87.6%), religious leaders (67.2%), community leaders (65.4%) and occasionally extension agents (45.3%) for COVID-19 related information. They depended more on herbs and traditional medications (72.4%) and had to trek long distances to market farm produce and get inputs (69.7%), in order to cope with the impact of the pandemic. The extension services reported by the respondents were limited to phone calls from extension agents (82.6%), text messages (76.3%). Majority of the respondents solicited for timely assessment of COVID-19 impacts in communities to identify the specific challenges and needs of farmers for better response from government and other agencies.

**Keywords:** Contributions; Extension Services; Farmers; Adaptation to Covid-19 Pandemic.



**FACTORS INFLUENCING TRAINING NEEDS OF AGRICULTURAL EXTENSION  
PERSONNEL: A SYSTEMATIC REVIEW**

**Sulaiman Umar,<sup>1\*</sup>Bashir G. Muktar,<sup>2</sup>Ahmed G. Abdullahi,<sup>1</sup>Abdulshakur M.  
Mahmud<sup>1&3</sup>and Rasheed K. Olaifa<sup>4</sup>**

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**ABSTRACT**

Training is the most important operation in human resources development. It is vital to establish the training needs of personnel, as well as the factors that determine such needs before embarking on a training exercise. This study reviewed relevant empirical literature with the aim of identifying the factors that influence training needs among personnel of extension agencies. Systematic review of literature was conducted using renowned and reliable search engines in the academia. Out of the 143 articles downloaded and studied, 21 journal articles, one conference paper and one postgraduate thesis were included in this study. The definitions of ‘training’, ‘needs’ and ‘training needs’ were conceptualized. Among the major factors that were found to determine training needs across literature were: job experience, educational attainment, and job position or rank. Hence, a basic model showing these concepts as predictors of training needs was proposed. The need for more empirical studies to ascertain the strength and directions of the relationships was emphasized.

**Keywords:** education, job experience, job position, training needs, theory

**CONSTRAINTS TO THE EFFECTIVENESS OF TRAINING OF CASSAVA PROCESSORS IN  
ORIIRE LOCAL GOVERNMENT AREA OF OYO STATE, NIGERIA**

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**ABSTRACT**

The processing of cassava into garri and pellets is no more new in Nigeria. However, the effectiveness of improved processing techniques must be considered as there have been several trainings given to cassava processors. This study assessed constraints to the effectiveness of training of cassava processors in Oriire Local Government Area of Oyo State, Nigeria. Simple random sampling technique was used to select 80 out of 317 cassava processors. Data were collected with the aid of structured interview guide and analysed with SPSS 16.0. The mean age of cassava processors was 37 years, 91.2% were female, 68.8% married while the average household size was 6 members. Purchasing of cassava processing equipment was ranked lowest effective of the 11-items with WMS 0.48. Similarly, lack of improved technology (WMS 2.90), inadequate capital (WMS 1.90), and high cost of packaging (WMS 1.76) were serious constraints to the effectiveness of cassava processing trainings. Age ( $r = 0.65$ ) and years spent in school ( $r = 0.71$ ) were significantly correlated with the effectiveness of trainings. The study concluded that socio-economic factors and constraints affected the effectiveness of the trainings. The study therefore recommends provision of subsidized cassava processing equipment in the study area.

**Keywords:** Cassava, effectiveness, processors, training, improved technology

**ANALYSIS OF FACTORS AFFECTING ADOPTION OF NEW COCOA FARMING  
TECHNIQUES IN ONDO STATE, NIGERIA**

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**ABSTRACT**

The study inquired the benefit of new cocoa farming techniques in Ondo State, Nigeria. To achieve the stated objectives, 120 respondents were proportionately selected from the two agricultural zones in the state through multi-stage sampling technique. Structured questionnaire complemented with oral interview where administered to the cocoa farmers and data collected were analyzed using both descriptive such as means frequency etc and probit regression model was used for inferential statistics. The result of this study showed that the mean age distribution of respondents was 56 years, 50.0% of the respondents had non-formal education 57.5% of the respondents were female while 42.5% were male. The result further revealed that the mean farming experience of the respondents was 20.0 years and the mean household size was 7.0. Result of probit regression shows that gender, farm experience and income are some of the factors affecting adoption of new cocoa farming practice in the study area. Furthermore, some of the major constraints to cocoa production in the study areas was that techniques take a lot of time ( $\chi = 3.64$ ). The study conclude that majorly adopted practices area weeding, pruning and shading of cocoa trees also majority of the farmers who carry out the farming techniques are more beneficial with reduction in cost of production, ease of paying children school fees, with better environment, more healthy and positive attitude towards the techniques. The study therefore, recommended that government and non-governmental organization should encourage farmers on the use inorganic fertilizer in their cocoa farm.

**Keywords:** Cocoa farmers, perception, benefits, new farming techniques.

**EFFECT OF SELECTED TRAINING AND VISIT BASED CAPACITY BUILDING ACTIVITIES  
ON PRODUCTIVITY AND FOOD SECURITY OF CASSAVA FARMERS IN IMO STATE,  
NIGERIA**

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**ABSTRACT**

The study examined the effect of T&V based capacity building activities on productivity and food security of cassava contact farmers in Imo State, Nigeria. The specific objectives were to; describe socio-economic characteristics of farmers; identify T&V based capacity building technologies extended; determine effect of T&V based capacity-building activities on their productivity and determine the effect of T&V based capacity-building activities and other variables on food security status of farmers. Multistage random sampling technique was employed. Data were collected from 96 farmers using semi-structured questionnaire. The result revealed that use of improved varieties, optimum plant population, line planting, fertilizer application, correct spacing, planting depth, timely weeding, routine watering, application of insecticides, timely planting and tillage practices were perceived by the farmers as being available while result on z-test showed that mean productivity before and after adoption was 1.80tons/ha and 4.04 tons/ha respectively. The OLS result showed that the coefficients of capacity building activities, farm size, planting materials, use of fertilizers and other agro-chemicals were positive and highly significant at 1%. This implies that a 1% increase in capacity building activities will bring about an increase in food security status of the farmers. Based on the findings, it is recommended that agricultural extension policies and measures which improved the food security status of cassava farmers should be advocated.

**Keywords:** Training and Visit, Capacity Building Activities, Food Security, Productivity

**EFFECT OF FARMERS' SOCIO-ECONOMIC FACTORS IN EXTENSION DELIVERY SERVICES FOR SUSTAINABLE LAND USE FOR CROP PRODUCTION IN KANO STATE, NIGERIA**

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**ABSTRACT**

The study was conducted to describe the farmers' socio-economic factors and analyze their effects in Extension service delivery in Kano State, Nigeria. Multi stage sampling procedure was to select 118 farmers. Primary data was collected through structured questionnaires and analyzed using descriptive statistics and Logit regression model. The findings of the result revealed the mean age of the farmers was 44 years and farming experience was 22 years while the mean household size of the farmers was 10 members with mean farm size of 2.71 hectares in the study area. Majority 40.70% had Qur'anic education and about 26.00% of them had secondary and tertiary education. From the result, 77.10% of the respondents had extension contact and majority 52.74% had fortnight frequency extension contacts. The result of logit regression shows that Farm size was found positive and significance at 5% level while age of the farmers were found negative and significance at 10% level. In conclusion, despite farmers' low literacy status, inadequate extension visits and small farm holdings, increased awareness, adequate training, improved extension-linkages, more involvement of research institutes and NAERLS in generating and transmitting of appropriate technologies in AED services are hereby recommended.

**Keywords:** Crop productivity, Effects, Extension, Farmers, and Land use.

## **THE ROLES OF FORESTRY EXTENSION SERVICE IN FOREST CONSERVATION IN CROSS RIVER STATE, NIGERIA**

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### **ABSTRACT**

The study assessed the roles of forestry extension service in forest conservation in Cross River State. The specific objectives were to: examine extension role of forest officers in forest conservation; identify forest officers' extension training needs in forest conservation; and identify forest officers' perceived constraints militating against forestry extension service delivery. All the forest officers under the employ of the Cross River State Forestry Commission (CRSFC) formed the population of the study. Systematic sampling technique was employed to select 78 respondents for the study. Data were collected through validated structured interview schedule. Data were analyzed using percentage and mean scores. The major effective extension role of forest officers in forest conservation were found to include, creating awareness through environmental enlightenment campaign in forest communities (M = 2.62 and dissemination of information in relation to public participation in forest conservation (M = 2.61), among other roles. Major perceived training needs of forest officers in forest conservation were sustainable forest management practices (M = 3.39), forestry extension practices (M = 3.32) and developing group participation. Major constraints to effective forestry extension service delivery were found to include inadequate funding (M = 2.97), and lack of vehicles for field staff logistics (M = 2.80). Forestry extension service delivery in forest conservation was less effective, owing to a great number of constraints militating against the service delivery in forest conservation. For the effectiveness of forestry extension services in the state, the constraints to extension service delivery in forest conservation must be seriously considered.

**Keywords:** Forestry, Extension, Service, Conservation, Training, Needs, Constraints

## **STAKEHOLDER'S WILLINGNESS TO USE ICE-FISH BOX IN LAGOS, NIGERIA**

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### **ABSTRACT**

A preservation technology was developed by Nigerian Stored Products Research Institute, (NSPRI) in a well-insulated container known as “NSPRI Ice-Fish Box” to considerably reduce fish loss by preventing spoilage and lengthening shelf life. This study was conducted in selected coastal areas of Lagos, Nigeria to ascertain stakeholder’s awareness on Ice–Fish Box and determine their willingness to use the technology. Three fishing communities were purposively selected for the study. One hundred and ten (110) fish-sellers were sampled using a simple random sampling technique. Data was collected with a well-structured interview schedule, and subsequently subjected to descriptive statistical analysis. Chi-square was employed to test stated hypothesis. Excellent numbers of fish-sellers (81.82%) are well aware of the Ice–fish box while 27.27% of them indicate they are not aware. Chi-square analysis reveals significant associations ( $p \leq 0.05$ ) between willingness to use Ice–fish Box and fish sellers’ age, level of education, and their awareness status of Ice–fish box. Conclusively, fish-sellers are well aware and are willing to use the technology. Fish postharvest loss reduction policy should be directed towards mass adoption of Ice–fish box.

**Keywords:** fish-sellers, willingness, awareness, ice-fish box, shelf life extension.

**NEW PERSPECTIVES IN THE PRACTICE OF AGRICULTURAL EXTENSION SUITABLE FOR  
ADDRESSING EMERGENCIES ARISING IN THE FIELD OF AGRICULTURE**

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**ABSTRACT**

Agricultural extension has increasingly moved from a traditional emphasis on technology transfer and farm management information to a broader public and private advisory service mode, addressing topics such as marketing, environmental sustainability, pest diagnostics, and risk management. For a variety of reasons, extension systems have become more pluralistic over time, relying on multiple delivery mechanisms and alternative funding sources. This review assessed new perspectives in the practise of agricultural extension suitable for addressing emergencies arising in the field of agriculture. The recognition and common adoption of a pluralistic model is conceivably the utmost necessary change in African agricultural extension. Extension intervention moved to a broader livelihood framework in which the farmers function to produce more sustainable change. In the new context, agricultural extension, through building farmer capacity to manage their farming enterprise, manage their social and environmental sustainability and to deliberately engage in scientific enquiry in order to help realise sustained enhanced food security and enriched livelihoods for smallholder farmers. It was concluded that without recognised policies, it will be difficult to provide farmers effective support which operates in a context of long-term sustainability. The study recommended the implementation of extension-friendly policies to enhance agricultural sustainability.

**Keywords:** extension, farmer, sustainability, pluralistic, policies



**ASSESSMENT OF TRAINING NEEDS OF N-POWER AGRO-BENEFICIARIES IN KWARA STATE, NIGERIA**

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**ABSTRACT**

Nigeria government had embarked on different programs, which N-power scheme is one of them, aimed for youth empowerments to contribute positively to national Development. Training is essential in for effectiveness and better service delivery. This study therefore assessed the training needs of beneficiaries in Kwara State. Simple random sampling was used to select 216 respondents using a structured questionnaire to collect data and descriptive statistics and Pearson Product Moment Correlation (PPMC) were used to analyze the data. Training of respondents was assessed using job/task, and skill gap analysis. Results showed that most (72.1%) preferred online media platform while pre-service (65.2%) was the major training received. Findings indicated that there is positive significant relationship between the socio-economic characteristics and the effect of the training received by the respondents. The study concluded that N-agro beneficiaries have not been undergoing adequate capacity building training and therefore recommend an aggressive training for better productivity.

**Keywords:** Empowerment, Training, Capacity development, Human resources, Productivity

**INFORMATION NEEDS OF CASSAVA FARMERS IN IBARAPA AREA OF OYO  
STATE, NIGERIA**

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**ABSTRACT**

Agricultural information serves as a pre-requisite and a valuable resource for agricultural development and informs decision to exploit for better opportunities and sustainable solutions. The study assessed the information needs of cassava farmers in the Ibarapa communities of Oyo state, Nigeria. Random sampling technique was used to select 120 cassava farmers. Data were analysed using frequency count, Pearson Product Moment Correlation (PPMC), and Chi-square ( $\chi^2$ ) at  $\alpha= 0.050$ . Findings revealed that most (55.68%) were at their productive age of between 41 – 60 years and majority (65.8%) were male. Result revealed that Fellow farmers (94.1%) and farm associations (90.0%) were the major sources of information on cassava technologies. Majority (100.0%, 98.3%, and 97.5%) of respondents were aware of technologies relating to recommended planting time, pesticides, and improved cassava variety respectively. Also, Majority (89.2%, 82.5%) of the cassava farmers identified information needs on weed control and planting method respectively as very important to their cassava production. Low income from cassava produced and low yield were the major effects of lack of information. Sex ( $\chi^2=12.033$ ,  $p= 0.001$ ), Religion ( $\chi^2= 45.150$ ,  $p=0.000$ ), Education ( $\chi^2=19.267$ ,  $p= 0.000$ ), Age ( $r= 0.029$ ), Farm size ( $r = 0.025$ ) and effect of lack of information ( $r= 0.000$ ) were significantly related to the information needs of cassava farmers. The study concluded that information was a major source and driver of growth, therefore the extension services in rural areas should ensure continuous access to information to cassava farmers to boost food production and rural development.

**Keywords:** Information needs, Cassava farmers, Communities

**COCOA FARMERS' PREFERRED TRAINING DESIGN PROGRAMME ON GOOD  
AGRICULTURAL PRACTICES (GAP) IN ONDO STATE, NIGERIA**

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**ABSTRACT**

Cocoa farmers' preferred training design programme on Good Agricultural Practices (GAP) in cocoa production in Ondo State, Nigeria is the focus of this study. A total of 294 cocoa farmers were the sample size for the study, these were selected through a multi-stage sampling procedure. Descriptive and inferential statistics were used to determine the Cocoa farmers' preferred training design programme on GAP in cocoa production. The study reveals that cocoa farming is male dominated (83.7%), the mean age of the respondents was 51.91 years and 78.0% were married with mean household size stood at 7 members. Primary education was the highest level amongst the respondents (43.5%). The study also revealed significant relationship between cocoa farmers age in years ( $r = 0.138$ ), Age of cocoa farm ( $r = 0.149$ ), number of contact with extension agents ( $r = 0.195$ ) and their training needs at 0.01 level of significance. The study revealed that cocoa farmers preferred practical demonstration method of training and training in groups. They also preferred training at farm site as well as using the local dialect as medium of communication. The study recommended that any agency that will organize training for cocoa farmers should organized it using practical demonstration and small plot adaptative technique, they should also put into consideration farmers' age through using of local dialect as medium of communication.

**Keywords:** Cocoa farmers, Training design, Good Agricultural Practices.

**CONNECTIVITY BETWEEN FARMERS AND VALUE CHAIN ACTORS: A CASE STUDY OF  
HOW HERBACEOUS PLANT FARMERS ARE CONNECTED TO GROCERIES STORES IN  
ONDO STATE**

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**ABSTRACT**

Connectivity between farmers and groceries stores in Nigeria is far below what is obtainable in other developed countries and as a result of this the study focused on how herbaceous farmers are connected with groceries stores. A purposive sampling technique was used to select the herbaceous plant farmers, while Cluster sampling was used to select one cluster from Akure South and Akure North L.G.As. The results revealed that herbaceous plant farmers were educated, young with a mean age of 48years. Findings showed that input supplier ranked first (100%) in the connection of herbaceous plant farmers with groceries stores while Transporters & CIA-GED ranked second & third (96.7% and 96.7%). Increase profitability ( $\bar{x}=4.7$ ) and increase yield ( $\bar{x} = 4.3$ ) are some of the factors that encouraged the farmers to sell to groceries stores. The result of the analysis revealed that there is significant relationship between socio economic characteristics like age ( $p=0.0324 < 0.05$ ), educational level ( $p=0.0431 < 0.05$ ) and farm size ( $p=0.0049 < 0.05$ ) of the farmers and how they are connected to groceries stores. The study concluded that there is need for the State Government and other non-governmental bodies to create awareness and training for farmers on how to get connected with groceries stores other than just selling at the local markets available

**Keywords:** herbaceous plants, groceries stores and value chain actors.

**ASSESSMENT OF HOUSEHOLD CONSUMPTION OF CASSAVA PRODUCTS IN AFIKPO  
NORTH LOCAL GOVERNMENT AREA OF EBONYI STATE, NIGERIA**

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**ABSTRACT**

The study analyzed household consumption of cassava products in Afikpo North Local Government area of Ebonyi state, south-eastern Nigeria. The specific objectives were to; describe the socio-economic characteristics of the respondents; identify the proportion of household income spent on cassava/cassava products and identify the constraints to consumption of cassava/cassava products in the study area. Multistage random sampling technique was employed. Data were collected from ninety (90) consumption households in the area using semi-structured questionnaire. The result identified garri, fufu and tapioca as the various cassava products consumed while garri was perceived by the respondents as the major cassava product consumed in the area. The households were found to consume averagely 6kg of cassava products every month and spend about 58.16% of its income on cassava products per month. In other words, an average household in the area have a relatively high marginal propensity to save (0.58). This means that the mass (in kg) of food stuff is not a real measure of its price

**Keywords:** Household, Cassava Products, Consumption, Close substitutes, Afikpo LGA

**ASSESSMENT OF NON-FARM ACTIVITIES AMONG CROP FARMERS IN EGBEDA LOCAL  
GOVERNMENT AREA OF OYO STATE**

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**ABSTRACT**

This study was conducted to assess non-farm activities among crop farmers in Oyo state. The respondents were predominantly crop farmers in Egbeda Local government. Multistage sampling techniques was used to select 120 respondents. Data were collected from primary source using a well-structured interview guide and analyzed using descriptive and inferential statistics. Results revealed that most (70.0%) of respondent were males within 21-40 years, most (63.3%) were married, had no formal education (56.7%), while majority (79.2%) had agriculture as their major occupation and 79.2% belongs to cooperative society. Result also revealed majority (90.8%) of the respondent agreed that non-farm activities serve as a source of employment. Most (85.8% and 85.0%) of the respondents revealed that serious severe factors militating against the sustainability of non-farm livelihood activities were perceived lack of experience and inadequate capital respectively. There is significant relationship between factor affecting the sustainability of non-farm livelihood activities among crop farmers and benefit associated with non-farm livelihood activities in the study area. The overall finding from the study reveals that most of the respondents were not engaged in non-farming activities. The study further concludes that inadequate capital, lack of experience in non-farm activities, fear of risk, level of education, age of the farmers, mode of income on farm activities, economic instability all had direct and positive effect on the benefits associated with non-farm activities. It is recommended that farmers should intensify their involvement in non-farm activities, so as to serve as alternative source of capital for farm activities

**Keywords:** Occupation, sustainable, farmers, extension services

**UTILIZATION OF MODERN OIL PALM PROCESSING TECHNIQUES BY WOMEN IN  
AKINYELE LOCAL GOVERNMENT AREA, OYO STATE, NIGERIA**

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**ABSTRACT**

This study examined the utilization of modern oil palm processing techniques in Akinyele Local Government area of Oyo state. Multi-stage sampling procedure was used to select a sample size of 120 oil palm processors from 5 out of the 12 wards in the LGA using structured questionnaire to elicit information. Data were analyzed using descriptive and inferential statistics such as frequency and percentages, chi-square and PPMC. Results showed that majority (82.3%) of the respondents in the study were married (82.3%) and practiced Christianity (71.7%) with mean age of 51 years. About 23.0% had adult education with mean household size of 5 persons. About 47.8% of the respondents had no other income generating activity apart from oil palm processing. Also, the mean years of processing experience of respondents in the study area was 14.8 years while majority (95.6%) of the respondents made use of hired labour and 61.9% produced on commercial basis with mean income of ₦20238.94. The study also revealed that dryer (68.1%), oil expeller or extractor (62.8%), sterilizer (61.1%), crusher (58.4%), digester and presser (54.9%), miller (47.8%) and Nut cracker (30.1%) were always available for the use of oil palm processors in the study area with high availability of 69.9%. Respondents' income ( $R=0.433 \leq 0.05$ ), Farm size ( $R=0.968 \leq 0.05$ ) and years of processing experience ( $R=0.258 \leq 0.05$ ) were significant to the utilization of modern facilities of oil palm in the study area. Also respondents' knowledge ( $r=0.300, p<0.05$ ), attitude ( $r=0.546, p>0.05$ ), benefits derived ( $r=0.572, p<0.05$ ) and access to modern facilities ( $r=0.983, p<0.05$ ) were all significant to the utilization of modern facilities for oil palm processing in the study area. It is therefore recommended that Government should assist those with low socio-economic characteristics by providing funds and creating awareness about the modern oil palm processing facilities.

**Keywords:** Utilization, Processing, Techniques

**ADOPTION OF SMART FARMING PRACTICE AMONG WATER MELON FARMERS IN  
YAMALTU-DEBA L.G.A, GOMBE STATE, NIGERIA.**

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**ABSTRACT**

The research was aimed at determining the adoption of smart farming practices and constraints among watermelon farmers in dadin kowa Area. The study was conducted at Dadin-kowa area of Yamaltu-Deba Local Government Area, Gombe State. Data was collected using structured Questionnaires and interview guides/schedule. Descriptive statistic such as frequency and percentage were used to determine the socio-economic characteristics, awareness, interest, trial, performance, decision of smart farming and constraint affecting Smart Agricultural production on watermelon in the study area. The result revealed that majority (96.56%) of the watermelon farmers in the area were male, the majority (28.89%) were in the age range of 51-60 years, 84.44% of the respondents are married, the majority (44.44%) have farm size of 2- 3 acres (0.81 – 1.21 hectares), with the majority (42.22%) in faming experience for 11-15 years, land acquisition mainly (37.78%) through purchased. The result revealed that all the farmers are aware of smart farming with 68.89% interested, for the trial and decision majority (62.22%) tried smart farming and it performed satisfactorily, none of them tried smart farming fully. Diseases management considered the main (88.88%) aspect farmers need more attention on. However, the research also identified that high incidence of pests and diseases are the major constraints which rank 1<sup>st</sup> and followed by the inadequate capital to carryout farming activities. The research recommends that adequate provision of Smart farming materials (devices with simple software applications) especially for pests and diseases management should be identified and/or provided by the farmers in the area at affordable price. Government at all levels, private organizations, NGOs, should keep supporting smart farming practices. Farmers should try to adopt smart farming practices fully, for maximum yield, healthy crops and friendly environment by using smart devices and materials (facilities).

**Keywords:** Evaluation, smart farming, practices



## **THE ROLE OF DEVELOPMENT AGENCIES IN SUSTAINABLE FISHERIES IN KAINJI LAKE BASIN, NIGERIA: A REVIEW**

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### **ABSTRACT**

This paper examined role of development agencies in sustainable fisheries in Kainji lake Basin, Nigeria. The study highlighted fisheries development agencies in Kainji lake Basin, role of fisheries development programmes in the lake Basin and their challenges. The study revealed that West Africa Agricultural Productivity Programme (WAAPP), Gesellschaft für Technische Zusammenarbeit (GTZ) and Federal Department of Fisheries (FDF) were the major stakeholders in fisheries development programme in Kainji lake Basin which had projects with proven positive impacts. This study revealed that introduction of WAAPP has yielded positive result by encouraging increase fish production through pond culture technology dissemination, adoption and promotion of other component of fish value chain. Also, the result showed that GTZ and FDF contributed to the improvement of standard of living of fishing communities around Kainji Basin and provision of resources fisheries research. The study concludes that development agencies have contributed significantly to sustainability of fishery sector in so many ways. Moreover, attention should be given to stable programmes policies and improved funding to ensure continuity. Also, lessons learnt from previous programmes should serve as guide for future fishery policies and programmes inventions. The challenges faced by the development agencies could be traced to poor implementation process.

**Keywords:** Fisheries, Technology, Policies, Programme and Adoption

**CHALLENGES OF THE AGRICULTURAL ENTREPRENEURSHIP TRAINING FOR  
NATIONAL YOUTH CORPS MEMBERS IN ANAMBRA AND ENUGU STATE**

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**ABSTRACT**

The study assessed the agricultural entrepreneurship training for national youth corps members in Anambra and Enugu state, Nigeria. Specifically the study was designed to: assess the perception of the training among youth corps members, assess the level of satisfaction of the youth with the structure and organization of the training and identify the challenges encountered during the training. Purposive sampling technique was used in selecting the orientation camps and proportionate sampling technique was used in selecting the respondents. A total sample size of one hundred and twenty three (123) respondents were used for the study. Data for the study were collected using questionnaire. Perceived challenges of the training were limited number of resources persons (Mean=3.33), inadequate contact with resources persons (Mean= 3.22), more theoretical (Mean=3.06), short duration of the training (Mean=3.37), limited content (Mean=3.33), unconducive teaching/learning environment (Mean=3.34), lack of practical session (Mean=3.12) and tedious and sandwiched (Mean=3.17). The study concluded that short duration of the training was a major challenge encountered during the training followed by unconducive teaching/learning environment.

**Keywords:** Youth, Unemployment, Entrepreneurship and Agricultural Entrepreneurship

**CLIMATE INFORMATION NEEDS OF SMALLHOLDER ARABLE CROP FARMERS IN OGUN STATE: LESSONS FOR CLIMATE INFORMATION DISSEMINATION**

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**ABSTRACT**

This study assessed climate information (CI) needs of 134 smallholder arable crop farmers in Ogun-State, Nigeria, using a multi-stage sampling technique. Interview guide was conducted to identify challenges associated with climate change and CI needs of the farmers. Data were analysed using descriptive statistics, Pearson Product Moment Correlation (PPMC) and t- test. Findings revealed that Majority (82.8%) of the farmers were male while few of the respondents (35.1%) had primary education. The prominent challenges identified were increased incidence of pest and diseases ( $\bar{x} = 2.51$ ) and inadequate rainfall ( $\bar{x} = 2.18$ ). CI highly needed by the farmers was periodic localized weather outlook ( $\bar{x} = 2.49$ ). PPMC showed a significant correlation between smallholder farmers' household size ( $r = 0.04$ ,  $p < 0.05$ ), years spent in formal school ( $r = 0.01$ ,  $p < 0.05$ ) and their information needs. T- test revealed a significant ( $p < 0.01$ ) difference in the information needed by farmers across the study area ( $t = -21.34$ ). The study concluded that the most important climate information needed by the farmers were periodic localized weather outlook, Early Warning System and communication of CI Services through Short Message Services (SMS) on mobile phone in local language. The study recommended the establishment of climate information centres across all rural communities in Nigeria for more effective weather forecast for improved agricultural production.

**Keywords:** Climate change; climate information services; information needs; arable crop farmers

**SUB THEME B - ADAPTIVE RESEARCH AND INNOVATIONS IN AGRICULTURE DURING  
EMERGENCIES**

**SELF-ESTEEM OF AGRICULTURE STUDENTS IN CONVENTIONAL AND AGRICULTURE  
BASED UNIVERSITIES IN SOUTHWESTERN, NIGERIA.**

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**ABSTRACT**

The study investigated self-esteem of Agriculture students of Conventional and agriculture based Universities in Southwestern, Nigeria. Multi-stage sampling procedure was used to select 117 and 124 students for the study in Conventional University and Agriculture based University respectively. A structured questionnaire was used in data collection and analysed with percentages, Chi-square, PPMC and independent t-test at  $p \leq 0.05$ .

The mean age of the students in Conventional University (UI) and Agriculture based University (FUNAAB) were  $21.9 \pm 2.7$  years and  $21.9 \pm 2.6$  years respectively. The students from UI preferred Medicine ( $\bar{X}=1.14$ ), had unfavourable perception (87.2%) towards Agriculture and low self-esteem (85.5%) while students from FUNAAB preferred Agriculture ( $\bar{X}=1.48$ ), had favourable perception (82.7%) towards Agriculture and high self-esteem (89.5%). Self-esteem is significantly related to family structure and preferred course of study in UI while gender and perception towards Agriculture is significantly related to self-esteem of students in FUNAAB. There is significant difference between self-esteem of students in UI and FUNAAB and between 100 level and 500 level students in UI. The study recommended that course Advisers and Counsellors in schools should prioritise and promote careers and opportunities in Agriculture to make it popular, attractive and create awareness on the potentials in Agriculture.

**Keywords:** Self-esteem, Perception, Preferred course, Agricultural students and Career in Agriculture.

**DEVELOPMENT OF ARTISANS' FISH SMOKING MACHINE: INNOVATION IN  
AGRICULTURE**

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### **ABSTRACT**

Components are arranged to develop Artisans Fish Smoking Machine (AFSM). The Artisans Fish Smoking Device operates under Uncontrolled Technology Conditions and saw dust low usage at homes and industries is at significant level. Development phase and performance test phase was limited to physical observations are discussed. Well-dried saw-dust was compressed to full capacity in  $1.25 \times 10^8$  mm<sup>3</sup> biomass stove to achieve smoke temperature at lower cost for desired smoked and cooked fish in 1 h with significant moisture reduction without the use of fan. The Cod fish weight is 5000 g and smoked in a single batch at temperature at which part of the fire screen made from refused corrugated roofing sheets melted. The internal walls and the heat guide were made from it while plywood was used to make the external walls. The micro-environment temperature must be raise before putting the fish. The less dense smoke and heat produced were conducted away from the artisans, a convenient smoking operation during emergency cases. AFSM remaining components are wooden-frame, a stove section, vertical rack and four wooden legs. The interview granted to 25 staff randomly selected in Tai Solarin College of Education (TASCE) after been given the better physical appearance products to eat and satisfactory taste was confirmed. Heat flow control mechanism should be develop and incorporated into AFSM.

**Keywords:** Smoked-fish, Artisans-fish-smoking-machine, Control-technology-conditions, less-costly-fuel, no-fan

**KNOWLEDGE OF EXTENSION AGENTS ON CLIMATE SMART AGRICULTURAL  
INITIATIVES IN SOUTH WEST NIGERIA: IMPLICATION FOR EMERGENCY RURAL  
ADVISORY SERVICES READINESS**

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**ABSTRACT**

The role of agricultural extension in providing emergency advisory services on climate smart agricultural initiatives (CSAI) to farmers for adequate and timely response to adapt and mitigate the effect of climate change remains very crucial. This study examined the knowledge level of extension agents on CSAI. A multi-stage sampling procedure was utilized to collect data from 277 agents in South West Nigeria with the aid of a structured questionnaire. The result showed that extension agents were knowledgeable on crop-mix related climate smart initiatives (56.3%), however, they had a low knowledge level on majority of the water management (59.2%), tillage-smart (53.4%), fossil-burning (94.2%), soil (75.8%), ICT and other technological (98.9%) related initiatives. The study concluded that the potential of these initiatives is still far from being adequately utilized in the study area. This has implications for educating and training extension agents on CSAI. It was recommended that seminars and workshops should be provided for these agents to upgrade their knowledge and capacity on these initiatives as farmers can only be adept to respond adequately in managing climate change risks by scaling up their use of CSAI provided the extension agents are knowledgeable on these initiatives thus making them well positioned to readily respond to emergency call by farmers.

**Keywords:** Climate Smart Agricultural Initiatives, Emergency Extension Services, Extension Agents, Knowledge, Nigeria.

**SOIL SUITABILITY ASSESSMENT FOR *CITRUS SINENSIS* IN SOME PARTS OF LOWER  
WATARI RIVER, KANO STATE, NIGERIA.**

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**ABSTRACT**

Soil samples from lower parts of Watari River at Ungogo Local Government Area, Kano State were collected and analyzed to assess its suitability for *Citrus sinensis* production in the lower parts of the River, and classify it according to the Physical and Chemical Properties present. The results and interpretations of analysis reveal that the soil samples in the study area were well drained, sandy loam and loamy sand in texture, brown to dark brown in color as physical properties, while for chemical properties the analysis reveal that the soil samples were slightly alkaline with pH values ranging from 7.2-7.3 (pH 7.2-7.3). The Electrical conductivity range from 0.38-1.09mmhos/cm. Calcium, Magnesium, Potassium and Sodium are all found in tolerable range. Therefore *Citrus* production in the study area is classified as suitability class two (S2), i.e. suitable with very few limitations that can be manage with good agronomic practices. However the research recommended regular soil testing for monitoring and evaluating the soil for optimum *Citrus* cultivation in the study area.

**Keywords:** assessment, production, suitability



**INTRODUCTION OF IMPROVED VARIETY OF ONIONS (RED CREOLE) AND STORAGE TECHNIQUES IN KWADON VILLAGE OF YAMALTU-DEBA LOCAL GOVERNMENT AREA OF GOMBE STATE, NIGERIA.**

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**ABSTRACT**

The research was conducted during 2019 rainy season at Yamaltu-Deba local government council of Gombe state. The project focused on Kwadon community in an attempt to introduce improved variety of Onion (early maturity, diseased resistant and high yielding), so as to boost the income earning capacity and improve the economic development as well as food security of the nation. Farmers group were used for this research which include Temako multipurpose cooperative society limited Kwadon, Haske multipurpose cooperative society limited Kwadon and Hamdala multipurpose cooperative society limited Kwadon respectively. Ten (10) members were selected from each of the farmers group to represents each group as their active members. Demonstration plot was established and improved agronomic practices were demonstrated. The variety proof to be high yielding with about 78.21% and the technology used in the storage was highly effective and recorded low spoilage percentage.

**Keywords:** Introduction, Variety, Onions, Storage, Techniques.

## **STORAGE TECHNOLOGIES USAGE AMONG MAIZE FARMERS IN KWARA STATE**

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### **ABSTRACT**

Food security remains a cardinal goal of any government, because only a food secure population can participate meaningfully in economic activities of a nation but this is threatened by post-harvest losses. This study therefore, assessed storage technologies usage among maize farmers in Kwara State. Multistage sampling procedure was used to sample 238 maize farmers with the aid of interview schedule. Descriptive statistics and Pearson Product-Moment Correlation was used to analyzed and test for the relationship between socio-economic characteristics of the farmers and the usage of improved maize storage technologies at 1% level of significance level. Result revealed mean age of the maize farmers was 43 years. About 48.0 percent were married and 80.6 percent were male with an average household size of 6 persons. Polythene-lined bags (88.2%) were the most used storage technology and Nigerian Stored Products Research Institute (50.4%) was the main source of maize storage technology. The most ranked constraint was lack of finance to secure the sophisticated storage technologies (WMS = 2.68). Furthermore, about 39.0 percent fell within the moderate level of use of improved maize storage technologies. There was significant relationship between years of experience in farming ( $p = 0.001$ ), annual income ( $p = 0.001$ ) and size of land cultivated ( $p = 0.001$ ) and use of improved maize storage technologies. Use of improved storage technologies was impaired by farmers' financial constraint as well as lack of technological know-how of storage technologies. The study therefore, recommend that farmers should organize to form groups to easily access funds.

**Keywords:** Storage, Improved Technology, Maize

**PERCEIVED EFFECTS OF MIGRATION TYPES ON FARM LABOUR AVAILABILITY  
AMONG RICE FARMERS IN MAMOU, GUINEA CONAKRY**

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**ABSTRACT**

The study assessed Perceived Effects of Migration Types on Farm Labour Availability among Rice Farmers in Mamou, Guinea Conakry. Multistage sampling procedure was used in selecting a total of 140 respondents for the study. Data were collected using interview schedule and analysed using descriptive and inferential statistics. The findings shows that the respondents had mean age of ( $\bar{x} = 46.7$ ), implying that the respondents were still in their productive age, the result also shows that most (68.6%) of the respondents were male, while majority (82.5%) were married, and most (61.4%) of the respondents had no formal education. Radio had ( $\bar{x} = 2.06$ ) was mostly sourced for information on migration. Poverty ( $\bar{x} = 1.98$ ) and good government policy ( $\bar{x} = 1.99$ ) ranked highest as push and pull factors respectively. Voluntary migration ( $\bar{x} = 1.43$ ) ranked highest for migration type with highest effect on farm labour availability. Food insecurity ( $\bar{x} = 1.98$ ) ranked highest as constraint that affect farm labour availability. Mechanised labor ( $\bar{x} = 0.29$ ) was the least available source of farm labour. Significant relationship exist between farm size ( $r = 0.280$ ,  $p = 0.001$ ) unemployment ( $\rho = -0.019$ ), land preparation ( $\rho = -0.219$ ), marriage ( $\rho = -0.178$ ), family and friends ( $\rho = -0.184$ ), availability of raw materials ( $\rho = 0.240$ ). The study recommends the intensification of agricultural mechanization especially in its cooperative form to address labour shortages in rice production in the study area.

**Keywords:** Migration, Farm labour availability and Rice farmers

**AWARENESS OF ROOT KNOT NEMATODE INFESTATION AND MANAGEMENT  
STRATEGIES UTILISED BY SMALL HOLDER TOMATO FARMERS IN SOUTH WEST  
NIGERIA**

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**ABSTRACT**

Root-knot nematodes are major threats to tomato production. Continuous cultivation of tomatoes often results in population build-up of nematodes in the soil which consequently increase crop loss. This study is designed to assess farmers' awareness and management strategies employed in addressing root knot nematode infestation in South West Nigeria. Simple random sampling technique was used to select 224 respondents. Data was collected with the aid of a structured interview schedule. Field observations were also employed to complement the method of data collection. Descriptive statistics such as frequency and percentages were used to analyze the data. Results revealed that majority (80.4%) of the respondents were male, with an average age of  $41 \pm 9.7$  years. The average years of farming experience and farm size were  $8.8 \pm 5.8$  years and  $2.2 \pm 1.4$  hectares, respectively. Majority (95.9%) of the respondents were aware of root knot nematode infestation. Level of nematode infestation was high (88.4%). Cultural methods such as crop rotation (97.6%) and neem plants (62.9%) were mostly used by the respondents to manage the root-knot nematode infestation in tomato farms. The study recommended the need for improved varieties and an integrated pest management to address the devastation of root knot nematode infestation in tomato farms.

**Keywords:** Root-knot nematodes, awareness, Management strategies, Tomato farmers

**CONTRIBUTION OF BAMBOO (*BAMBUSA VULGARIS*) PRODUCTION TO HOUSEHOLD INCOME AND REVENUE GENERATION IN EDO STATE.**

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**ABSTRACT**

The study assesses the contribution of bamboo to household income, government revenue and to identify the constraints to sustainable development of Bamboo production in Edo. A combination of purposive and random sampling techniques was used to administer structured questionnaire to 80 farmers, 5 staffs of the state forestry department and 25 registered bamboo merchants. The data were analyzed using descriptive statistics. A Bamboo contractors' monthly income ranged between ₦37,000 to ₦55,500. Only 38.75% of the respondents used bamboo for cooking. 70% of the respondents had bamboo grown around their farm and 75.32% claimed that bamboo increased crop productivity. The Bamboo based organizations paid a fixed sum of ₦200,000 to the government monthly as tax. Results from the study, showed that the association generated between 2.4 million naira to 3.6 million naira net income in a month; however, only little percent of the revenue generated are remitted to the government. The lack of inventory data, loss of bamboo cover to urban development and agricultural practices among others were some of the constraints identified. It is therefore recommended that there is a need to create a more effective model by government for effective monitoring and management of revenue collection in the state.

**Keywords:** *Bamboo, Constraints, Livelihood, Revenue, Sustainability*

**CLIMATE VARIABILITY MITIGATION AND ADAPTATION MEASURES UTILIZED BY  
ARABLE FARMERS IN SOUTHEAST NIGERIA**

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**ABSTRACT**

The study assesses the effect of climate variability on the yield of arable crops in the three selected states of the southeast. Especially the study identified the mitigation and adaptation measure use by the arable farmers. Five hundred and sixty (560) arable farmers were randomly sampled from three States of the Southeast Nigeria. Data were collected with the aid of questionnaire. Data collected were analyzed using frequency and percentage. The major mitigation measures used by arable crop farmers also practices were crop rotation (89.7%), avoidance of bush burning (87.5%) and planting cover crops (86.8%). Almost all (94.06%) were plating early maturing crops and (91.0%) and were changing planting date adaption measures. The study recommends that farmers should plant early maturing crops, be mindful of the planting date avoid bush burning always plant cover crops and also make use of the other mitigation and adaptation measures that were found helpful in ameliorate the effect of climate variability

**Keywords:** Climate Variability, Adaptation; Mitigation measures', Arable farmers

**EFFECT OF CLIMATE CHANGE: RAINFALL DISTRIBUTION AND RICE PRODUCTION IN  
AFIKPO NORTH LOCAL GOVERNMENT AREA OF EBONYI STATE, NIGERIA**

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**ABSTRACT**

The aim of this research was to generate information/data on rainfall distribution in Afikpo North Local Government Area of Ebonyi State, Nigeria from 2017 - 2018. The LGA constitutes of twelve Autonomous Communities (ACs) and out of which ten (10) ACs which was about 80 % of the ACs was randomly selected. To record the parameters required for the field work, two (2) Field Assistants (FAs) were purposively selected from the randomly selected ACs to give a total of 20 FAs. The result of this research will provide the guide with which to suggest to farmers on how to probably plan their farming activities in the future to, among others, help reduce losses of farm produce and other farm resources. The data generated were analyzed using table and descriptive statistics. The result shows that the rains now start early in the year (between the month of July and March) rather than in the usual month of April which shows that there has been “deviation” from the usual time of commencement of rainfall. The result also shows that there was absence of the popular two peaks of rainfall, “Double Maxima”, in the months of July and September and heavy downpours were experienced between the months of July and August. Adaptation Strategies suggested, among others, include shifting the time for cultivation of rice.

Recommendations, among others, include that farmers should “shift” the planting dates of rice and construct water channels to serve as source of irrigation.

**Keywords:** Rainfall Distribution, Rice Production, Climate Change, Adaptation Strategies.

## **USE OF MANAGEMENT PRACTICES FOR CLIMATE VARIATION AMONG RICE FARMERS IN NIGER STATE, NIGERIA**

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### **ABSTRACT**

The study assessed rice farmers' perception of management practices for climate variations; determined the extent of use; identified farmers' training needs and constraints to the use of the practices. A two-stage random sampling technique was used to select 152 respondents. Data were analysed using Pearson's Product Moment Correlation and Multiple Regression Analysis. Farmers' mean age, experience, and annual income were 44years, 22years and ₦551,800.00, respectively. Farmers' attitude was poor (MS=2.22), and use was low (MS=2.74). Major areas of training need were the use of improved rice varieties and adjustment of cultivation calendar. Poor access to meteorological information was the major constraint to use of management practices. At  $p \leq 0.05$ , sex (B=0.178), education (B=0.013), frequency of extension contacts (B=0.036) and membership of farmer-groups (B=0.216) determined the use of the management practices. Farmers' training needs had an inverse relationship with the use of management practices. The study concluded that the level of use of management practices among farmers was low. It recommends the establishment of information centers by the Nigerian Meteorological Agency in rural areas. Farmers should also be trained in the identification and cultivation of improved rice varieties and the use of meteorological information to guide against seasonal variations.

**Keywords:** Climate, Variation; Management; Practices.



**CONSTRAINTS IN UTILIZATION OF CASSAVA PROCESSING TECHNIQUES  
AMONGST AGRO-FORESTRY FARMERS IN EDO STATE, NIGERIA**

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**ABSTRACTS**

Nigeria possesses enormous potentials in cassava production. However, it is still largely dependent on some approaches which pose major challenges in its utilization and processing techniques as a result of inherent difficulties which underscore the vulnerability gaps to post harvest losses. The study was carried out to investigate the constraints in utilization of cassava processing techniques among agroforestry farmers in Edo state. One hundred and fifty farmers were selected using simple random sampling technique. The data was analyzed using descriptive and inferential statistics. The findings of the study revealed that credit facilities played key role in the socio economic characteristics in the perceived effects in the utilization of the processing technique. The study revealed that constraints faced by the farmers were the techniques being expensive with a mean value of ( $X = 2.46$ ); the techniques having high labour requirement with a mean value of ( $X = 2.35$ ). Chi square analysis revealed there was no significant relationship ( $p > 0.05$ ) between marital status ( $X^2 = 0.733$ ) religion ( $X^2 = 2.701$ ) and the effectiveness in the utilization of the technique. Also, Sex ( $X^2 = 10.45$ ) and labour size ( $X^2 = 32.729$ ) showed a positive significant relationship with effectiveness of the utilization of the technique. Furthermore, correlation analysis revealed there was no significant relationship ( $p > 0.05$ ) between that cassava processing techniques and the effectiveness of the utilization of the technique ( $-0.175$ ). It is hoped that government should greatly assist farmers to become more integrated into the overall value chain development.

**Key words:** Cassava, Constraints, Utilization, Processing Technique.

## **DETERMINANTS OF SOCIO-ECONOMIC STATUS OF RURAL HOUSEHOLDS IN SOUTHWESTERN NIGERIA**

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### **ABSTRACT**

The study investigated the determinants of socio-economic status among rural households in Southwestern Nigeria. A multi stage sampling procedure was used to select 348 respondents for the study. Data was collected using interview schedule and analysed using descriptive and inferential statistics. Results reveal that majority of the respondents have formal education (86.6%), 56.8% were male and 52.1% belonged to co-operative societies, with a mean age, years of enterprise experience and monthly income of 43.0years, 13.4years and ₦18728.53 respectively. The major livelihood activities of the respondents included farming ( $x = 0.51$ ), processing activities ( $x = 0.22$ ), and formal employment in their locality ( $x = 0.19$ ). However, 71% of the respondents had moderate socio-economic status. Significant relationship existed between respondents age ( $r = 0.124$ ,  $p = 0.020$ ), household size ( $r = 0.238$ ,  $p = 0.000$ ), marital status ( $\chi^2 = 9.888$ ,  $p = 0.020$ ) and socio-economic status. The determinants of socio-economic status of the respondents included age ( $\beta = 0.148$ ,  $p = 0.011$ ), household size ( $\beta = 0.228$ ,  $p = 0.000$ ), educational status ( $\beta = 0.123$ ,  $p = 0.012$ ) and livelihood activities ( $\beta = 0.329$ ,  $p = 0.000$ ). The study concludes that age, household size and livelihood activities are the major determinants of socio-economic status of rural households. The study therefore recommends that any effort that will improve the livelihood activities of rural households such that younger generations will find rural areas attractive and provide gainful employment for them should be put in place.

**Keywords:** Determinants, Socio-economic status, rural dwellers

**ARABLE CROP FARMERS' PERCEPTION OF INVOLVEMENT IN NON-FARM ACTIVITIES  
IN ONDO STATE. NIGERIA.**

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**ABSTRACT**

The study assessed arable crop farmers' perception of involvement in non-farm activities in Ondo State, Nigeria. A multistage sampling procedure was used to select 210 respondents. The data were collected through a structured interview schedule and analysed using frequency counts, percentage, mean, chi-square test and Pearson Product Moment Correlation (PPMC). Findings revealed that the mean age of the respondents was 55 years and the majority (67.9%) of the respondents were male. Majority (87.1%) of the respondents were involved in non-farm activities. While the majority (64.2%) were involved throughout the season. Inadequate finance (mean=1.56) ranked 1st in the constraint to arable farmers' involvement in non-farm activities. At  $p < 0.05$ , there was a significant association between educational level ( $\chi^2 = 15.6$ ;  $p = 0.01$ ), Source of Credit ( $\chi^2 = 3.7$ ;  $p = 0.05$ ), perception of arable farmers on involvement in non-farm activities ( $r = -0.1$ ,  $p < 0.05$ ). The study concluded that alongside side efforts to improve agriculture, there is a need for diversification into the non-farm economy. Hence, in ensuring a sustainable pathway to boosting productivity and ameliorating the menace of poverty and food insecurity in Nigeria, a broader rural development strategy that includes both farm and non-farm activities must be adopted by farmers.

**Keywords:** Non-farm activities, arable farmers, perception, involvement

**SUB THEME C - INSTITUTIONAL ADAPTATIONS DURING EMERGENCIES**

**COVID-19 PANDEMIC: A REVIEW OF ITS IMPLICATION ON THE NIGERIA  
AGRICULTURE AND THE ROLE OF EXTENSION**

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**ABSTRACT**

The paper focused on COVID-19 pandemic: a review of its implication on the Nigeria agriculture and the role of extension. The purpose was to review the impact of the pandemic on the Nigeria agriculture and also to narrate the implication for agricultural extension service. Being a review, data was drawn from verified websites, research papers, journals, statistical bulletins and other online materials. The review uncovered a subtle but undeniable negative impact on all the value chain of the Nigeria agriculture. Also, with enough evidence, there is likelihood of possible food catastrophe if concerted action is not taken to save the sector. One of the most important factors that may avert this negative impact in agricultural extension service. But in this time of global lock, travel ban and social distancing, the way out becomes technology. Thus, from the review, it was concluded that government and institutions at all levels should intentional deploy technology tools to aid effective agricultural extension service transmission to farmers.

**Keywords:** COVID-19, Impact, Agriculture, Extension, Nigeria.

**PERFORMANCE OF AGRICULTURAL EXTENSION SERVICES AT ENHANCING MARKET-ORIENTED COCOA FARMERS IN IFE-EAST LOCAL GOVERNMENT AREA OF OSUN STATE, NIGERIA**

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The dynamic produce market pose a threat to the survival of smallholder farmers. This is mainly because this category of farmers lacks necessary marketing skills. It is therefore pertinent for agricultural extension services to ensure that farmers are trained on being market-oriented to compete favorably with other relevant actors within the agricultural sector. The extent to which agricultural extension is rendering this support to farmers along cocoa value chain formed the basis for this study. Multi-stage sampling technique was used to sample 76 cocoa farmers in Ife-East Local Government Area of Osun State. Radio was the mostly used (92.1%) extension communication channel by the extension agents. Training on production techniques ( $\bar{x} = 3.62$ ), establishing linkage with input supplies ( $\bar{x} = 3.56$ ) and tailored marketing production ( $\bar{x} = 3.53$ ) were the mostly performed activities by the extension agents. There was high level of trust for cooperative leadership ( $\bar{x} = 1.86$ ) and extension services ( $\bar{x} = 1.81$ ). There was no significant relationship ( $r = -0.037$ ,  $p = 0.937$ ) between the activities performed by the extension agents and level of trust among the stakeholders. It is recommended that beyond training, extension agents should facilitate linkages of farmers with relevant stakeholders to achieve mutual trust and participation.

**Keywords:** Agricultural extension services, Cocoa production, Market-oriented, Smallholder farmers.

**FACTORS INFLUENCING COMMUNITY PARTICIPATION IN THE CONSERVATION OF  
FOREST RESOURCES IN ENUGU NORTH SENATORIAL ZONE OF ENUGU STATE,  
NIGERIA**

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**ABSTRACT**

This study assessed factors influencing community participation in forest conservation in Enugu North Senatorial Zone, Enugu State, Nigeria. The study specifically ascertained the factors influencing community participation; examined the challenges of rural community participation in conservation of forest resources and identified ways to enhance community participation. Multi-stage sampling technique was used to select 120 respondents. The data were obtained using structured questionnaire and analyzed using descriptive statistics and multiple regression analysis. Foremost among factors influencing community participation were age and health problem ( $\bar{x}= 3.49$ ); Lack of technical ability to do so ( $\bar{x}=3.37$ ) which were ranked 1<sup>st</sup> and 2<sup>nd</sup> respectively. However, challenges of community participation in conservation of forest resources include poor funding ( $\bar{x}=3.40$ ) and inadequate local people's involvement in conservation decisions ( $\bar{x} =3.85$ ). Also, a grand mean of 3.91 showed that sharing in benefit and management responsibilities could enhance participation. Rural community members have good perceptions about forest conservation with a grand mean of 2.82. The F-value 2.27 obtained from multiple regression analysis showed that factors influencing participation, poor income hence resorting to indiscriminate forest resources use and conflict were positive and significant at 5% level, implying that those factors influence the rural community participation in conservation of forest resources in the study area hence, rejecting the null hypothesis. The study concludes that there are several factors upon which community participation is dependent and recommends involvement of rural community members in conservation of forest resources.

**Keyword:** Forest, participation, conservation, resources

**EXTENSION METHODS UTILIZED BY AGRICULTURAL DEVELOPMENT PROGRAMMES  
IN SOUTH WEST NIGERIA: IMPLICATIONS FOR EXTENSION DELIVERY IN  
EMERGENCIES**

**ABSTRACT**

If the success of extension activity can be determined by the efficiency of communicating useful ideas to the people using appropriate methods, then the current methods used by the Nigerian public extension service needs to be examined in the light of global crises and emergencies. The study examined the level of utilisation of extension methods in the Agricultural Development Programmes of south west Nigeria. A multistage and random sampling procedure was used to select 120 extension agents. Questionnaires were used to gather information and they were analysed using descriptive and inferential statistics. The levels of utilization of various methods were ascertained and self-appraised competencies determined. Group (59.0%) and Mass media (66.0%) methods were highly utilised. Face to face method (62.5%) was prominent among the feedback mechanisms. Competencies was average for all methods (50%). At 0.05 level of significance, years of experience ( $r = 0.25$ ) and level of competency ( $r = 0.46$ ) significantly influenced utilization of extension methods. The findings underscores the need to introduce more ICT based methods for extension delivery in south west Nigeria to be able to cope during emergencies.

**Keywords:** Extension methods, Competencies, Feedback, ICT's, ADP's



## **NIGERIA'S PREPAREDNESS AND POLICY RESPONSES TO MITIGATING THE IMPACT OF COVID-19 ON RURAL LIVELIHOODS**

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### **ABSTRACT**

The outbreak of COVID-19 has not only affected the health of populations globally but also threatened the socio-economic activities of millions of people, especially rural and vulnerable populations who depend on agriculture for their livelihoods. Globally, about 63% of the world's poor derive their livelihood from agriculture, with most of them practicing small-scale farming. In Nigeria, the impact of the disease outbreak has greatly affected millions of rural families due to the measures that were imposed to contain the spread of the virus in the country. With over 40% of the Nigerian population living below the national poverty line, and rural poverty is as high as 52.1%, adapting measures that mitigate the impact of the disease on the populace becomes imperative. This study examined the preparedness of Nigeria in tackling COVID-19 in terms of human development, healthcare, and communication access; the disease impact on agricultural systems, and the policy responses of the government towards mitigating the impact of the disease using secondary data sources. The study concluded that policy responses of the government hardly addressed the impact of COVID-19 on rural households and recommended that the government should provide adequate social protection measures for rural households.

**Keywords:** Nigeria, Preparedness, Policy Responses, COVID-19, Rural livelihoods

**EFFECTS OF WORKPLACE CONDITIONS ON EMPLOYEES' JOB PERFORMANCE:  
EVIDENCE FROM AGRICULTURAL ORGANIZATIONS IN OYO AND OGUN STATE,  
NIGERIA**

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**ABSTRACT**

The environment and conditions in which employees work, have been found to have positive or negative effects on job performance and in some cases can lead to intention of employees to leave jobs. This study therefore assessed the effects of workplace conditions on employees' job performance in some agricultural based organizations in Ogun and Oyo States, Nigeria. A multistage and random sampling procedures were used for data collection from 222 employees. Data were collected through a structured questionnaire and were analyzed using descriptive and inferential statistical tools. Results revealed that the mean age of respondents was 39.6 years and that majority (55.0%) of the respondents were male and married (67.1%). Also, most workplace conditional indicators identified in study area were: Top management styles ( $\bar{x} = 3.73$ ), relationship with co-workers ( $\bar{x} = 3.67$ ), job security ( $\bar{x} = 3.65$ ), building of employee's esteem ( $\bar{x} = 3.58$ ) and working hour ( $\bar{x} = 3.50$ ). The hierarchical regression analyses results indicated that overall job performance was significantly related to job security and safety ( $b_1 = 4.531, p < 0.05$ ), working hour ( $b_1 = 1.734, p < 0.05$ ), relationship with co-worker ( $b_1 = 2.135, p < 0.05$ ), esteem needs ( $b_1 = 1.987, p < 0.05$ ) and top management styles ( $b_1 = 1.734, p < 0.05$ ). It was concluded that workplace conditions indicators had positive effects on job performance. It was therefore recommended that organisations should always consider workplace conditions as a major factor for achieving organizational goals.

**Keywords:** Workplace, condition, job performance, effects and agricultural Organization

**PERCEIVED EFFECTS OF WORKPLACE CONFLICT ON EMPLOYEES' PERFORMANCE IN  
AGRO-SERVICES CORPORATION (OGASC), OGUN STATE, NIGERIA**

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**ABSTRACT**

The study analysed the perceived effects of workplace conflict on employees' job performance in Ogun State Agro-services Corporation. Multistage sampling technique was used to select 77 respondents. None appreciation of staff prerogative on problems as at when necessary and lack of good communication network were the major perceived causes of conflict in OGASC with highest mean ranking of 3.43 each respectively. Findings revealed that, management resolution strategy 'management do not take payment of pension and gratuity with levity' ( $\bar{x}=4.17$ ) has the highest mean ranking. 80.6% respondents affirmed that they are satisfied with their relationship with co-workers, while 74.1% of the respondents affirmed that, there is significant level of team spirit among employees. Also, respondents have high (40.3%) and low (23.4%) level of satisfaction in the presence of functional staff union to minimise conflict, while 60% of the respondents have relatively low level of satisfaction towards the existence of favoritism in the corporation. The study found that a significant relationship between socio-economic characteristics and job performance at  $p<0.05$ . Similarly, resolution strategies in OGASC is significantly related to job performance( $r= 0.401$ ,  $p\text{-value}=0.001$ ), while challenges of workplace conflict also relates with job performance( $r=0.541$ ,  $p\text{-value}=0.001$ ).

**Keywords:** Workplace Conflict, Employee Performance, Conflict Resolution, OGASC.

**EFFECTS OF LEADERSHIP STYLES ON EMPLOYEES' TURNOVER IN FEDERAL  
INSTITUTE OF INDUSTRIAL RESEARCH, LAGOS STATE**

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**ABSTRACT**

Employees' turnover in many organisations in Nigeria is quite high due to a number of reasons, key among which is poor leadership. This study identified level of turnover, association between socioeconomic factors and employees' turnover. The study also estimated the influence of leadership style on employees' turnover at Federal Institute of Industrial Research, Oshodi (FIIRO). Data collection was done by administering 115questionnairesthroughsimple random sampling technique. Data collected were analysed using descriptive statistics, Chi-square, PPMC and multiple regression analyses. Result of Chi-square test revealed staff status had negative association with employee turnover. PPMC showed staff salary had a negative association with employee turnover. Further, findings revealed that laissez-faire, transactional and transformational leadership styles had mean of ( $\bar{x}$ = 3.76,  $\bar{x}$ = 3.59 and  $\bar{x}$ = 3.54) respectively with laissez-faire leadership style being the dominant style. Results of the multiple regression indicated a unit increase in transactional leadership styles implies 0.471 increase in employee turnover while a unit increase in transformational leadership style implies 0.34 increase in employee turnover in FIIRO. Turnover levels can be reduced to the barest minimum if staff salary and leadership styles are improved upon.

**Keywords:** Employee Turnover, Transactional Leadership style, Transformational Leadership style, Laissez-faire Leadership style, FIIRO

## **ADAPTATION STRATEGIES TO LAND GRABBING AMONG AGRIPRENEURS IN LAGOS NIGERIA**

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### **ABSTRACT**

Land grabbing is a serious issue that affect the environment, economy, social welfare and human rights. The study identified adaptation strategies to land grabbing among agripreneur using three stage sampling technique. The first stage was purposive selection of Ibeju Lekki and Ikorodu Local Governments. Second stage selection of communities mostly affected by land grabbing activities; and third stage involved use of snow ball technique to select sixty respondents. Data collected through interview schedule were analyzed using descriptive statistics. Results showed that majorities (91.7%) of the agripreneurs were male and most were within the age range of 51-60 years. More than half (65%) had at least primary education which reflected in their adaptation strategies. Increase urbanization (48.3%) account for major cause of land grabbing. 45% of the respondents attest to loss of fertile land as the major challenge. Building and construction (60%) were most effective as preventive measure. Change in farming system was the coping strategies adopted after the land had been grabbed by most (83.3%) respondents. Petty trading (53.3%) was adopted as strategy at the long run. The chi-Square analysis showed that there was a significant relationship between education status ( $X= 11.7$ ,  $P=0.01$ ) and coping strategies unlike other socioeconomic characteristics. In conclusion land grabbing is gradually driving agricultural production into extinction in these Local Government Areas mostly known for agricultural production. The study recommended intervention of government by promulgation and enforcement of law in favour of agricultural production.

Keywords: Adaptation, Agripreneurs, Land grabbing, Strategies.

**ASSESSMENT OF AGRICULTURAL EXTENSION SERVICE CAPACITY ADAPTATION AND  
MAINTENANCE OF CRITICAL SERVICES DURING PANDEMIC IN AKWA IBOM STATE**

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**ABSTRACT**

The study assessed the extent to which agricultural extension agency in Akwa Ibom State has adjusted the system's capacity to adapt to pandemic as COVID-19. Are the extension agents still discharging critical services? What are the dimensions and mechanism of services and what challenges are the extension agents facing in rendering services to their clients in the pandemic season. key-informant interview with the Programme Manager (PM) and a survey of 79 extension agents revealed that, adjustment of the system to the new normal occasioned by COVID-19 has been quite challenging. Majority of the extension agents (91.7%) revealed that they can only reach the farmers through phone calls and text messages while few agents (34.7%) admitted to occasionally seeing the farmers to train and advise them on farm practices that will keep them safe from the impact of COVID-19. Majority (87.8%) of the agents reported lack of access to digital technology, dilapidated facilities, as well as limited COVID-19 coping skills as the major challenges they are facing. Extension workers need capacity strengthening and the use of right tools and channels to provide tailored extension services in the face of pandemic.

**Keywords:** Assessment; Agricultural Extension Service; Capacity Adaptation; Critical Services; Pandemic; Akwa Ibom State.

**EFFECTS OF COVID-19 PANDEMIC ON POULTRY FARMERS IN OYO STATE:  
ADAPTATION STRATEGIES AND ROLE OF INSTITUTIONS**

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**ABSTRACT**

This study examined the effects of COVID-19 pandemic on Poultry Farmers in Oyo state. Data on effects of lockdown, farmer's revenue before and during the lockdown, coping strategies and role of Poultry Farmers Association (PAN) were collected and analysed. Multistage sampling procedure was employed to select five Key Informant and Focus Group Discussion respectively. The effects of pandemic in severity order include, poor marketing due to collapse of the standard delivery system; glut of the poultry products, burying of unsold eggs; shock related death of some farmers, laying stock reduction and folding up of the enterprise which has led to drastic reduction of about 80% of farmers' revenue. However, the coping strategies employed were sourcing financial support from cooperative societies, sold produce on credit and sourcing ICT-based marketing information. The role played by PAN include taking exemption letter from Inspector general of police (Police wireless message) to move poultry products for sale; mediating unfavourable government taxation and relevant information dissemination via WhatsApp group platform. Since the associated emergency are putting pressure on poultry farmers, hence, the need to develop an emergencies-smart resilience programme for the poultry industry.

**Keywords:** Emergency-smart resilience programme, poultry marketing, ICT-based marketing information, unfavourable government taxation.

**ASSESSMENT OF USE OF AGROFORESTRY IN ENSURING FOOD SECURITY IN  
ILEOLUJI/OKEIGBO LOCAL GOVERNMENT AREA OF ONDO STATE, NIGERIA**

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**ABSTRACT**

This study investigated the assessment of use of agroforestry in ensuring food security in Ileoluji/Okeigbo Local Government Area, Ondo State. Multi-stage sampling technique was used to select 120 farmers and data were obtained with the use of a well-structured interview schedule. Data analysis was carried out with the use of descriptive statistical tools such as frequency counts, percentages and weighted mean score, while inferential statistical tool used to test the stated hypothesis was Pearson product moment correlation. The study reveals that above average of the respondents were below 50 years of age, most (71.7%) of the respondents were male while majority (72.3%) have vast experience in agroforestry. It was indicated by all (100.0%) of the respondents that agroforestry are useful and it has contributed to food security. Also, all (100.0%) of the respondents encountered various constraints in the use of agroforestry for food security. It was established that significant relationship exist between socioeconomic characteristics such as (age  $r=0.267^{**}$ ,  $p<0.003$ ), household ( $r=0.267^{**}$ ,  $p<0.003$ ), educational level ( $r=0.407^{**}$ ,  $p<0.00$ ) and years of experience ( $r=0.524^{**}$ ,  $p<0.00$ ) and the assessment of use of agroforestry in ensuring food security. The study concluded that farmers in the study area affirmed the usefulness of agroforestry to food security. It is recommended that agroforestry practice should be consolidated on, to aid protection of farmland, improve and sustain soil fertility for high crop yield.

**Keywords:** Agroforestry, Food security and Soil fertility



**SUB- THEME D - FARM HUSBANDRY ADJUSTMENTS DURING EMERGENCIES**

## **ENTERPRISE TRAINING NEEDS OF POULTRY FARMERS' DURING COVID-19 PANDEMIC IN ENUGU STATE, NIGERIA**

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### **ABSTRACT**

The study investigated the enterprise training needs of poultry farmers during COVID-19 Pandemic in Enugu State, Nigeria. Multistage sampling technique was used to select one hundred and eight (108) respondents from the six agricultural zones in the State. Data were collected using semi-structured interview schedule and analyzed using descriptive and inferential statistics such as Percentages, frequency counts and multiple liner regression analysis. Findings indicate that (100.0%) of the respondents produced live chicken alone, 88% indicates that they never had any visits from extension agents before and during COVID\_19 Pandemic. Also, results revealed that the cost of feeds increased during the Pandemic. In addition, the major identified constraints faced by the respondents during pandemic were; scarcity of trained labour ( $\bar{x}=3.76$ ), theft ( $\bar{x}=3.63$ ), rotting of eggs ( $\bar{x}=3.55$ ) and shortage of feeds ( $\bar{x}=3.52$ ). Results also show that flow of funds (98.1%) and feed formulations (73.1%) were the major areas where training are needed. One sample t-test indicates that there was a significant difference ( $t=-24.738$ ,  $p=\leq 0.005$ ) between the cost of feed before and during the COVID-19 pandemic. In conclusion farmers during the pandemic faced a lot of challenges which lead to loss in enterprise capital. The study recommends that extension agents should train farmers on feed formulation so that they can be able to produce the feed they need during emergencies like COVID 19. Government should make available agricultural grants to farmers which will enable them bounce back especially during emergencies.

**Keywords:** COVID-19 pandemic, emergencies, training needs, poultry production

## **EFFECTIVENESS OF COPING STRATEGIES USED BY POULTRY FARMERS DURING COVID-19 PANDEMIC IN ENUGU STATE, NIGERIA**

### **ABSTRACT**

The study assessed the effectiveness of coping strategies used by poultry farmers during COVID 19 Pandemic in Enugu State, Nigeria. Multistage sampling technique was used to select one hundred and eight (108) respondents from the six agricultural zones in the State. Data were collected using semi-structured interview schedule. Percentage, frequency, mean scores and multiple linear regression were used in data analysis. Greater proportion (42.6%) of the respondents were between the age of 32 and 41years, the most (60.2%) of the respondents attended tertiary education, and majority (78.7%) of the respondents had 1-10 years farming experience. The coping strategies used by the respondents were sales to middlemen (=0.87), delivering of birds to customers (=0.79), and sales of poultry waste to crop farmers as manure (=0.88). The most effective coping strategies were sales of poultry waste to fish farmers as feed ingredients (= 3.76, SD 0.722), respondents also indicated giving waste freely to interested farm workers (= 3.60, SD 0.864) as one of the coping strategies and delivering of eggs to customers (= 3.43, SD 1.146). Results also show that there was a significant difference ( $t=2.203$ ,  $p \leq 0.005$ ) between income before and during COVID 19 Pandemic, also there was a significant difference ( $t=2.136$ ,  $p \leq 0.005$ ) between the price of day old chick before and during COVID 19 Pandemic. The study recommends that extension should provide an effective link between poultry farmers and more input and output markets of poultry products so that they can be able to cope effectively during emergencies like COVID 19 Pandemic.

**Keywords:** COVID-19, Emergencies, Poultry farmers, Coping strategies.

**ASSESSMENT OF WEST AFRICA AGRICULTURAL PRODUCTIVITY PROGRAMME  
BENEFITS TO FISHERFOLKS IN KAINJI LAKE BASIN, NIGERIA**

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**ABSTRACT**

A wide spectrum of programmes had been undertaken so far to improve productivity and ensure improved quality of life for the rural population especially those below the poverty line. While some programmes have been acknowledged to have yielded the expected results, many others were ephemeral. The study assessed the benefits of West Africa Agricultural Productivity Programme (WAAPP) through inputs, training and services received; attitude; satisfaction; and constraints of respondents in WAAPP. Purposive sampling procedure was used for this study. Four NIFFR adopted villages were selected purposively to include: Monai, Mussawa, Tunga Alhaji Dambaba, and Cover Dam out of 8 established villages at 50% as at the time of this study due to large number of WAAPP activities in the area. The total number of respondents sampled in selected adopted villages were 120. Primary data was used for this study and these were collected through the use of semi-structured interview schedule. Data collected were analysed using descriptive statistics, namely, frequency distribution, percentages and mean. Results of the study revealed that majority (88.2%) of the respondents received improved fingerlings and fish feeds from WAAPP and the attitude towards WAAPP was favourable for 67.6% of the respondents. The level of satisfaction with WAAPP was favourable for 58.8% of the respondents while more than half (55.9%) of them derived high level of benefit from the programme. Though the study shows that respondents benefit from the WAAPP programme, yet about half (47.1%) of the fisherfolks are being severely constrained by inadequate capital to sustain the programme projects.

**Keywords:** Poverty; Productivity; Adopted; Village and Programme

**KNOWLEDGE AND UTILISATION OF INDIGENOUS PRACTICES IN SMALL RUMINANT PRODUCTION AMONG RURAL WOMEN DURING EMERGENCIES IN SOUTHWESTERN NIGERIA**

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**ABSTRACT**

Application of Indigenous Knowledge (IK) in agriculture helps rural communities to optimize resources and consequently addresses rural poverty. The use of IK in small ruminant production is invaluable especially during emergencies like Covid-19 lockdown. There is a dearth of information on knowledge of indigenous practices in small ruminant production by rural women hence; knowledge and utilisation of indigenous practices in small ruminant production among rural women during emergencies in southwestern Nigeria was investigated. A multi-stage sampling procedure was used to select 220 respondents in the study area and information was gathered on indigenous management, nutrition and health practices of small ruminant farmers. Data were analysed using descriptive and inferential statistics. Average number of animals owned by respondents was  $8.83 \pm 7.41$ . Knowledge on management, nutrition and health practices of animals were 30.5%, 68.6% and 10.0%, respectively. Overall knowledge of indigenous practices of small ruminant production was 56.8% and utilisation was 47.7%. The correlation analysis for both knowledge on management ( $r=0.078$ ;  $p>0.05$ ) and nutrition ( $r=0.016$ ;  $p>0.05$ ) were not significantly related to utilisation of IK. However, knowledge on health ( $r=0.245$ ;  $p<0.01$ ) showed a positive significant relationship with utilisation of IK. Knowledge of indigenous practices affects utilisation in small ruminant production during emergencies.

**Keywords:** Indigenous knowledge, Small ruminant production, rural women, Poverty alleviation

## **CONTRIBUTION OF GOAT PRODUCTS TO THE WELLBEING OF RURAL WOMEN IN OGUN STATE, NIGERIA**

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### **ABSTRACT**

Women, generally contribute more to the agricultural labour force, food production and care of livestock activities in the country. The study focused on the contribution of goat products to the wellbeing of rural women in Ogun state. Multistage sampling procedure was used to select 120 respondents. The study described rural women socioeconomic characteristics, identify goat products realized and the extent of utilization of goat products likewise the contribution of the products to their wellbeing activities. Data were collected from primary source using a well-structured interview guide and analyzed using descriptive and inferential statistics. Results revealed mean ages of 44 years (41.5%), most (64.6%) respondents were married with mean years of experience being 6years. Result further revealed that 53.1% reared goat for both consumption and commercial purposed with 54.6% not getting assistance from a cooperative society. The product is mostly utilized in the roasted form (mean=1.20) and direct sales and marketing (mean=1.61), while categorization of the contribution of goat to the women wellbeing was low (maximum=16, mean= 5.4). There was relationship between women socioeconomic occupation ( $\chi^2= 13.15$ ,  $p= 0.002$ ), reason for rearing goat ( $\chi^2= 10.551$ ,  $p= 0.032$ ), source of capital ( $\chi^2= 7.945$ ,  $p= 0.047$ ) and member of association ( $\chi^2= 7.848$ ,  $p= 0.005$ ) and their wellbeing. There was also significant relationship between awareness of the product and their wellbeing while significant contribution factor with women wellbeing were occupation (beta= 0.175) years of experience (beta= 0.192) awareness (beta= 0.289), and their sources of information (beta= 0.292). It concluded that goat farming had a slightly low contribution to rural women's wellbeing in terms of household consumption of goat products with recommendation that credit institutions should be granted as a sustainable tool for capital formation to enhance women wellbeing and development.

**Keywords:** Rural women, wellbeing, cooperative, goat products.

## **PERCEPTION OF HERDSMEN-FARMERS CONFLICT AMONG ARABLE CROP FARMERS IN ONDO STATE**

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### **ABSTRACT**

Herdsmen-Farmers conflict has had debilitating effects on food security and national development. The study determined the perception of herdsmen–farmers conflict among arable crop farmers, ascertained the frequency as well as the underlying causes of the conflict in the study area. Data were analyzed using frequency counts, percentages, and Chi-square. The study showed that crop damage by cattle (88.7%), indiscriminate bush burning (84.3%) and destruction of farm structure (78.7%) were the main causes of the conflict. Conflict also occurred regularly (50.5%) as a result of crop damage. A perception score of 3.01 indicates that the farmers understand the hazards the conflict poses to food security and consequently, the need for sustainable measures to curb the conflict. Age ( $\chi^2 = 8.546$ ,  $p \leq 0.05$ ), farming experience ( $\chi^2 = 6.474$ ,  $p \leq 0.05$ ) and membership of social organization ( $\chi^2 = 76.291$ ,  $p \leq 0.05$ ) of respondents had a significant relationship with their perception. The study concluded that inadequate grazing area leading to crop damage by cattle was the prime cause of the herdsmen–farmers conflict. It recommended the use of sensitization and literacy programmes by agricultural extension in order to educate farmers, facilitate better communal understanding and proper conflict management.

**Keywords:** Herdsmen-Farmers conflict, Food security, Perception, Ondo State

**SUSTAINED LEVEL OF ADOPTED IMPROVED PRACTICES AMONG MAIZE FARMERS IN  
IBARAPA AREA OF OYO STATE**

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**ABSTRACT**

The study assessed the sustained level of adopted improved production practices among maize farmers in Ibarapa area of Oyo State, Nigeria. Multistage sampling procedure was used in selecting 165 maize farmers for this study. Data collected was analyzed using descriptive statistics such as frequency counts, percentages and mean; while Linear regression analysis was used to test the hypothesis of the study. Results revealed that the mean age was 53 years which implies that farmers in the area were matured enough to decide whether to continually apply the adopted improved maize production practices. Small-scale farming was predominant in the area. Practices such as ploughing (1<sup>st</sup>), selection of suitable land (2<sup>nd</sup>), use of recommended chemicals (3<sup>rd</sup>) were the sustained adopted improved maize production practices. However, practices such as use of shelling machine (10<sup>th</sup>), harrowing of farmland (11<sup>th</sup>) and use of appropriate storage (12<sup>th</sup>) were never sustained during maize cultivation. Age ( $r = 0.083$ ); educational attainment ( $r = 0.123$ ); farming experience ( $r = 0.011$ ) and farm-size ( $r = 0.128$ ) influenced sustained application of the adopted improved maize practices. It is hereby recommended that all extension agencies should rejig their efforts on advocacy for farmers to continuously use all the recommended production practices.

**Keywords:** Level, maize, improved, practices



**ASSESSMENT OF SOCIOECONOMIC FACTORS AFFECTING USE OF INDIGENOUS  
CLIMATE ADAPTATION STRATEGIES BY CROP FARMERS IN SOKOTO STATE, NIGERIA**

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**ABSTRACT**

Socioeconomic factors affecting use of indigenous climate adaptation strategies by farmers in Sokoto State were assessed. Multistage sampling procedure was employed to select 160 respondents. Data collected (using questionnaire) from the respondents were analyzed using descriptive statistics and regression model. Majority (97.6%) of the farmers were aware of climate change, experienced both changes in temperature (92.5%) and rainfall patterns over the years. As a climate change adaptation strategy, majority (78.8%) of the respondents diversified their crop production, 75.6% of them practiced intercropping and 70.6% cultivate drought-resistant crop varieties. Age (-0.038: P<0.01), farming experience (0.056: P<0.01) and non-farm income (0.367: P<0.01) significantly influenced the use of indigenous climate change adaptation strategies among others. It was concluded that the local indigenous farmers were able to develop several adaptation strategies in a way that enabled them to cope with the erratic impact of climate change on crop production. It is recommended that relevant information on climate change adaptation practices should reach the farmers through radio, news-papers, public lectures, seminars as well as other mass media channels.

**Keywords:** adaptation strategies, awareness, climate change, factors, Indigenous.

## **CONSTRAINTS TO ADOPTION OF COCOA REHABILITATION IN SOUTHERN NIGERIA**

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### **ABSTRACT**

The study investigated constraints in cocoa rehabilitation in Southern Nigeria. Multistage sampling procedure was used to select respondents for the study in Ondo, Cross-Rivers and Oyo States. These States were purposively selected as high and medium cocoa producing States in which 2 Local Government Areas (LGAs) and 2 communities were equally purposively selected to give a total of 12 communities in the 3 selected States. Finally; 25 respondents were randomly selected in each community to give a total of 300 cocoa farmers for the study. The data were generated using SPSS, while descriptive and Chi-square analyses were used for the discussion. The study showed that, the mean age of respondents was 46.2, majority (81.3%) was male and 87.3% of the farmers participated in one social organization or the others. Cocoa farmers had high practice in planting young cocoa under old cocoa trees (78.7%) and gapping up (84.3%), while the least practice was phased farm replanting (12%). Also, lack of fund ( $\bar{X} = 2.14$ ), inadequate training ( $\bar{X} = 2.13$ ) and poor extension visit to advice on cocoa rehabilitation techniques ( $\bar{X} = 2.11$ ) were the major constraints faced by cocoa farmers. The Chi-square results showed that there was significant difference between lack of fund ( $X^2 = 6.43$ ), inadequate training ( $X^2 = 6.39$ ) and cocoa rehabilitation techniques practiced at  $P < 0.05$  level of significance. The study revealed that gapping up and planting under old cocoa trees were commonly practiced, but there were constraints for increased productivity. It was recommended that, cocoa production should be seen as a carrier option through provision of soft loans and training on improved practices through an on-farm adaptive research approach, thus; enhanced farms' productivity.

**Keywords:** Rehabilitation Techniques, Adaptive research, Constraints

**PERCEIVED EFFECTS OF CLIMATE VARIABILITY ON CROP PRODUCTION AMONG  
ARABLE CROP FARMERS IN IFE NORTH LOCAL GOVERNMENT AREA, OSUN STATE,  
NIGERIA**

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**ABSTRACT**

This study examined the perceived effects of climate variability on crop production and analyzed socio-economic factors associated with climate variability perceptions among arable crop farmers in Ife North Local Government Area, Osun State. Data were collected using a well-structured interview schedule from 120 randomly selected arable crop farmers. Data analysis was carried out using both descriptive and inferential statistics such as frequency, percentages, mean, and correlation analysis. Results showed that the majority (77.5%) of the arable crop farmers were males, married (78.3%), had attempted primary education or more (90.8%), and of an average age of 41.82 years. The mean household size was 4.24, while over three-quarters of the farmers (73.3%) were members of different social organizations, with farming as their major occupation (40%). The three most important climate adaptation strategies used were soil and water conservation, cover cropping, and planting of resistant varieties of crops. Results of correlation analysis showed that socio-economic variables such as age, household size, years of residency, and years of farming experience can be used to predict the productivity of arable crop farmers as they have a significant relationship with productivity. The result implies that the perception of respondents on climate variability effects tends to increase with their years of farming experience, years of residence, and household size. The study recommends that Government at all levels should continue to support conferences, association meetings and workshops where farmers can share from each other's experience on both traditional and modern ways of mitigating climate variability effect

**Keywords:** Socio-economic, Farmers, Climate Change, Coping strategy, Variability

**ANALYSIS OF RURAL HOUSEHOLDS' ATTITUDE TO DIVERSIFICATION INTO NON-FARM ENTERPRISES IN KATSINA STATE, NIGERIA**

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**ABSTRACT**

This study analyzed rural households' attitude to diversification into non-farm enterprises in Katsina State, Nigeria. A multistage sampling procedure (involving both purposive and random) was used to select 256 farmers. Data were obtained with the aid of questionnaire and analyzed using descriptive statistics and logit regression model. Findings of the study revealed that among the positive attitudes expressed by the respondents is the fact that non-farm enterprise is a crucial pathway to food security for rural households ( $\bar{X} = 5.00$ ). This was closely followed by non-farm enterprise being a source of agricultural household savings used for food purchase in hard times ( $\bar{X} = 4.97$ ) and non-farm enterprise providing a means to cope when farming fails ( $\bar{X} = 4.95$ ). Age and formal education were statistically significant ( $p < 0.01$ ); farm size and household size were significant ( $p < 0.05$ ) and marital status was also significant ( $p < 0.1$ ). It was concluded that the positive attitude expressed by the farmers was a willingness for diversification into non-farm enterprises, not depending on agriculture as a sole means of livelihood. It is recommended that all stakeholders in agricultural and rural development should support the existing non-farm enterprises and encourage the creation of new ones through special interventions.

**Keywords:** Attitude, Diversification, Enterprises, Households, Non-farm, Rural

**PERCEIVED EFFECTS OF COVID-19 PANDEMIC ON AGRICULTURAL PRODUCTION  
ACTIVITIES AMONG RURAL HOUSEHOLDS IN OGBOMOSO AGRICULTURAL ZONE, OYO  
STATE, NIGERIA**

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**ABSTRACT**

The study assessed the perceived effects of the COVID-19 pandemic on agricultural production activities among rural households in the Ogbomoso agricultural zone, Oyo State, Nigeria. The objectives of the study are to examine the socio-economic characteristics, determine the sources of awareness of the COVID-19 pandemic as well as investigating the perceived effects on agricultural production activities among the rural dwellers. A multistage sampling procedure was employed to select 90 respondents for the study. The data for the study were collected with a structured interview schedule and were analyzed using descriptive statistics such as frequency counts, percentages, and means while ordinary least square (OLS) is the major inferential statistical tool employed in the study. Results showed that friends/relatives (Weighted Mean Score = 2.90) were the major sources of awareness of the pandemic among the respondents. Findings also revealed that the major perceived effect of the COVID-19 pandemic on agricultural production activities includes scarcity and high cost of farm inputs (WMS = 4.84), high cost of transportation (WMS = 4.76) due to restrictions, and closures related to the Covid-19 pandemic. The result of OLS indicated that the level of awareness of COVID -19 ( $t = -2.040$ ;  $p = 0.045$ ) is inversely related to the perceived effects of Covid-19 pandemic on agricultural production and was statistically significant at a 5% level. The COVID-19 pandemic had serious consequences on agricultural production activities among rural households in the study area. There is a need for all stakeholders in rural development to expedite efforts to create more awareness on the existence of the pandemic as well as educating them on amiable coping strategies in tackling the effects. Also, adequate representative and good-quality data is needed which allows for systematic research on equality in accessing palliative measures in the rural area.

**Keywords:** COVID-19, perceived effects, rural households, agricultural production activities

**PERCEIVED EFFECT OF OIL PIPELINE VANDALIZATION ON FARMERS' AGRICULTURAL  
ACTIVITIES AND FARMING ENVIRONMENT IN RIVERS STATE, NIGERIA**

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**ABSTRACT**

The study evaluated the perceived effects of oil pipeline vandalization on farmers' agricultural activities and farming environment in Rivers State, Nigeria. Data were collected using two major sources namely; primary and secondary sources and 120 respondents were selected through multistage sampling techniques. Semi- structured questionnaire was used for data collection. Descriptive and inferential statistical tools like frequency count, percentages, mean and ordinary least square multiple regression analysis. The result revealed that the major causes of oil pipeline vandalization in the study area with higher mean score include; Lack of development (3.97), administrative neglect (3.93), Sabotage (mean=3.9417) and others like unemployment (mean=3.83), Corrosion due to ageing pipes (mean = 3.3500) etc. The results also show that degradation of farm (mean=4.00), Pollution of water bodies (mean=3.67) and Loss of mangrove (mean=3.98) were effects of oil pipeline vandalization on the farming environment perceived to be very severe in the study area. The result of the multiple regression analysis revealed that education was significant at 5% while occupation, household size, farm size, social organization membership were significant at 1%. These variables had significant relationships with the perceived effects of oil pipeline vandalization in Rivers state, Hence the study recommended among other measures that the Multi National Oil Companies and the Federal government should put into consideration these factors (variables) in formulating policies to checkmate oil pipeline vandalization, develop the host communities and also involve the qualified members of the host communities in keeping watch over the oil pipeline to guarantee its safety, ensure environmental justice through securing farming environment.

Keywords: pipeline vandalization, perceived effects, agricultural activities, farming environment.

**ANALYSIS OF CAPTURE METHODS AND CONSTRAINTS ASSOCIATED WITH  
*Chrysichthys nigrodigitatus* (SILVER CATFISH) CAPTURE FROM THE WILD IN EPE  
LGA, LAGOS STATE, NIGERIA**

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**ABSTRACT**

The study was conducted to analyze the capture methods and associated constraints in Silver catfish capture from the wild among artisanal fisher folks in Epe lagoon, Lagos State. Data were collected using structured questionnaire from 96 fisher folks in Ebute Afuye, Oluwo market and marine fishing communities, and were analyzed using descriptive statistics. Results revealed that 89.58% of the respondents were male, and were between the ages 41 – 50 years old majority (93.75%) were married, 50% had formal education respondents had an average household size of 8, and over 25 years fishing experience. Most (73.96%) practiced full time fishing, 59.38% had no access to extension agents, and 82.29% did not have access to loan. Major fish capture methods used by respondents include net (100%), bamboo (69.79%), and PVC Pipes (87.5%). The major constraints of capturing silver catfish were water hyacinth (100%) and movement of large boats (42%). The study recommends that since majority of the fisher folks are on full time fishing, government should help with innovations that will eliminate the water hyacinth, improve access to loans, and provide extension services. This will boost food security and income generation in the country.

**Keywords;** Silver catfish, Fisher folks, capture methods.

**CHALLENGES OF PIG MARKETING DURING EMERGENCIES IN KADUNA STATE,  
NIGERIA**

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**ABSTRACT**

The study was conducted in four Local Government Areas of Kaduna State, Nigeria. It set out to analyse the socio-economic characteristics of pig marketers, access the gross margin per pig of participants and to determine the challenges of pig marketing during this period of emergency. A multi-stage sampling technique was used to collect data from one hundred and twenty pig marketers. Primary data were generated using structured questionnaire and personal observations. Data were analysed using descriptive statistics, gross margin and factor analysis. The findings showed that majority (75%) of marketers were males and 40 years old. The study revealed a mean gross margin per pig of ₦4,190.05, ₦7, 208.01 and ₦8, 701.23 for rural assemblers, wholesalers and retailers respectively. The explanatory factor analysis of challenges showed four components, infrastructural, market/government policy, financial and environmental. The study showed that males dominated the market and all the participants made profit despite the challenges. The study recommends that marketers should fabricate special vehicles as climate adaptation strategy in transporting pigs along the marketing channels, form or join co-operative societies to enable them access to credit facilities, subsidies and extension services, both private, non-governmental organisations (NGO) and government should provide infrastructure, market information, and funding of research. There should be deliberate policy by government to promote pig marketing devoid of discrimination.

**Keywords:** pig, marketers, challenges, marketing chain, factor analysis,



**EFFECT OF LAND TENURE SYSTEM ON CLIMATE CHANGE ADAPTATION AMONG RICE FARMERS IN NORTH-WEST, NIGERIA**

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**ABSTRACT**

This study was conducted to assess the effect of land tenure system on climate change adaptation among rice farmers in North-West Nigeria. It targeted Sokoto, Kebbi and Zamfara States in North-West, Nigeria. A multistage sampling procedure, involving both purposive and random selections was used to obtain 522 farmers for the study. Data were obtained with the aid of structured questionnaire. The data were analyzed using descriptive statistics and Tobit regression model. Results of the study revealed that majority (93%) of the farmers acquired land through inheritance, owned 1-4 ha (86%) of which less than 1 ha was cultivated for rice production (62%). Result of the Tobit regression analysis showed that both purchase and rent of land had positive and significant ( $p < 0.01$ ) influence on the farmers' use of climate change adaptation practices. It was concluded that use of climate change adaptation practices by rice farmers in North-West Nigeria is largely influenced by land tenure system in the region. The implication is that unless the current land tenure system is reformed, land might not be readily available for rent or purchase especially to non-members of a community who are more willing to use the climate change adaptation practices for increased productivity.

**Keywords:** Adaptation, Climate Change, Land Tenure System, Rice Farmers

**INORGANIC FERTILIZER USE ON RICE PRODUCTION: IMPLICATIONS ON FOOD  
SECURITY DURING EMERGENCIES IN NIGERIA**

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**ABSTRACT**

In recent time, the focus of agricultural development plan in Nigeria has been on increasing rice production. Inorganic fertilizer has been recognized as a major input that can help to increase rice/food production and ensures food security in Nigeria. This study therefore examined inorganic fertilizer use in rice production and its implication in achieving the aforementioned goal. A total of 120 rice farmers were purposively selected and used for the study. Data were collected by use of interview schedule and analyses were conducted using frequency, percentage, mean score and regression. Results show that the respondents applied mostly urea fertilizer (54.2%) usually once (55.8%) on rice farm using broadcasting method (100%). Major constraints that limited inorganic fertilizer use on rice production were high cost of fertilizer ( $\bar{x}$  =2.85) and poverty ( $\bar{x}$  =2.82). Surprisingly, rice output ( $t$  =1.243;  $p>0.05$ ) had no significant relationship with fertilizer use. The study concluded that emphasis on increase use of fertilizer alone may not bring about the expected rise in rice output. It is therefore recommended that government at all levels should look into other factors affecting rice production in order to achieve food security

**Keywords:** Inorganic fertilizer; rice production; food security, implication, emergency, Nigeria

**EFFECTS OF CLIMATE VARIABILITY ON ARABLE CROP FARMERS' SOCIO-ECONOMIC STATUS IN SOUTHWEST NIGERIA**

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**ABSTRACT**

Climate variability is an observed weather condition that causes climatic parameters to change within a short period such as a month, a season or a year. This study assessed the effects of climate variability on socio-economic status of arable crop farmers in Southwestern Nigeria. Multistage sampling procedure was used to select 320 respondents from the study area. Data collected were analyzed using descriptive and inferential statistics such as Percentage, and Spearman Rho at 0.01 level of significance. The mean age of the respondents was 50.0 years. Majority (79.4%) of the respondents were married while 67.2 percent were literate. The study showed that 86.6 percent of the respondents were of low socio-economic status in 2017, 91.9 percent in the year 2018 while it was 87.2 percent in 2019. The Spearman Rho's  $r$  value of 0.985 and  $p$  value of 0.000 showed that there was strong positive significant relationship at 0.01 significant level. It was therefore recommended that policies and programmes that will stimulate the interest of young people into arable crop farming as a business should be put in place by all tiers of government..

**Keywords:** Climate, Climate Variability, Arable Crop, Socio- economic status

**DEFORESTATION AND REFORESTATION ACTIVITIES IN COMMUNITY FORESTS IN  
ANAMBRA STATE, NIGERIA**

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**ABSTRACT**

The study examined the deforestation and afforestation activities in community forests of Anambra State, Nigeria. Data were obtained from (80) respondents through the use of structured interview schedule using a multi-stage random sampling procedure. Percentage counts and mean scores were used in data analysis. Findings indicated that (82.5%) of forests in Anambra State were communal forests. Greater proportion of the community forest (63.6%) is owned by the village. The major causes of deforestation included: housing development (= 2.47), firewood collection (=2.00), increase in farming activities (=1.84), and wood logging (=1.55). The perceived effects of deforestation were: soil erosion (=2.15), loss of medicinal plants (=2.11), among others. Perceived constraints to reforestation include; lack of support by government agencies (= 2.41), inability to enforce existing rules and regulations guiding community forest (=2.16), inadequate institutional/legal framework on protecting forest (=2.15), and need for agricultural land (=2.06). The perceived coping strategies in cushioning the effects of deforestation include: creating awareness on benefits of reforestation (=2.48), provision of land (=2.37), effective enforcement of law guiding forest (=2.30), provision of law guiding forest (=2.25), motivating the people by subsidizing the planting materials (= 1.94), and planting of improved /indigenous tree species (=1.94). The study recommends that government should give adequate priority to policy measures aimed at addressing deforestation. Also, forestry extension services be provided to households living within the forest areas.

**Keywords:** Community forest, deforestation, reforestation, forest protection

**COMPARATIVE ANALYSIS OF THE PROFITABILITY OF DRY SEASON FARMING OF  
*Corchorus Olororius-Amaranthus Cruentus* INTERCROP AND SOLE CROPS**

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**ABSTRACT**

The study compared the profitability of three different cropping systems in the study area. Results of the gross margin analysis showed that both the intercropping and only sole amaranthus vegetable production were profitable in the study area, yielding a gross margin of Five hundred and Seventy Nine Thousand, Nine Hundred and Sixteen Naira and Sixty Seven Kobo (₦579,916.67)/ha with a total revenue of One Million and Six Hundred Thousand Naira (₦1,600,000)/ha and having the highest output of 8000kg/ha for the intercropping systems while the sole Amaranthus vegetable production had a gross margin of One hundred and Seventy Nine Thousand, Nine Hundred and Sixteen Naira, Sixty Seven Kobo (₦179,916.67)/ha with a total revenue of One Million and Two Hundred Thousand Naira (₦1,200,000)/ha and having the highest output of 6000kg/ha. Also, the intercrop vegetable production had a Benefit Cost Ratio, Rate of Return and Gross Ratio of 1.53, 0.52 and 0.65 respectively while sole amaranthus production had a Benefit Cost Ratio, Rate of Return and Gross Ratio of 1.15, 0.15 and 0.87 respectively. The result indicates that the two vegetable production were profitable in the study area. However, losses were incurred for the sole *C. olitorius* vegetable production system during the period of the experiment. The study therefore concluded that both the intercrop and sole amaranthus enterprises were profitable in the study area, but there was a significant difference in the profitability of the intercrop cropping system practised as the amaranthus/corchorus intercrop was more profitable. The intercrop is, therefore, recommended for the farmers since it is more profitable and provides a variety of income generation for the farmers thereby ensuring food security and income security.

**Keywords:** Gross margin, profitability, sole cropping, amaranthus-corchorus intercrop

**SUB-THEME: E - FINANCING AGRICULTURAL EXTENSION DURING EMERGENCIES**

**MARKETING DETERMINANTS OF RAW CASHEW NUTS FOR INCOME GENERATION  
AMONG FARMERS IN KOGI STATE OF NIGERIA**

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**ABSTRACT**

Marketing of raw cashew nuts (RCNs) in Nigeria is faced with many challenges ranging from the activities of middlemen, liberalization policy on commodity crops and so on. This situation results in market failure and low price of RCNs. The study addressed marketing problems of cashew nuts to enhance farmers' livelihood. A multistage sampling procedure was adopted. Kogi State was purposively selected because it is the highest producer of cashew in Nigeria. Simple random sampling was used to select 44 farmers each from the list of registered farmers in Dekina, Ankpa and Ofu Local Government areas due to predominance of cashew production, amounting to 132 respondents in all. Data were collected and analysed using descriptive statistics. The mean age of respondents was 42 years. Majority (61.3%) of the respondents sold 80kg bag of raw cashew nuts between ₦50,000-59,000 in 2017, 34.9% sold ₦30,000-39,000 in 2018 and majority (90.1%) sold below ₦20,000 in 2019. This suggests a sharp drop in the prices of RCNs. Fraud from local buyers and absence of organized market were ranked 1<sup>st</sup> and 2<sup>nd</sup> as major factors determining marketing of RCNs. The study reveals that insincerity of cashew buyers lead to low price of nuts sold by farmers. It was recommended that the National Cashew Association of Nigeria should help reduce activities of middle men during marketing.

**Keywords:** Marketing, raw cashew nuts, farmers, Kogi State

**TRANSPORTATION CHALLENGES AND MARKETING STRATEGIES OF FISH IN KAINJI  
LAKE BASIN, NIGER STATE, NIGERIA**

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**ABSTRACT**

This study analysed fish transportation challenges and marketing strategies in Kainji Lake Basin, Niger state, Nigeria, two stage sampling methods were used to select 90 fish marketers as the sample size for the study. Data were collected through administration of structured questionnaires and interview schedule. Data collected were analysed using descriptive statistic. The result of the study revealed that (75%) of fish marketers in the study area were within the age range of 31 to 50 years, road was found to be the major (100%) means of transportation used by the respondents. The major constraints associated with transportation in the study area were bad roads (100%), high cost of fuel (75%), and delay in payment from fish retailers and marketers inaccessibly to financial institution (62.5%) respectively. However, majority of the respondents (62%), transport their fish to loading point (Total Filling Station, New Bussa) , while 25% of the respondents sends their produce straight to Onitsha, Major strategies employed by respondents are creation of sale point ( $2.10\pm 0.82$ ) and maintaining market contact via the use of mobile phone ( $2.0\pm 0.68$ ).The results from the study also indicated that product branding, sales promotion, market positioning and core competences marketing strategies in the sense that Lack of appropriate marketing strategies, skills and knowledge in marketing had further complicated the situation leaving many fish farmers struggling to grow market share which also affects fish marketing. It is recommended amongst others, that government should provide basic amenities such as conducive roads and lastly, financial institution should encourage the fish marketers with credit facilities to boost their fish marketing.

**Keywords:** Marketing, Transportation, Fish.



**EFFECT OF COOPERATIVE LOAN ON FOOD SECURITY STATUS OF FISH FARMING  
HOUSEHOLDS IN IDO LOCAL GOVERNMENT AREA OF OYO STATE, NIGERIA**

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**ABSTRACT**

Inadequate finance had remained the most limiting problem of agricultural production, therefore the role of cooperative society in improving productivity and ultimately ensuring food security cannot be overemphasized. This study examined effect of cooperative loan on food security status of fish farming households in Oyo State, Nigeria. A sample of 120 fish farming households was drawn using multistage sampling technique. Data collected were analyzed using descriptive statistics, USDA household food security model and logit regression model. Findings from the study showed that majority (65.0%) of the household heads were between 31-40 years. Majority (82.4%) are married with an average household size of 5 individuals. The fish farmers are highly educated with majority (91.8%) having formal education. About two-third of the farmers are members of a cooperative society out of which 52.5% are loan beneficiaries. 38.3 % of the households were highly food secured, 21.7% were marginally food secured, 13.3% had low food security status and 26.7% of the respondents had very low food security status. The logit regression result revealed that household food security status in the study area is influenced by educational qualification ( $p < 0.01$ ), household size ( $p < 0.01$ ), farming experience ( $p < 0.01$ ), income ( $p < 0.01$ ), membership of cooperative society ( $p < 0.1$ ), loan beneficiary ( $p < 0.01$ ) and access to extension services ( $p < 0.1$ ). Efforts and policies should be directed towards making loans accessible to farmers in order to address their resource acquisition constraints and eventually improve food security status. Awareness should also be created so as to encourage farmers to organize themselves into groups and also be a member of a cooperative society.

**Keywords:** cooperative, fish farming, food security, households, loan.

**DETERMINANTS OF LABOUR ALLOCATION DECISIONS AMONG COCOA FARMERS  
DURING EMERGENCIES IN RURAL AREAS OF ONDO STATE, NIGERIA**

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**ABSTRACT**

The study investigated determinants of labour allocation decisions among cocoa farmers during emergencies in Ondo State. Multistage sampling technique was used to select one hundred and fifty-six respondents. Structured questionnaire was employed to elicit information on demographic characteristics, causes of emergencies and factors influencing labour allocation among cocoa farmers during emergencies. Descriptive statistics, t-test and multinomial logit model (MNL) were used to analyse data collected. Results indicated that, mean age was  $44.4 \pm 7.6$  years. Majority of respondents (63.7%) were male and 57.1% were married with average household size of  $10 \pm 3$  members and 60.3% had primary education. Activities to which labour were allocated included; fetching water, weeding, breaking and scooping, and heaping. The MNL revealed that labour allocation to fetching water, weeding and breaking and scooping are positively influenced by, age, gender, wage paid and negatively by education, income of household head and credit access at 5% level of significance while age, gender and education negatively influenced breaking and scooping and heaping during emergencies. It was observed that labour allocation to activities during emergencies helps to generate income, reduce labour migration and unemployment. It was recommended that more wages will enhance labour allocation, access to training and education should be encouraged.

**Keywords:** Labour allocation, Cocoa farmers, emergencies, safety net, rural areas.

**SUB-THEME F – HEALTH AND SAFETY ISSUES IN THE PRACTICE OF AGRICULTURAL  
EXTENSION DURING EMERGENCIES**

**ANALYSIS OF HIV/AIDS AMONG CROP FARMERS IN JEMA'A AND ZANGO KATAF LOCAL GOVERNMENT AREA OF KADUNA STATE, NIGERIA**

**ABSTRACT**

The study analyzed the effects of HIV/AIDS among men, women and youth in crop production in Jema'a and Zango Kataf local government areas of Kaduna state, Nigeria. Jema'a and Zango Kataf were purposively selected due to the prevalence of HIV/AIDS and the people are predominantly crop farmers. A sample size of 192 respondents was randomly and proportionately selected for the study. Structured questionnaire was used to elicit relevant data from the respondents. Descriptive statistics such as frequency distribution, percentage distributions, mean values and analysis of variance (ANOVA) were used to analyze the data. The results showed that men and women were 41.8% and youth 58.2%, and 73.0% had secondary education status, about 70% of the respondents earned between ₦1,000.00 - ₦15,000.00 monthly with the mean earning of ₦12,595.1. About 51 of respondents used family labour while 46% had family size of 6-10 members, about 69% were married and 40% had farm sizes of less than one hectare with about 28% having 6-10 years farming experience. Also, about 71% respondents do not have access to credit facilities. The study established that about 84% of respondents agree that HIV/AIDS significantly affects their crops output and income at 5% level of significance. It was established that the general constraints affecting the HIV/AIDS infected farmers in the study area were stigmatization ( 96 % ), insufficient income (65%), lack of means of income (farm land) (53.08%), distance to medical care facilities( 50 % ), and gender bias in terms of job opportunities(45%) affects the respondents in managing their HIV/AIDS status and crop production. It was concluded that HIV/AIDS has significant economic effects on crops output and income of the respondents implying that there might be a diverted attention, time and money in nursing the HIV/AIDS patients and burial or funeral services instead of on crop production. Also, based on land ownership, income levels and gender which the female fold suffers most, there is need to draw up legislation that can protect the land rights of women and children who contributes in a great measure to crop production development in Nigeria.

**Keywords: Effects, HIV/AIDS, Crop Production, Kaduna State.**

**PERCEPTION OF ARABLE CROP FARMERS ON SELF MEDICATION AS ALTERNATE HEALTH CARE TREATMENT TO COPE WITH EMERGENCIES IN RURAL COMMUNITIES OF OGUN STATE, NIGERIA**

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**ABSTRACT**

This study examined the perception of arable crop farmers on self-medication as alternate care health treatment to cope with emergencies in rural communities of Ogun State. Multi stage sampling procedure was used to select 160 respondents for the study. Data was collected with the aid of interview guide. Data was analyzed by mean, standard deviation and frequency and Pearson Product Moment Correlation. The results show that the mean age of the respondents was 46 years and 41.3% had secondary school education. Findings revealed that 65.0% and 12.5% of the respondents nearly at all times practiced self-medication by using herbal medicines and analgesics respectively during emergencies. The results show that 95.6% of the respondents had favorable perceptions on self-medication as alternate health care treatment to cope with during emergencies. The result of hypothesis shows that there is significant relationship between the frequencies of the use of self-medication ( $r=0.194$ ,  $p\leq 0.05$ ) and the perception of the respondents on self-medication. The study concluded that the respondents had favorable perceptions on self-medication as alternate health care treatment to cope with during emergencies. It was therefore recommended that state ministry of health and stakeholders in the health sector should endeavor to create more awareness on the danger of self-medication among arable crop farmers.

**Keywords:** Self-Medication, Health Treatment, Emergencies

**POULTRY FARMERS' AWARENESS LEVEL ON BIOSAFETY PRACTICES AGAINST  
INFECTIOUS DISEASES IN KANO STATE, NIGERIA**

**ABSTRACT**

The study examined the awareness level of poultry farmers on biosafety practices on infectious diseases in Kano state, Nigeria. A two stage sampling procedure was used on 166 respondents with structured questionnaire. Majority were males (99.4%), married (73.5%), with No-formal education (30.7%). Average: age of 45.0 years, monthly income of N199,894.54k, household size of 10 persons and flock size of 500.14 birds. Greater proportion claimed no extension contact (71.7%). Main source of awareness is Mass Media (48.8%). Based on awareness of biosafety practices in poultry: in Cleaning only low pressure washer ( $\bar{x}$ =1.602) and hand washing after toileting ( $\bar{x}$ =1.789) were known, in Disinfection only covering feeds in the store ( $\bar{x}$ =1.560), Manure management ( $\bar{x}$ =1.608) and removal of dead carcasses ( $\bar{x}$ =1.530) were known while in Segregation & Traffic Control all subcomponents were known except; banning keeping of birds at home ( $\bar{x}$ =1.114), exclusion of rodents & wild birds ( $\bar{x}$ =1.054) and presence of Buffer Areas around the farm ( $\bar{x}$ =1.000). Majority claimed very low level of awareness (81.9%). Major constraints were complexity of the biosecurity, inadequate capital (93.4%) and high cost of the biosafety practices (83.1%). Awareness level should be improved through farmers' group and more extension services involvement.

**Keywords:** Poultry Farmers, Awareness, Biosafety, Infectious Diseases

**ANALYSIS OF KNOWLEDGE LEVEL OF CORONA VIRUS (COVID – 19) PREVENTIVE MEASURES BY CRAYFISH MARKETERS IN AKWAIBOM STATE.**

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**ABSTRACT**

This study assessed the knowledge level of Corona Virus (COVID – 19) Preventive Measures by Crayfish Marketers in the Markets of Akwaiabom State. A multistage sampling procedure was utilized to select a total of 144 respondents for the study. Descriptive statistical tools such as percentages, frequencies, means and ranks were used to analyse data obtained for this study. The result of analysis indicated that the respondents mostly obtained information on COVID – 19 from friends and families (83%), community people (75%) and churches (68%) respectively. The major knowledge area on mode of transmission of COVID – 19 in the study was touching of mouth, eyes or nose without washing the hands ( $\bar{x}$ =1.72) and transmitted through droplet of saliva or discharge from nose of infected persons( $\bar{x}$ =1.66). The most recognized COVID – 19 symptoms indicated by the respondents were dry cough ( $\bar{x}$ =1.56), fever ( $\bar{x}$ =1.53) and sore throat ( $\bar{x}$ =1.51). Results further reported that the major knowledge on prevention of COVID – 19 were washing hands regularly with soap and water ( $\bar{x}$ =1.57) and proper wearing of face mask ( $\bar{x}$ =1.51). The study recommended that government should train agricultural extension agents on COVID – 19 preventive protocols for them to train and encourage crayfish marketers to comply with the COVID – 19 standards which are designed to combat the spread of the virus.

**Keywords:** Control, Corona Virus, Preventive Measures, knowledge,

## **COMPLIANCE OF RURAL AND URBAN FOOD VENDORS TO FOOD SAFETY REGULATIONS IN OYO STATE**

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### **ABSTRACT**

Despite the food safety measures by the Nigerian Government, food safety is still being compromised especially at grassroots level. This study examined the compliance of rural and urban food vendors to food safety regulations in Oyo State. The study was conducted in 5 zones in Afijio LGA; namely Awe, Ilora (urban areas); Jobele, Akinmorin and Fiditi (rural areas). A multi stage sampling technique was used to select 86 vendors ranging from restaurants, hotels, bukaterias/canteens and hawkers while data was collected through interview schedule. Percentages, Chi-square, PPMC and T-test were used for data analysis. The result indicated that a higher number of females (90.7%) were involved in food vending. Majority (89.5%) had a high level of awareness on food safety regulations. Most respondents obtained information from food canteen association (86.0 %) and health workers (62.8 %). The respondents identified inadequate supply of electricity (51.2 %) as the major challenge faced by food vendors. Although, more than half (53.5 %) of the respondents had high level of compliance to food safety regulations (91.9% keep food away from chemicals including chemical cleaning agents and 80.2% keep raw food away from ready-to-eat food), the type of food vendor ( $\chi^2= 7.664$ ,  $P = 0.022$ ) had significant relationship with their compliance. Moreover, there was a significant difference ( $t = 9.597$ ,  $P = 0.003$ ) between the level of compliance of rural and urban food vendors to food safety regulations. The study concluded that rural food vendors had lower compliance to food safety regulations and recommended that extension agents should collaborate with health workers and regulatory bodies to promote food safety practices in rural communities.

**Keywords:** Food Safety, Food Safety Regulations, Food vendors, Compliance



**THE USE OF TRADITIONAL MEDICINE FOR LIVESTOCK DISEASE CONTROL AMONG  
SMALL RUMINANT FARMERS IN ADAVI LOCAL GOVERNMENT OF ASSESSMENT AREA  
OF KOGI STATE**

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**ABSTRACT**

The study was conducted to examine the use of traditional medicine for the control of small ruminant diseases among livestock farmers in Adavi Local government Area, Kogi State, Nigerian. 120 livestock farmers were randomly selected and data were collected through well-structured questionnaire and interview schedule. The data were analyzed using descriptive statistics and logic regression. The Results revealed that the modal age of the farmers is 41-60years, while the mean age was 54 years. Majority (83%) of the farmers attended formal education and they produce small ruminant's animals on a small scale. The result further revealed that age, level of education scale of production and size of flock were positively significant in determining the use of traditional medicine at 5% level of probability. The results indicated that the use of local methods of managing and preventing ruminant diseases are indeed effective and reliable based on the farmers perception. Support and encouragement on the use of traditional medicine by livestock farmers and provision of credit facilities will go a long way in improving the use of traditional medicine for small ruminant's diseases control among the livestock farmers in the study area.

**Keywords:** Traditional medicine, livestock, diseases, small ruminant farmers, Adavi, Kogi, Nigeria.

**PERCEPTION OF THE EFFECTS OF FIRE WOOD USAGE ON RURAL WOMEN'S HEALTH  
IN OGUN STATE, NIGERIA.**

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**ABSTRACT**

In rural areas, overdependence on fuel wood has universally been recognized as one of the major threat to forestry ecosystems. The World Health Organization states that “Over 98,000” Nigerian women die annually from use of firewood. The study therefore determined the effects of firewood usage on rural women health in Ogun State. Samples of 128 respondents were randomly selected from four local governments in Ogun State. Data were collected with the aid of well-structured questionnaire. Majority of the respondents were married (91%) with a mean age of 50 years. The study also found out that (86.7%) of the respondents used firewood for their cooking, this is as a result of its availability and affordability. Eighty two percent of the respondents used gathering method to source for firewood while 82% did not know the name of the firewood used for cooking. The highest ranked effect of firewood usage on the health of the respondents was the uncomfotability caused by the smoke from the firewood ( $\bar{x} = 2.81$ ) and eyes irritation ( $\bar{x} = 2.53$ ). The result of Chi-square analysis shows that significant relationships exist between family size, household income and age of the respondents and the choice of using firewood. The study recommended those energy sources (gas, solar and electricity) that are with less health hazards should be formulated and implemented.

**Keywords:** firewood, health, rural, women and perception

**IMPACT OF FLOODING ON FOOD CALORIE INTAKE AND HEALTH OUTCOMES AMONG  
SMALL HOLDER FARM HOUSEHOLDS IN KOTON KARFE LOCAL GOVERNMENT AREA  
OF KOGI STATE, NIGERIA**

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**ABSTRACT**

The research examined impact of flooding on food calorie intake and health challenges among small holder farm households in Koton Karfe Local Government Area, Kogi State. Purposive and random sampling techniques were used to select 130 farm households. Primary data were generated through the administration of questionnaire. Data were analysed with descriptive statistics, Double Difference Estimator, Calorie Intake Estimation Function, t-test and multiple regressions. Result shows that farm households lost average of 132, 950kg of selected crops amounting to about ₦20m loss in income. Food daily calorie intake indicates a loss 715.18Kcal showing a significant difference in calorie intake before and after flooding ( $t = 2.0629$ ) at 5% probability. Furthermore, health challenges prevalent during flooding were malaria (91%), typhoid (75%), cholera (66%) and dysentery (58%). The determinants of daily calorie intake were age ( $t = 3.24$ ), household size ( $t = 2.90$ ), level of income ( $t = 2.67$ ), incidence of flooding ( $t = - 3.78$ ), health challenges ( $t = - 4.27$ ) and food price ( $t = - 2.88$ ). The study concluded that flooding had negative impacts on crop output and income, daily food calorie intact and health challenges. It was recommended that the State Government makes adequate to relocate residents of the area at the warning of possible flooding and should through the State Emergency Management Agency (SEMA) provide relieve items to the residents to cushion the effects of flooding.

**Keywords:** Calorie, Cholera, Flooding, Health Challenges, Impact, Typhoid, Karfe, Kogi

## **THE ROLE OF AGRICULTURAL BIOTECHNOLOGY IN FOOD SECURITY AND SAFETY**

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### **ABSTRACT**

Global recession, along with highly increased food prices in many countries has caused many people suffering from silent hunger and poverty. The global food crisis potentially imposes a serious risk towards world peace and security. Low agricultural production is considered as the main reason for poverty and food insecurity in the world. Biotechnology is the genetic manipulation and multiplication of any living organism through novel techniques and technologies such as tissue culture and genetic engineering in order to produce new organisms and or products that can be used in variety of ways. Agricultural biotechnology plays a significant role in the development of food products. Agricultural biotechnology can increase crops yield by introducing high yielding varieties of crops resistance to biotic and abiotic stresses, reduce pest associated losses and increase the nutritional values of food. This review discussed the current trends and future perspectives on how agricultural biotechnology can help us to produce safe and secure food and can act as a valuable tool to reduce poverty.

**Keywords:** Biotechnology, Food Security, Safety.

**SUB- THEME: G – ICTS AND NEW MEDIA DEPLOYMENT IN EXTENSION PRACTICES  
DURING EMERGENCIES**

**REVIEW ON USE OF ICTS AND NEW MEDIA TECHNOLOGIES IN AGRICULTURAL  
EXTENSION PRACTICE DURING EMERGENCIES TO ENSURE DEVELOPMENT  
COMMUNICATION AMONGST RURAL FARMERS**

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**ABSTRACT**

This paper reviewed the use of ICTs and new media technologies in agricultural extension practice during emergencies to ensure development communication amongst rural farmers. The paper indicates that the use of mobile phones is increasing and becoming more important in the lives of the people to farther contribute to development and advance communication. Additionally, computers and internet have been used for agricultural information and sharing. The review observed that the new media upward trend will highly influence agriculture in the future. Likewise, rapid technological developments have enable the new media to become established more-or-less in every aspect of daily life. The launch of new media sites such as Twitter, Facebook, Instagram and zoom has revolutionized and improved the way we communicate through both voice and video contact. Also application of robots in agriculture improves efficiency and reduce reliance on manual labor. It's deduced that rural areas receive less attention for agriculture emergency planning, mitigation, response. And internet services are poorly equipped in remote rural areas. Therefore, it's recommended that government should establish centers whereby rural farmers can access agricultural information online. There is a need for an integrated approach to an agriculture emergency training include mitigation, planning, and response.

**Keywords:** Media, Information and Communication Technology, Agriculture, Emergency, Development

## **REVIEW OF DIGITAL AGRICULTURE IN BENUE STATE, NIGERIA**

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### **ABSTRACT**

Agriculture is one of the most important areas in which human life has continued to depend on. In the era before green revolution, majority of human population was engaged in the agricultural sector, advances in technology kept on improving on its productivity till today, these technologies designed to advance the agricultural sector and boost agricultural production have led to marked increase in yield. Agriculture has undergone a series of changes that have led to higher yield than the previous ones. This decade suggests that a digital agricultural revolution has being the newest shift which could help ensure agriculture meets the requirements of the global population into the future. Digitalization can change every part of agriculture, the gradual introduction of more and more advanced or precision farming technologies can become highly optimized, individualized, intelligent and anticipatory. Digital agriculture can create systems that are highly productive, anticipatory and adaptable to changes such as those caused by climate change. Digitalization of agriculture entails use of electronic and other devices which can lead to greater food security and sustainability, reduce waste of time and resources and can lead to increase in quality and quantity of farm produce. Digital agriculture is however, associated with problems including policy formulation, relaying on data and high cost of technological appliances. It is recommended that appropriate policies for its effective operation should be formulated including subsidy for digital machines/technologies.

**Keywords:** Agriculture 4.0, review, Benue State, Nigeria

**CREATING HORTICULTURAL TRAINING VIDEO/AUDIO CONTENT TO IMPROVE  
QUALITY IMPACT FOR FARMERS AND OTHER STAKEHOLDERS**

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**ABSTRACT**

Too seldom do third world policy leaders consider learning in their own native languages compared to foreign languages for innovative training - especially for agricultural food security development. This presentation therefore shares decades of acquired knowledge, around the globe, on how to improve quality impact for farmers/stakeholders capacity development purposes using “farmers helping the farmers” model approach. Challenges of training through audio visuals to impact farmers/stakeholders learning; as well as benefits of creating audio/video contents in farmers/stakeholders own languages are discussed. Opportunities for improving agricultural research extension impact and collaboration with the international community through NGOs are highlighted. Presented herewith as well are downloadable demonstrated horticultural training audios/videos; created to improve qualitative and quantitative impact, for farmers and other stakeholders’ easier technology adoption, even in situation of electricity supply failure and absence. All that is needed is to translate our research findings/words into action by training farmers/stakeholders in local languages audios/videos for qualitative and quantitative food security impact.

**Keywords:** Technology, Learning, Research, Local, Language, Policy.



## **INFORMATION NEEDS OF CASSAVA FARMERS ON CASSAVA VALUE ADDITION TECHNOLOGIES IN OYO STATE**

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### **ABSTRACT**

The rapidly expanding end-use markets for cassava implies a surge in the production and processing of cassava roots into various value-added forms. This study investigated the information needs of cassava farmers on cassava value addition technologies in Oyo State, Nigeria, to ascertain areas of information gap for farmers to maximally exploit the opportunities inherent in the product value addition. Using a multistage sampling procedure, 130 registered cassava farmers were sampled and interviewed. Data were collected on respondents' personal and enterprise characteristics, access to information, perceived benefits and constraints to accessing information and information needs on cassava value addition. Data were analysed using percentages, means and correlational analysis at  $p=0.05$ . Results indicate that respondents were married (91.5%), with mean farm size and farming experience of 2.3 ha and  $20.1\pm 13.8$  years, respectively, while fellow farmers ranked first as major source of information. Though respondents were constrained with low income (70.0%), they reckoned that if they had access to information on value addition, their postharvest loss will be reduced (89.2%). Respondents had information gap on information needs on cassava adhesives (1<sup>st</sup>), glucose syrups (2<sup>nd</sup>) and confectionaries (3<sup>rd</sup>). Farming experience ( $r = -0.236$ ), constraints ( $r = -0.288$ ) and access to sources of information were significantly related to respondents' information needs. It is recommended that information on improved cassava value addition technologies be made available to cassava farmers through relevant sources, especially during emergencies coupled with hands –on training for effective application of information acquired.

**Keywords:** Information needs, Information sources, Access to information, Cassava value addition technologies.

**VEGETABLE FARMERS' ACCESSIBILITY TO INFORMATION AND COMMUNICATION  
TECHNOLOGY IN KARASUMA LOCAL GOVERNMENT, YOBE STATE, NIGERIA**

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**ABSTRACT**

The study examined the farmers' accessibility of information and communication technologies and new media amongst vegetable farmers in Karasuwa Local Government Area of Yobe State Nigeria. Multistage sampling procedure was used to select 100 vegetable farmers. Data were collected using a semi-structured interview guide and analyzed using descriptive statistics such as frequency counts and percentages. The result revealed that 59.0% of the respondents were female, 45.0% were within the age bracket of 20-30 years, 40.0% had primary education. The study revealed that majority of the respondents were aware of the existence of ICT tools as a source of agricultural information, but few 1.0% were aware of new media can be a source of agricultural information. Also, the result of this study indicated that access to agricultural information using technologies amongst vegetable farmers in the study area were still analogue (radio and television and mobile phone). It is recommended that government should establish centers through which farmers can access agricultural information using new media. It can be utilized more because it is economical to access hence it can be favorable to extension organizations who want to disseminate information. Extension agents can effectively reach to all farmers, through new media, in areas where farmers' settlement is dispersed.

**Keywords:** Information; communication; technology; new media; vegetable, farmers

**FISH FARMER'S WILLINGNESS TO PAY FOR IMPROVED INFORMATION  
COMMUNICATION TECHNOLOGIES (ICTS) IN THE WAKE OF COVID-19 PANDEMIC**

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**ABSTRACT**

The outbreak of COVID-19 has reduce Nigerian Aquaculture output. The effect of COVID-19 has been felt by farmers as their market dwindle and revenue margin lowered. These challenges includes farmers having limited access to input and output markets, and extension agents. This necessitated the need for farmers to have ICTs to bridge the divide created by bringing their markets and extension needs close than ever. Hence, this research was conducted to find out if farmers will be willing to pay for improved ICTs to bridge the gap caused by outbreak of corona virus. The research adopted the cross-sectional survey design with a total sample size of 40 farmers located in Oyo state, Nigeria. Primary data collected was analysed using Stata13.0 and the results revealed that; 80% of farmer's activities was affected by COVID-19 and ICTs plays a role in their activities (55%). The most used ICT was mobile phone (42.5%) and were willing to pay for improved ICTs (52.5%). Farmers were willing to pay up to N 250,000.00 more for ICTs. The result of the probit regression revealed that socio-economic and farming experience were found to be statistically significant with willingness to pay. This shows that farmers are willing to pay for improved ICTs. Therefore the government need to help farmers by introducing them to these ICTs and also subsidized the price.

**Keywords:** ICTs, COVID-19, Willingness to Pay

## **DIGITIZATION OF AGRICULTURAL EXTENSION SYSTEM FOR EFFECTIVE MANAGEMENT OF EMERGENCY IN NIGERIA**

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### **ABSTRACT**

Farmers, especially in Nigeria, face a range of interconnected risks and emergencies and need access to relevant information on agriculture in a timely, reliable and effective way to manage them. The traditional practice of providing agricultural information depends largely on agricultural extension workers visiting farmers to provide advisory services. Due to the limited number of extension staff and other challenges, the delivery of agricultural extension services through the traditional farm and home visits has been ineffective. This paper presents challenges that the agricultural extension system in Nigeria faces most especially during crisis and emergencies, which necessitate the adoption of digitize extension system as a basis for improving access of farmers to extension services during emergency situation. The emergence of ICTs has given rise to digitization, which is the delivery of agricultural advice via text message to an interactive voice response. A recent study has shown that agricultural extension professionals in Nigeria understand the potential and usage of digital tools in Nigeria and are well positioned to embrace its introduction. Therefore, the paper recommends that efforts should be made to digitize the country's extension system, capitalizing on existing enthusiasm among extension practitioners, farmers and lessons of best practice from elsewhere.

**Keywords:** Agricultural extension, digitization, emergency, management

## **USE OF ADVERTISING MEDIA BY SMALL SCALE AGRICULTURAL ENTREPRENEURS IN ODEDA LOCAL GOVERNMENT AREA OF OGUN STATE, NIGERIA**

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### **ABSTRACT**

The study examined the use of advertising media by small scale agricultural entrepreneurs in Odeda Local Government Area of Ogun State. Snow-ball sampling was used to select 180 respondents for the study. Primary data were obtained with the aid of Interview Guide. Chi-Square, Pearson Product Moment Correlation and Spearman Correlation were used to analyze the data. Results showed that the mean age of the respondents was 30years. Majority (73.3%) were males. A little above half (51.1%) attended secondary schools while 18.9% had tertiary education. Less than half (45.6%) had below 10years of experience in agricultural enterprises while majority had positive perception of the use of advertising media. Majority (94.4%) used physical display of products as a means of advertisement. Most (82.4%) of the respondents regarded high cost of electronic and print media advertisements as the foremost constraint to their use of advertising media. Correlation analysis showed a significant relationship between type of agricultural enterprises and advertising media used ( $r=0.14$ ,  $p<0.05$ ). The study also found a significant relationship between the use of advertising media and sales of agricultural products and services ( $r=0.52$ ,  $p<0.05$ ) while an inverse relationship was found between the constraints experienced by the respondents and their use of advertising media ( $\rho = -0.26$ ,  $p<0.05$ ). The study concluded that the use of advertising media could enhance sales of agricultural products, inputs and services and recommended a reduction in the cost of media advertisements for agricultural entrepreneurs by media organizations and advertising agencies.

**Keywords:** Advertising, Media, Agricultural entrepreneur, Products, Services, Patronage.

**FACTORS INFLUENCING THE USE OF SOCIAL MEDIA IN INFORMATION  
DISSEMINATION BY EXTENSION AGENTS IN LAGOS STATE AGRICULTURAL  
DEVELOPMENT PROGRAMME**

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**ABSTRACT**

The study assessed factors influencing the use of social media in information dissemination by extension agents in Lagos State Agricultural Development Programme. Simple random sampling technique was used in selecting 73 respondents across the zones. Data was collected with the aid of questionnaire. Data were analyzed using means, frequency counts and percentages. 52.1% of the respondents' were male, 74.0% were married, 69.9% had HND/BSc., with an average age, monthly income and years of experience of 43 years, ₦100,387.30 and 6 years respectively. Social media tools mostly accessed were Facebook ( $\bar{x}=3.53$ ) and WhatsApp ( $\bar{x}=3.52$ ). WhatsApp was perceived as the most effective social media tool ( $\bar{x}=3.60$ ). Perceived ease/speed of disseminating information to the farmers ( $\bar{x}=4.48$ ) and good use of time ( $\bar{x}=4.38$ ) were major factors enhancing the use of social media by the respondents. Constraints faced by extension agents in accessing social media tools were epileptic power supply ( $\bar{x}=2.58$ ) and irrelevant posts ( $\bar{x}=2.41$ ). Educational and training information ( $\bar{x}=4.41$ ) and technological information ( $\bar{x}=4.37$ ) were the major information posted on social media by the extension agents (EAs) to the farmers. WhatsApp and Facebook were the most accessible and effective social media tools used by the extension agents. Therefore, EAs should be trained on the use of other social media tools to improve information dissemination to farmers.

**Keywords:** Social Media Tools, Information Dissemination, Extension Agents

**REVIEW OF THE CHALLENGES OF AGRICULTURAL EXTENSION SERVICE DELIVERY  
USING SOCIAL MEDIA DURING COVID-19 PANDEMIC IN NORTHERN NIGERIA**

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**ABSTRACT**

Agricultural extension is important in providing information, skills and knowledge to solve farmers' problems. The paper reviewed the Challenges of Agricultural extension service delivery using social media during covid-19 pandemic in Northern Nigeria. The paper used secondary data which were obtained from published journal articles, books, reports from government and non-governmental organisations to serve as the basis of literature review. The review explored that mobile phone was the main tool utilized in the ESD during covid-19. Facebook, WhatsApp were the main e-extension tool employed in the transfer of information during emergencies such as covid-19. The challenges faced by ESD during Covid-19 were poor power supply, poor network connectivity, illiteracy as well as inadequate skilful extension workers that can handle e-extension. Therefore, it is suggested that Government at all levels should collaborate with private development partners and non-governmental organisations to provide digital innovations such as laptops, smart phones at affordable price to farmers, this will aid in adopting farm technologies.

**Keywords:** Extension, extension service, extension service delivery, Corona virus disease 2019

## **CONTENT ANALYSIS OF YOUTUBE VIDEOS ON CASSAVA PRODUCTION AND PROCESSING IN NIGERIA**

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### **ABSTRACT**

Video-streaming platforms such as YouTube have become an important medium to educate, entertain and in finding solutions to problems which can also be channelled for effective and efficient dissemination of agricultural information. This study was a content analysis of YouTube videos on cassava production and processing that were posted in Nigeria between 2009 and 2019. Purposive sampling method was used in selecting 155 YouTube videos because of the cassava production and processing contents. Findings revealed that many (53.5%) of the videos were on processing of cassava, while most (80.0%) of the videos were relatively recent (2014 - 2019). The major content of the video were on agronomic practices in cassava production (12.9%) and value addition (11.0%) Results further revealed that 66.5% of the videos had video description (descriptive texts), 36.8% had mobilizing information while 52.3% were of very high video quality (720p). The presentation patterns in the videos were in form of news (24.5%) and documentary (20.0%). Kruskal-Wallis test revealed a significant difference ( $p < 0.01$ ) in the number of likes ( $H = 43.834$ ), dislikes ( $H = 17.872$ ) and subscribers ( $H = 58.455$ ) across video sources. ANOVA revealed a significant difference ( $p < 0.01$ ) in the content of YouTube videos on cassava production and processing as posted by the various sources ( $F = 9.935$ ). The study concluded that YouTube videos on cassava production and processing were well viewed with a substantial number of subscribers with varied contents from the different sources. It is therefore recommended that more YouTube videos on cassava production and processing should be produced by different stakeholders in the agricultural sector with a view to enhance the dissemination of these information to would-be users.

**Keyword:** Content Analysis; Cassava Production; Cassava Processing; YouTube Video



**AWARENESS AND USAGE OF INFORMATION AND COMMUNICATION TECHNOLOGY BY  
AGRICULTURAL EXTENSION WORKERS IN OYO STATE**

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**ABSTRACT**

The study assessed the awareness and usage of Information and Communication Technologies (ICTs) by agricultural extension agents in Oyo State, Nigeria. The objectives described the socio-economic characteristics of the extension agents and the respondents' awareness of ICTs usage. A multistage-stage random sampling technique was employed to select 120 agricultural extension agents from Oyo State ADP. Data collected were analyzed using descriptive and inferential statistics. Findings revealed that majority (85.0 %) of agricultural extension agents were between the ages of 41 and 50 years. A large proportion (84.0%) were male with 74.0% having one form of degree qualification. The mean working experience was 7years. All (100.0%) of agricultural extension agents were aware of one form of ICTs or another for extension service delivery. The major ICTs commonly aware of among the extension agent were mobile phone (83.3%), radio (86.7%), television (55.0%) and newspapers (23.0%). Results of the data test of hypothesis also shows that age ( $r = 0.196$ ,  $p < 0.05$ ) and years of ICTs usage ( $r^2 = 0.103$ ;  $p < 0.01$ ) of extension agents had significant relationship with their usage of ICTs. Based on the explicit evidence from the study most extension agents had access to ICTs and the usage of modern ICTs were constrained with inadequate power supply. It was recommended that power should be made available for extension workers for effective usage of ICT tools.

**Keywords:** Agricultural extension agents, Awareness, Information and Communication Technologies

**AGRICULTURAL NEWS COVERAGE IN PRINT MEDIA: IMPLICATIONS FOR CREATING  
AWARENESS OF ORGANIC FARMING IN NIGERIA**

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**ABSTRACT**

Newspapers provide information, create awareness, increase knowledge and stimulate positive attitudes of people towards issues. Considering the relevance of the dailies in awareness creation, it is necessary therefore to find out whether in recent times there is enough coverage of agricultural news and serve as a veritable instrument for organic agriculture awareness creation in Nigeria. Three newspapers published between January – December 2017 and 2018 were purposely selected. These three (3) Newspapers are Guardian, Vanguard and The pointer from State and National Newspapers. The study shows that newspapers have a low level of priority on the reportage of agricultural news items and cannot serve as a reliable tool for organic agriculture awareness creation in Nigeria. It is recommended therefore that other mass media be investigated to find out their agricultural news friendliness and potentials as means of disseminating organic agriculture news. Research has shown the place of extension agents in reaching farmers with innovations, it is therefore pertinent to involve agricultural extension agents in the organic agriculture crusade especially as the media (dailies) seem to concentrate more on politics, religion, health and others.

**Keywords:** agricultural news, extension agents, food system, newspaper, organic agriculture

**ANALYSIS OF THE FACTORS INFLUENCING KAMBUWA CULTURAL AGRICULTURAL  
SHOW IN YAURI EMIRATE, NGASKI LOCAL GOVERNMENT AREA OF KEBBI STATE  
NIGERIA**

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**ABSTRACT**

The study reviewed the challenges in organizing annual cultural agricultural shows in Kambuwa Village area of Yauri Emirate in Ngaski Local Government, Kebbi State Nigeria using pairs wise ranking to determine the most pressing challenges. Purposive sampling was used to select four participants' from each group (Students, local Communities, participating Farmer, Government Officials and other Private Stakeholders) attending the event in the first stage and simple random sampling was used in the second stage to select two (2) respondents from each group using single proportion design to drawn 20 sample size using E-questionnaire (Google form) for data collection. Specifically, the result of the study indicated that Inadequate funding in organising the event rank first and also the respondents' highlighted lack of proper incentive for participating Farmers rank list (17th) as the challenges in organising the annual event. It was recommended therefore that Adequate, timely and complimentary funding should be made by Kebbi State and Ngaski Local Government Council so as to enable the organizers to properly plan and organize the shows as possible solutions to ameliorate the challenges and strengthen the annual cultural show.

**Keywords:** Factors, Affecting, Kambuwa, Cultural Agricultural Show, Organization

**AWARENESS IN THE USE OF ICT AMONG EXTENSION AGENTS AND AGROFORESTRY FARMERS IN EDO NORTH SENATORIAL DISTRICTS OF EDO STATE, NIGERIA**

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**ABSTRACT**

The aim of this study was to ascertain the awareness in the use of ICT among extension agents and agroforestry farmers in Edo North Senatorial Districts of Edo State, Nigeria. Data were collected with structured questionnaire distributed to sixty (60) Extension Agents and one hundred and thirty (130) Agroforestry Farmers respectively. Frequency, Percentages, mean scores and standard deviation were used to analyze the data. The result obtained showed that majority (100.0% and 96.2%) of extension agent and agroforestry farmers were aware of ICT devices as a source of information, while 93.3% and 84.6% of the respondents sampled know how to access the internet on their own respectively. Result shows that ICTs have effects on respondents agricultural practices with average mean value of (M = 3.69 and M = 3.53) and respondents' welfare with average mean value of (M = 3.82 and M = 3.16). Some of the constrained in the use of ICT devices by extension agents and agroforestry farmers were irregular power supply (M = 4.37 and M = 4.43), poor network coverage (M = 4.08 and M = 3.92) and low level of ICT s skills (M = 3.86 and M = 3.91) in the study area. This study concluded that there was a high and positive effect of the usage of ICTs on agricultural practices and respondent's welfare. It was therefore recommended that extension agents and agroforestry farmers should be given the requisite skills on ICT for total optimum utilization.

**Keywords:** Awareness, Agroforestry, ICTs, Extension agent, Farmers

**AVAILABILITY AND UTILIZATION OF INFORMATION AND COMMUNICATION  
TECHNOLOGY FOR ACCESSING AGRICULTURAL INFORMATION ON RICE PRODUCTION  
AMONG WOMEN FARMERS IN OGUN STATE, NIGERIA**

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**ABSTRACT**

This study assessed the availability and utilisation of Information and Communication Technology (ICT) for accessing agricultural information on rice production among women farmers in Ogun State, Nigeria. Multi-stage sampling procedure was used to select 184 women rice farmers for the study. An interview schedule was used for data collection. Descriptive and inferential statistics such as frequency count, percentage, Product Moment Correlation (PPMC) and Analysis of Variance (ANOVA) were used as statistics for data analysis. The findings showed that the mean age of the women rice farmers was 44.3 years. Majority (81.0 %) were married with an average household size of 5 members. The mean years spent in school and farming experience of the respondents was 3.2 and 15.2 years respectively. The majority (94.6%) of the respondents cultivated Ofada rice variety. The most available and utilised ICT tools for accessing agricultural information are: mobile phones (98.9%), radio (82.2%) and television (82.6%). Rice production information accessed through ICTs by the respondents includes information related to pest control, safe use of agro-chemicals and techniques of fertilizer application. There existed significant differences in the levels of availability ( $F= 13.007, P<0.05$ ) and utilization ( $F= 14.278, P<0.05$ ) of ICT for accessing agricultural information on rice production. The study recommended that the adult literacy programme and ICT enlightenment programme be organised for women farmers in order to improve ICT usage pattern and boost rice production capacity of women in Ogun State, Nigeria.

**Keywords:** Agricultural Information, Access, ICT tools, Women Farmers

**HARNESSING PERCEPTIONS AND ACTIVITIES OF AGRICULTURE STUDENTS ON  
SOCIAL MEDIA FOR USEFULNESS DURING EMERGENCIES IN ENUGU STATE, NIGERIA**

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**ABSTRACT**

The study assessed perceptions and activities of agricultural students on social media with a view to harness them for teaching, learning and communication especially during emergencies. One hundred and twenty agricultural students selected using simple random sampling technique from two universities in Enugu State, Nigeria constituted sample for the study. Questionnaire was used for data collection while percentage, mean scores and regression were used for data analysis. Findings reveal that Facebook (97.5%), and WhatsApp (97.5%) were social media platforms commonly used by the respondents for sharing information among themselves on academic matters. Although the respondents had negative and positive perceptions on social media, majority (95%) of them had high knowledge of the media. Sex, amount spent in subscribing to social media and membership of social organization were socio-economic variables that influenced their use of social media. The study concluded that Facebook and Whatsapp are social media tools that are useful for academic purpose among students. Thus lecturers and instructors in agriculture should deploy these platforms in teaching students especially when there is emergency like corona virus pandemic that discourages physical contact.

**Key words:** Agricultural Students, Social Media, Emergencies, Enugu State

## **ROLES OF INFORMATION COMMUNICATION AND TECHNOLOGY (ICT) IN AGROFORESTRY SERVICE DELIVERY IN EDO STATE NIGERIA**

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### **ABSTRACT**

This study sought to determine the role of information communication technology (ICT) in agroforestry service delivery in Edo State, Nigeria. Interview schedule was used to collect primary data from a sample of 150 farmers. Results revealed that majority (93.3%) of the respondents had radio, while (90.0%) had television and owned mobile phones (85.3%) were the most available ICTs. Importance of ICT identified were easy access to agricultural information such as new varieties of crops, breeds of livestock, pest and disease prevention, and control measures with the mean value of 3.55. The major constraints to the use of ICT included unavailability of business centers for Internet services ( $m = 2.50$ ) high cost of mobile phones ( $M = 2.35$ ) and non-durability of electronic devices computers ( $M = 2.33$ ). The proffered solutions were providing quality agricultural information through media and providing adequate training in the use of computers, e-mails, and Internet. There was a significant association ( $p < 0.05$ ) between radio ( $r = 0.923$ ), television ( $r = 0.783$ ), mobile phone ( $r = 0.813$ ), internet ( $r = 0.776$ ), and the importance of ICTs among the respondents in the study area. The study concluded that radio, television and mobile phones were the most commonly used ICTs by the farmers in obtaining agricultural information. It was recommended that farmers need to put in place appropriate machineries to integrate ICTs fully into their farms to increase and improve agricultural productivity.

**Keywords:** Agricultural information, Agroforestry, Constraints, ICT, Importance.

**EXTENSION PRACTICES AND THE USE OF INFORMATION AND COMMUNICATION  
TECHNOLOGIES UNDER COVID-19 IN AKWA IBOM STATE, NIGERIA**

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**ABSTRACT**

Acquiring and using information are critical to agricultural developmental process and the emerging information age imposes challenges that call for concerted efforts and a shift in the ways of dissemination of information needs. The study assessed agricultural extension personnel use of information and communication technologies for the development of agriculture. It aims to ascertain the extent of availability of ICT facilities for use and factors determining respondents' use of ICT facilities. Multistage sampling techniques were used to select one hundred and twenty (120) Agricultural extension personnel spread across the six Agricultural Development Programme (ADP) Zones in the State. Data were collected using pre-tested structured questionnaires and analysed using both descriptive (frequency, percentages and means) and inferential (chi-square) statistical tools. The results revealed that the most contemporary ICT facilities (internet) were not available. Of all the ICT facilities, radio and television were the most (75%) widely utilized while internet was the least (7%) utilized by the respondents. Factors determining the use of ICT facilities were: availability, accessibility, affordability and ease to use. The result of the hypothesis shows that there is significant relationship between the level of education and utilization of ICTs facilities for agricultural purposes ( $p < 0.01$ ). Based on these, the study recommends efforts that will make ICTs gadgets available, accessible, affordable and tutorials on them for Extension personnel for ease of usage.

**Keywords:** Use, Information, Critical.



**COVID-19 PANDEMIC-FARMERS' READINESS FOR SOCIAL MEDIA AS A TOOL FOR  
AGRO-INFORMATION RECEPTION IN ONDO STATE, NIGERIA**

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**ABSTRACT**

The outbreak of corona virus has limited face to face interaction of extension agents and farmers and as such shifted focus to more user centric devices with today's computers and mobile phones This study therefore examined farmers' readiness for social media as a tool for agro-information reception in the study area. An interview guide was used in collecting data from 120 farmers who were randomly selected. Data collected were analysed with the aid frequency counts, percentages and logit regression. The results shows the mean age of 44 years and farming experience of 16 years, respectively. Half of the respondents (50%) had primary education. About 85% were aware of WhatsApp and 12.6% were aware of blogs, respectively. Education, farming experience, membership of farmers' group and extension access were the variables that positively influence farmers' readiness to assess agro-information through social media while respondents' age negatively influence readiness to access social media.

**Keywords:** Social media, Information and Communication Technology, agro-information, farmers

**CATEGORIZATION OF POULTRY FARMERS BASED ON EXTENT OF MOBILE PHONE USAGE FOR ACCESSING AGRICULTURAL INFORMATION IN OYO STATE, NIGERIA**

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**ABSTRACT**

Mobile phone is a major component of information communication and technology (ICTs), which makes communication and social networking easy. Nevertheless, its potential has not been fully exploited for agricultural information among poultry farmers in Oyo State, Nigeria. The study therefore categorized poultry farmers based on extent of use of mobile phones for accessing agricultural information in Oyo state, Nigeria. A total of 172 respondents were selected for the study. Data were collected with the use of interview schedule while descriptive and inferential statistics such as frequency counts, percentages, mean, standard deviation and analysis of variance were used to analyzed the data. The result shows that agricultural information accessed through the use of mobile phone include request for drugs/vaccine , (WMS = 2.68); Information on transportation of poultry birds/ products (WMS = 2.65) and information on feed ingredients/ feed formulation (WMS= 2.64) among others. The extent of mobile phone usage was low (34.5%) and there was a significant difference in the extent of mobile phone usage for agricultural information across the selected zones ( $F = 15.34$ ,  $P < 0.05$ ). The respondents' age, household size, farming experience, number of mobile phone owned, significantly influenced the category of poultry farmers based on extent of mobile phone usage for agricultural information in the study area. The study therefore concluded that capacity building programme should be organized for poultry farmers in the study area in order for them to maximize the potentials of mobile phone for accessing agricultural information.

**Keywords:** Agricultural information, Mobile phone, Poultry farmers

## **FARMERS' PERCEPTION OF VIDEO-MEDIATED EXTENSION LEARNING PLATFORM IN ENUGU STATE, NIGERIA**

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### **ABSTRACT**

The emergence of the COVID-19 pandemic has re-emphasized the importance of digital technology as a viable source of information and knowledge needed to empower rural farmers. Video-mediated extension approach (VMEA) provides a viable platform for knowledge sharing among smallholder farmers because of its digital attributes and the low extension agent farmer ratio occasioned by dwindling labour force and low recruitment of extension personnel in Nigeria. This study assessed farmers' perception of video mediated extension approaches in Enugu State, Nigeria. Primary data were obtained from 180 farmers through the use of structured interview schedule. A multi-stage sampling technique was used in selecting the sample for the study. Percentages, mean scores, z-test, and chi-square were used to analyze the data. Results of the study show that more than half (59%) of the respondents were not aware of the existing agricultural extension videos used in the dissemination of agricultural information. Majority (65.7%) of them had not watched any video showing innovative agricultural activities. However, the respondents had positive perceptions toward the use of extension videos for disseminating agricultural information. The priority areas identified by farmers for future video production were new agricultural technologies and climate smart agriculture practices. Factors such as erratic and fluctuating power supplies, insufficient credit availability and inadequate awareness about VMEA and its importance were the perceived barriers to respondents' demand for extension videos. The study points to the need for creation of adequate awareness of the existence of extension training videos among rural farmers as a sustainable extension tool for disseminating innovative agricultural technologies, especially in the "new normal" occasioned by COVID 19 pandemic.

**Keywords:** Agricultural information, COVID-19, digital technology, rural farmers, video-mediated extension approach

**PERCEPTION OF YOUTH FARMERS ON INFORMATION COMMUNICATION  
TECHNOLOGY FOR SUSTAINABLE AGRICULTURAL PRODUCTION IN OYO STATE,  
NIGERIA**

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**ABSTRACT**

Information communication Technologies (ICT) has potential to enhance youth livelihood through sustainable Agricultural production, the study investigated perception of youth farmers on information communication technologies for sustainable agricultural production in Oyo state. A multistage sampling procedure was used to select 120 respondents. Data was collected through interviews schedule on respondents' socio-economic characteristics, types of information communication technology available, the use of ICT in receiving agricultural information and constraints to it. Data were analyzed using descriptive and Chi-square and Pearson product moment correlation (PPMC) Results showed that mean age and years of farming experience were 24.3years and 9.0 years respectively. Most (80.8%) of the respondents used mobile phone to access ICT agricultural Information while little above half (54.2%) was satisfied with information received. Poor electricity services (2.60) and cost of ICT (2.58) were the major constraints encountered using ICT in the study area. Furthermore, there was significant relationship between socioeconomic characteristics youth farmers, age ( $\chi^2= 50.700$ ,  $p<0.05$ ), annual income ( $\chi^2= 30.583$ ,  $p<0.05$ ), farm experience ( $\chi^2= 70.350$ ,  $p<0.05$ ) and farming size ( $\chi^2=1.1937$ ,  $p<0.05$ ) and use of ICT for sustainable agricultural production. The study concludes that Majority of the respondents used mobile phone (80.8%) to communicate and they were satisfied with the level of information they received. However, the major constraints identified were poor electricity services (67.5%) and high price of ICTs facilities (63.3%). The result also revealed that there is significant relationship between socio economic characteristics of youth farmers and the use of ICTs for sustainable agricultural production. Therefore, it is recommended that developmental practitioners should use mobile phones and radio for information propagation as ICT increased youth farmers' status and have potential to do more in sustainable agricultural production if constraints like poor electricity, price of ICT and poor internet connectivity are checked.

**Keywords:** Youth Farmers, ICT, mobile phone, sustainable agriculture

**RURAL FARMERS' READINESS TO ACCESS AGRICULTURAL INFORMATION FROM THE  
NATIONAL FARMERS HELPLINE CENTER NAERLS, ABU ZARIA, KADUNA STATE,  
NIGERIA**

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**ABSTRACT**

This findings conducted with the aim of investigating rural farmers' readiness to access agricultural information from the National Farmers Helpline Center NAERLS, ABU Zaria. It was revealed that 61.2% who frequently access information from the National Farmers Helpline were male farmers belonging to the age group of 41 years and above (46.4%), married (75.6%) and having a household size of 6 – 10 persons (51.1%), with at least 11 – 30 years of farming experience. Thus, 45.6% of the respondents were involved in crop production while 37.5% were into animal husbandry, with the majority of them (46.9%) having acquired no form of formal education. Furthermore, the findings showed that the National Farmers Helpline Center supplies the rural farmers with information on cultural practices, pest and disease management, weed management strategies, weather and climate, marketing strategies, post-harvest activities, farm tools and machineries, seeds varieties and selection and information on government policies. It was clearly identified that rural farmers are personally, infrastructural, resourcefully, mentally and managerially ready to access agricultural information from the National Farmers Helpline, NAERLS ABU, Zaria. The researchers recommends that rural and urban farmers should be committed in accessing the readily available agricultural information for a productive and sustainable agricultural productivity, likewise, reliable means of information dissemination should be adopted by the National Farmers Helpline Center so as to ensure that both rural and urban farmers benefit from the untold agricultural information available and individual farmers and commercial farmer should explore measures on effective productivity from the National Farmers Helpline Center, NAERLS, ABU, Zaria.

**Keywords:** Rural farmers, access, Information, NAERLS

**SUB-THEME H – GENDER ISSUES IN AGRICULTURAL EXTENSION PRACTICE DURING  
EMERGENCIES**

**A REVIEW ON GENDER ACCESSIBILITY TO AGRICULTURAL PRODUCTION RESOURCES  
AND EXTENSION SERVICES AMONGST RURAL FARMERS IN THE CRISIS REGIONS OF  
NORTHERN NIGERIA**

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**ABSTRACT**

This paper attempts to review gender issues on accessibility to agricultural production resources and extension services amongst rural farmers in the predominant crises regions of Northern Nigeria, The study applied qualitative analysis in reviewing related literatures, workshop proceedings, seminars, intervention projects and situation reports on the crisis torn regions to elicit cogent facts and figures, The findings reveals that there is a great deal of gender disparity in favor of the men folk as against women and in the accessibility to production resources and extension services in the affected regions of the study. This has not only affected their production output but also makes them vulnerable in emergency situations. The paper thus recommends strongly for gender mainstreaming policies towards ensuring equitable accessibility to production resources and extension services in periods of emergencies in these regions. The aftermath is for sustainability in Agricultural production and improvement in rural livelihood to guarantee food security.

**Keywords:** Gender, Accessibility, Extension, Production Resources, Emergencies,

**GENDER GAP IN ACCESS TO PALLIATIVE MEASURES ON COVID-19 PANDEMIC AMONG RURAL HOUSEHOLDS IN OGBOMOSO AGRICULTURAL ZONE OF OYO STATE, NIGERIA**

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**ABSTRACT**

The study examined differences in level of accessing palliative measures on Covid-19 pandemic among rural households on gender basis, in Ogbomoso agricultural zone of Oyo state, Nigeria. The study was conducted using 90 randomly selected respondents. Descriptive statistics were used to analyzed data. 25.6% of the respondents were female. The result of the analysis showed that radio (WMS = 2.91) was the major source of awareness of Covid-19 pandemic among the male respondents while religious gathering (WMS = 2.96) was rampant among the female respondents. Male respondents differed from females in accessing palliative measures on Covid-19 pandemic. Moreover, it was also revealed that female had more access to Covid-19 palliative measures at high level than their male counterparts (Male 14.9%; Female 21.7%). Awareness of Covid-19 pandemic was recorded at high level among female respondents (21.8%) more than the male respondents (19.4%). Independent sample T-test results indicated that female had a mean value of 16.22 in respect to their access to palliative measures as against mean value 14.49 recorded by their male counterpart. Adequate representative and good-quality data is needed which allows for systematic research on equality in accessing palliative measures and reduce inequality in resource sharing in rural areas.

**Keywords:** COVID-19, gender, household, rural, palliative measures



**AN APPRAISAL OF ENTREPRENEURSHIP COMPETENCES OF WOMEN FARMERS IN AGRIBUSINESS IN IKA SOUTH LOCAL GOVERNMENT AREA OF DELTA STATE, NIGERIA**

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**ABSTRACT**

The study assessed the entrepreneurship competences of rural women farmers in agribusiness and constraints to entrepreneurial development in Ika South Local Government Area of Delta State, Nigeria. A total of one hundred and twenty one (121) women farmers entrepreneurs were randomly selected and interviewed. Data was collected using questionnaire and interview schedule and were analyzed using descriptive statistical tools such as mean, frequency and percentage. The result showed that majority of the women does belong to farmers association (70.2%) and earned an annual income of ₦200,000 - ₦500,000. The major type of business embarked upon were production (70.3%), marketing (54.5), processing (39.7), and the ownership pattern of women business was majorly sole proprietorship (91.7%). The respondents gave multiple responses on the areas of entrepreneurial competence which are systematic planning and monitoring (92.5%), goal setting (90.3%), risk taking (90.3), self-confidence (70.3%) and information seeking (67.8%). The leading constraints are lack of start-up capital (95.4%), cumbersome procedure of farm credit facilities (92.5%), inadequate storage facilities (90.3%), high cost of farm inputs (89.2%) and unavailability of machines/equipment (87.6%). The general results shows that rural women farmers are engaged in diverse form and types of business and also have entrepreneurial competence in their enterprise but are limited by several constraints which is capable of affecting their entrepreneurial development. It is recommended that women farmers should be educated on how to obtain capital for start-up business so as to help build their capital base, rural women farmers should equally be encouraged to join more farmers groups as this is a quick means of raising fund, storage facilities and farm input should be made available to women farmers by the government through its agencies such as the ministry of agriculture.

**Keywords:** Entrepreneurial development, women entrepreneur and constraints

**GENDER ANALYSIS OF ATTITUDE OF YOUTH TOWARDS AGRICULTURE IN SELECTED  
SECONDARY SCHOOL OF MAIDUGURI METROPOLITAN COUNCIL BORNO STATE,  
NIGERIA**

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**ABSTRACT**

The study assessed the gender analysis of attitude of youths towards agriculture as a career in Maiduguri Metropolis, Borno State, Nigeria. Stratified sampling procedure was used to select 120 respondents for this study. Data used in this study were obtained through both primary and secondary sources. The analytical tool used for the study was descriptive statistics such as percentage counts, frequency, mean and also inferential statistics (regression analysis) were used to analyzed the data. The result of this study revealed that many (54.2%) of the students were males. The result showed that most (33.3%) of the respondents were in senior secondary school 2. the finding shows that most (50%) of the respondents parents/guardian occupation were civil servants with most and only few being farmers (6.7%). This showed that majority of the respondents' parent/guardian occupation is civil servants. The result of the findings reveals that few respondents' average income of parents/guardian is greater than ₦20,000. Based on the result of the regression analysis indicates that sex, class, household size and parents/guardian occupation had positive coefficient and were significant to attitude of the respondents towards agriculture as a career. There is need therefore, for improving the farming and changing the attitude of youth towards agriculture in the study area so as to boost the socio-economic status of students in the area. Based on the findings of the study it is recommended that; government should educate students on the need to adopt agriculture as a career to impact on their future life through extension education.

**Keywords:** gender, attitude, agriculture, youth, secondary school.

**GENDER ACCESS TO FARM LABOUR AND COPING STRATEGIES: IMPLICATION TO  
FOOD PRODUCTIVITY IN BENUE STATE, NIGERIA**

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**ABSTRACT**

The study focused on the main sources of farm labour, constraints and coping strategies adopted by each gender towards scarcity of labour in the rural areas of Benue State, Nigeria. Descriptive and inferential statistics were employed in data analysis while structured questionnaire was used to collect primary data. Copies of questionnaires were distributed to randomly selected gender and 240 were returned which formed the sample size. The result of the study showed that household labour was the most available labour to both male and female farmers. Result further revealed that male farmers had more access to hired labour than the females. The most adopted coping strategies when family labour was inaccessible and cost of hiring labour was high were, selling/leasing of personal properties by the male farmers and reduction of portion of farm land to be cultivated by the female farmers. The major factors militating against access to farm labour by gender were inadequacy of fund, inadequacy of water, inadequacy of the farm input, lack of good road, and high cost of farm labour. The study recommended that appropriate labour-saving machines and implements should be provided for farmer to ease the labour constraint.

**Keywords: Gender, Labour, Food productivity and Primary data**

**CLIMATE CHANGE ADAPTATION MEASURES USED BY WOMEN GARDEN EGG  
FARMERS IN ENUGU STATE, NIGERIA**

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**ABSTRACT**

This study investigated the climate change adaptation measures used by women in garden egg production in Enugu State, Nigeria. Multistage sampling procedure was used to select hundred respondents from the study area. Data were collected through the use of semi-structured interview schedule and analyzed with descriptive statistical tools such as frequency count & percentage, mean scores and standard deviation. The major perceived effects of climate change on garden egg production of women were scarcity of adequate floral resources (M=3.00), increased spread of pests and pathogens (M=2.78), reduces pollen production in flowers (M=2.68), reduced behavior and distribution activities, increase garden egg susceptibility to pathogens and decreased quantity and quality of garden egg production (M=2.67) and others. The adaptation strategies used by women in garden egg production were change of the sites for farming (M=2.97), establishment of water reserve and farming close to irrigated area (M=2.92). The identified constraints to adapting to the present climate change scenario included: unstable weather (M=3.00), unavailability of modern harvesting techniques (M=2.75), increased pest and disease pathogens (M=2.68), poor access to materials and equipment (M=2.63), among others. This study recommends awareness and training of garden egg farmers on effect, implication and adaptation measures to climate change and variability in the study area.

**Keywords:** Climate change; Adaptation; Women; Nigeria

**ASSESSMENT OF WOMEN'S INVOLVEMENT IN CASSAVA PROCESSING IN IJEBU ODE  
LOCAL GOVERNMENT AREA, OGUN STATE, NIGERIA**

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**ABSTRACT**

The study assessed women's involvement in cassava processing in Ijebu Ode Local Government Area, Ogun State, Nigeria. The role women play in agriculture and rural society cannot be over emphasized and is also fundamental to Agricultural and Rural Development in Nigeria and Sub-Saharan Africa. Two stage sampling procedure was used in selecting 120 women cassava processors. Data collected were described with percentages, mean and standard deviation. Results showed that mean age of the women cassava processors was  $42.66 \pm 11.76$  years, majority (80%) were married and majority (71.7%) had no access to credit. A little below average, (48.35) of the women cassava processors were at a medium level of involvement but their processing activities were majorly constrained by inadequate capital (92.5%), poor market situation (82.5%) and high cost of transportation of processed cassava (78.3%). The study concluded the women cassava processors in the study area engaged in cassava processing at a medium level. and recommended that governmental and non-governmental agencies should grant the women cassava processors access to credit so as to improve their cassava processing activities.

**Keywords:** Women, involvement, cassava, processing.

**THE ROLE OF DEVELOPMENT EXCHANGE CENTRE MICROCREDIT IN WOMEN  
EMPOWERMENT AND POVERTY ALLEVIATION IN KADUNA STATE,  
NIGERIA**

**ABSTRACT**

The study focused on the role of Development Exchange Centre (DEC) microcredit in women empowerment and poverty alleviation in Kaduna State, Nigeria. Data for the study were collected using a well-structured questionnaire administered to 420 women farmers of beneficiaries and non-beneficiaries in the study area. Data were analyzed using descriptive and inferential statistics. The result shows the mean farming experience was 22 years for DEC beneficiaries and 19 years for non- beneficiaries while mean farm size for beneficiaries and non- beneficiaries was 2.0 ha. The result of the regression analysis showed that level of education(4.05,P<0.01),, age(4.08,P<0.01),years of involvement in cooperative society(8.50P<0.01), household size(2.48 P<0.01), credit(6.81P<0.01),occupation (-3.87P<0.01), farm size(1.80 P<0.10), farm experience 1.74P<0.10),remittance(3.62P<0.01) and extension contact(-2.32P<0.01)were significantly related with level of participation. The mean crops output of DEC beneficiaries (437,807.1kg) was significantly higher than non-beneficiaries (145,571.4kg). The difference in the mean crops output levels was largely attributed to participation in DEC microcredit programme. The calculated Z-test value (14.74) for crops output and income (22.93) was significant at 1%. It was therefore recommended that DEC programme be extended to other farming communities in Kaduna State, so as to accelerate the poverty alleviation among women farmers in the State.

**Keywords:** DEC microcredit, Empowerment, Kaduna State, poverty alleviation, Women.

**LIVELIHOOD OUTCOMES OF RURAL WOMEN PARTICIPATING IN COOPERATIVE SOCIETIES DURING EMERGENCIES IN AKINYELE LOCAL GOVERNMENT AREA OF OYO STATE, NIGERIA**

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**ABSTRACT**

This study evaluated the effect of cooperative Societies on livelihood outcomes of rural women in Akinyele Local Government Area of Oyo State, Nigeria. Multistage sampling procedure was used to select ninety six respondents. Descriptive statistics, chi-square, t-test and Pearson Product Moment Correlation (PPMC) were used to analyze the data. Findings showed that few (47.9%) of the respondents who participated in cooperative societies fell within 31 to 40 years, while 41.7% of the respondents earned less than ₦200,000 per annum. Few (46.7%) of the respondents were involved in trading activities, most (64.6% and 62.5%) of the respondents agreed that participation in cooperative societies had increased their household food security and improved innovative capacity respectively. 46.7%). In addition, Chi-square showed that the level of education ( $\chi^2 = 0.000$ ,  $p \leq 0.05$ ), marital status ( $\chi^2 = 0.008$ ,  $p \leq 0.05$ ) and livelihood outcomes of the respondents were significantly related. However, PPMC showed that the household size ( $\chi^2 = 0.001$ ,  $p \leq 0.05$ ) and income level ( $\chi^2 = 0.00$ ,  $p \leq 0.05$ ) were significantly related to livelihood outcomes. There was significant difference ( $p = 0.00$ ) between livelihood outcome of participants and non-participants. The study concluded that participation of rural women in cooperative societies improved their livelihood outcome. It recommends that rural women should be encouraged to join active cooperative societies.

**Keywords:** Rural Women, Livelihood outcome, Cooperative Societies

## **GENDER ROLES IN SUSTAINING SOCIAL VALUES AMONG RURAL HOUSEHOLDS IN OYO STATE, NIGERIA**

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### **ABSTRACT**

Social values are moral beliefs and principles that are accepted by the majority so as to ensure the continuity of a society. The need to sustain social values by everyone becomes pertinent as the rate at which our social values are eroding is alarming. This study investigated gender roles in sustaining social values among rural households in Oyo State. A multi-stage sampling procedure was used to select 166 respondents (82 male and 84 female gender groups) for this study with the use of structured interview schedule to elicit information from respondents. Data were analysed using frequencies, percentages, PPMC and T-test. Female have higher (66.7%) level of knowledge on sustaining social values while male show a favourable (59.8%) perception on sustaining social values. Constraints to sustaining social values were peer influence ( $\bar{x}=1.90$ ), negative influence of social media ( $\bar{x}=1.80$ ) and time ( $\bar{x}=1.53$ ). Significant relationship exist between age ( $r= 0.155$ ,  $p=0.046$ ) and extent of sustaining social values. There exist a significant difference in the extent of sustaining social values across gender ( $t= 3.509$ ,  $p= 0.001$ ). The study concluded that female gender play their roles better in ensuring sustenance of social values than their male counterpart. This study recommends a need for sensitisation of male gender group to improve their roles in ensuring sustenance of social values so as to birth a sustainable society with good conducts and behaviour.

**Keywords:** Social values, Sustenance, Perception, Gender role



**ASSESSMENT OF EXTENSION SERVICES AND THE LIVELIHOOD PRACTICES OF WOMEN  
IN OBAFEMI OWODE, ABEOKUTA, OGUN STATE.**

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**ABSTRACT**

Agricultural Extension Services plays an important role in dissemination of agricultural information on new technologies and research aimed at improving agricultural productivity. The study assessed the extension services available to the respondents, their livelihood practices, accessibility to extension services and the constraints they face while adopting the services provided by the extension officers. Multi stage sampling techniques was used to select three hundred and seventy four (374) respondents for the study. Primary and secondary data were collected for data analysis which was done with descriptive statistics. Result reveals that an average (42.0%) of women was within the age range of 41-60 and 58.7 % of respondents had only primary education. Furthermore, extension services available to them were mainly Research and Training (R&T) and Women in Agriculture Programmes (WIA). R&T includes training on improved seedling and variety selection (98.1%) and marketing of farm produce (91.0%) amongst other research and training activities they were engaged in while WIA Programmes which includes cosmetic production and money saving culture 55.7% and 50.2% respectively were listed as the most available form of extension services provided to them. 21.74% are into garri production and 10.86% are into sales of vegetable produce as major means of survival. Furthermore, extension service available to them were mainly Research and training and women in Agriculture programmes. Funds/capital and gender based machine for innovation were the major constraints faced during the study. The study concluded that extension services and training have an important role to play in order to actualize their goals. The study recommend that extension services should be geared up in order to improve the livelihood of women in the study area.

**Keywords:** Extension services; Livelihood; Women

**TRADITIONAL SALT PROCESSING ACTIVITIES OF RURAL WOMEN IN EBONYI STATE,  
NIGERIA**

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**ABSTRACT**

The study investigates traditional salt processing activities of rural women in Ebonyi State, Nigeria. Two LGAs were purposively selected out of the 13 LGAs in the state and a total of 90 respondents were used for the study. Frequency, percentage and mean score were used in data analysis. Most (68%) of the respondents belonged to salt makers group. Majority (98.9%) of the salt makers indicated that their method of salt production involved pan evaporation with firewood. Most (62.9%) of the salt makers engaged in salt production during the dry season. A greater percentage (63.2%) indicated that they fetch brine anytime they want as the need arises. Majority (86.6%) indicated they used ash to filter the brine while majority (97.2%) reported that it takes less than 1 day to filtrate. Most of the women (66.8%) produced 6-10 bags of salt in a month while 53.4% sold 7-10 bags in a month. Findings disclosed that salt makers sold salt at an average price of ₦3,650. Findings shows that 24.7% earned ₦10, 000- ₦19, 999 per month. Findings also revealed that major contributions of salt making to the wellbeing of households were: medicinal value (M=2.96), payment of children/ward school fees (M=2.96), better feeding and nutrition (M=2.93) among others. The study recommends that government should provide aids to the salt processor by providing the basic infrastructure to improve the quality and quantity of salt produced.

**Keywords:** Salt, women, Ebonyi State

**CONSTRAINTS TO WOMEN'S EMPOWERMENT IN AGRICULTURE IN RURAL FARMING  
AREAS IN OYO STATE, NIGERIA**

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**ABSTRACT**

Women play crucial roles in the agricultural sector but are often marginalised with regard to accessing productive resources and decision-making. Most of the challenges women encounter are often mentioned generically, neglecting the fact that factors impeding women empowerment in agriculture intrinsically differ from one region to another. Based on this, this study examined the major barriers to women empowerment in agriculture in rural farming areas in Oyo State. A multi-stage sampling procedure was used to select 100 women farmers and primary data was collected with the aid of a semi-structured questionnaire. Descriptive analysis was used to analyse the data and the findings are presented in table and chart. The study revealed that the inability to access formal credit ( $\bar{x} = 4.61$ ), heavy domestic workload ( $\bar{x} = 4.36$ ), and poor pricing of produce ( $\bar{x} = 3.89$ ) are the major barriers to women empowerment in agriculture in the study area. Therefore, providing access to formal credit facilities, provision of labour-saving technologies, and regulation of agricultural produce prices will enable women's empowerment in agriculture.

**Keywords:** Women farmers, empowerment, agricultural productivity

**ASSESSMENT OF GENDER ROLES IN AGRICULTURAL EXTENSION PROGRAMME  
DELIVERY IN ABAKALIKI LGA OF EBONYI STATE, NIGERIA**

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**ABSTRACT**

The study investigated the assessment of gender roles in Agricultural Extension Programme delivery in Abakaliki Local Government Area of Ebonyi State, Nigeria. The study identified the socio-economic characteristics of the respondents, determined the role of male and female. Extension workers in Agricultural Extension delivery services and identified different ways of information dissemination by Agricultural Extension workers and problems militating against agricultural extension programme in the study area. The research design used was survey research method. Simple random sampling technique was used for the sample selection and questionnaire was used to elicit information from the respondents. Both descriptive statistics and Chi-square were used for data analysis. A sample size of 240 rural farmers was initially taken for the study but only data for 210 respondents were analyzed. Simple random sampling technique was used for the sample selection and questionnaire was used to elicit information from the respondents. Both descriptive statistics and Chi-square were used for data analysis. The findings of the study showed that there was no significant difference in the roles of male and female extension workers in the service delivery at  $P \leq 0.05$ . Methods used for information dissemination according to the result include personal contact, mass media, print media, agricultural shows, exhibition, etc. Problems militating against agricultural extension programme delivery in the study area include inadequate supply of farm inputs, inadequate number of women as extension workers, illiteracy, financial constraints etc. The study showed that women are seriously involved in agriculture in the study area but are very few among the extension workers. It is therefore recommended that agricultural extension programme should be more gender sensitive when organizing extension activities, so that women farmers have full and appropriate access to extension meetings demonstrations field days and other activities.

**Keywords:** Gender, Agricultural extension, programme.

**GENDER ANALYSIS OF URBAN VEGETABLE PRODUCTION IN OJO LOCAL  
GOVERNMENT AREA, LAGOS STATE, NIGERIA**

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**ABSTRACT**

The study assessed gender analysis of urban vegetable production in Ojo Local Government, Lagos State, Nigeria. A purposive sampling procedure was used to select 106 respondents for the study and primary data was collected with the aid of a questionnaire. The average age of the respondents was 45 years, majority (59.4%) of them were female, 72.6% were married, 48.1% had secondary education, 50.0% hired labour with average farmland, farming experience and family size of 2 hectares, 11 years and 5 people respectively. Male participated more in harvesting for sale ( $\bar{x}=3.79$ ) and irrigation ( $\bar{x}=3.09$ ) while female participated more in marketing ( $\bar{x}=3.76$ ), purchasing seeds/seedlings ( $\bar{x}=3.46$ ) and spraying ( $\bar{x}=3.44$ ). The major factors responsible for male and female participation in urban vegetable production were passion for vegetable farming ( $\bar{x}=4.33$ ) and improved household nutrition ( $\bar{x}=4.27$ ) respectively. Respondents were mostly constrained by high costs of inputs ( $\bar{x}=2.72$ ), pests and diseases ( $\bar{x}=2.59$ ) and poor funding ( $\bar{x}=2.56$ ). Significant ( $p<0.05$ ) relationship existed between source of farm labour ( $\chi^2=18.38$ ,  $df=3$ ), farming experience ( $r=0.22$ ), family size ( $r=-0.26$ ), constraints facing respondents' production ( $r=0.28$ ) and participation in urban vegetable production. Significant ( $p<0.01$ ) difference exist between male and female participation in vegetable production ( $t=1.05$ ). Therefore, providing more financial assistance, seeds and an enabling environment will further enhance male and female participation in urban vegetable production

**Keywords:** Gender, Urban, Vegetable production

**DETERMINANTS OF YOUTHS' PARTICIPATION IN AGRICULTURAL ACTIVITIES IN  
OGUN STATE, NIGERIA**

**ABSTRACT**

The study examined the determinants of youths' participation in agricultural activities in Ogun State, Nigeria. A multistage random sampling procedure was used to elicit information from 240 respondents. Instrument for data collection was a structured questionnaire. Descriptive and inferential statistics were used for data analysis. Results showed that (88.3%) of the respondents were male, majority (80.8%) were under the age of 30 years and majorly (98.4%) literate. Youth acquired agricultural skills like poultry, fish and crop production during the course of their participation in the programme. Majority of the sample used ICT's gadgets such as mobile phones, radio and television to acquired farm business information and transactions to align with the new trend in the emerging global market. Regression analysis showed that gender, educational level, length of residence in a community, income, extension contact and possession of ICT's gadget were the relevant and significant factors that determined youths' participation in agricultural activities of the associations. The study recommended that encouragement of young school leavers and female youth to participate in agricultural empowerment programme, extension delivery services on the uses of ICTs to transform agriculture to meet new challenges and opportunities in the global market should be intensified among the rural youth.

**Keywords:** Youth, Participation, Youth associations, Agricultural activities, ICTs

**GENDER, GENERATIONAL INVOLVEMENT AND SUSTAINABILITY LIKELIHOOD OF  
COMMUNITY AND SOCIAL DEVELOPMENT PROJECTS IN SOUTH-WEST, NIGERIA**

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**ABSTRACT**

Community and Social Development Project (CSDP) make efforts to ensure that projects beneficiaries are targeted. However, the dominance of males and elders persists. This study assessed the gender and generational involvement and the sustainability likelihood of CSDP in Southwestern Nigeria. A multistage sampling procedure was used to select 130 respondents (16 youths, 42 adult males, 34 adult females and 38 elders). Focus Group Discussion (FGD) was used to collect data. Thematic analysis was used to analyse the data. Respondents indicated their involvement in project phases: needs assessment (2:54, 6:5, 5:1), funding (2:23), decision making (12:4, 9:2, 7:2, 2:30), formulation of Community Development Plan (5:8, 3:3, 35:1), training (3:2, 6:6) and implementation (5:2, 2:25, 3:6, 9:3). Important benefits derived were increased knowledge (10:14, 17:4, 18:4, 8:29). Major constraint was inadequate fund (6:15, 3:14, 18:7, 5:11). None of the projects were insured (11:5, 2:26, 19:4), maintenance committee was set in place (8:32, 2:41), projects were relevant (19:7, 6:12, 20:10) and environmental impact assessment was carried out (7:8, 2:46, 3:13, 1:34). Communities that are poorer should be given lower counterpart fund to reduce the burden in sourcing for the counterpart fund.

**Keywords:** Community involvement, gender, generation, sustainability likelihood, Community and Social Development Project

### **Agricultural Extension Society of Nigeria (AESON)**

AESON ([aesong.org](http://aesong.org)) is a professional association of all practitioners in agricultural extension. From inception in 1992, AESON has facilitated sharing of ideas among staff of agencies implementing agricultural extension and related programmes (public, private, donors, banks, NGOs, national agricultural research institutes (NARIs) federal, state, local government agricultural parastatal. farmers, lecturers, and students. AESON collaborates with all stakeholders in agricultural extension practice and development in Nigeria, African and the World. This is done through regular annual conferences. Every year, presentations from the conferences are peer reviewed and accepted papers collated into the proceedings of the conference. The Society's journal, the Journal of Agricultural Extension, presents three issues a year (February, June and October). Currently, AESON has two textbooks on the shelf namely: "Agricultural Extension in Nigeria" and "A Guide to Research Methods in Agricultural Extension". The two textbooks remain important reference material for agricultural extension professionals and students in Universities and other higher institutions of learning throughout the country and beyond.

### **Livelihoods Support and Development Centre (SLIDEN AFRICA)**

SLIDEN AFRICA (Sustainable Livelihoods and Development Network for Africa) also known as the Livelihoods Support and Development Centre ([slidenafrica.org](http://slidenafrica.org)) is a non-governmental, non-profit making organization based in Nigeria with offices in Kenya and Ghana. It is made up of a network of partners that comprises knowledgeable and experienced professionals in the Agriculture, Development Studies and related fields. SLIDEN AFRICA was established in 2000 against the philosophy of is the empowerment of poor people in Africa through poverty alleviation, livelihoods development, skill enhancement and gender parity in development, research and networking. It aims at contributing significantly to the attainment of increase in level of education, reducing poverty, ensuring gender equity and environmental sustainability in Africa. In achieving this goal, SLIDEN AFRICA has a pro-poor strategy which encompasses educational development, community development, livelihoods development, capacity building and skill acquisition, among others. These strategies are embedded in our programmes which are:

1. Research and Development Programme: Consultancy; Business Development Support
2. Livelihood Development Support Programme: Capacity Building and Skill Acquisition; Microcredit and Livelihood Finance: Information for Development Project
3. Community Development Programme: Community-Assisted Development Initiatives; Community Development Consultancies
4. Educational Development Support Programme: SLIDEN and friend Educational Support Project; SLIDEN and U Educational Project