**EFFECTS OF CORN EARWORM (*Helicoverpazea*) ON THE YIELD OF SELECTED MAIZE (*Zea mays* L.) VARIETIES**\*1Oyewale, R.O, 1Abdulsalam, S. A. 1Bello, L. Y., 1Salaudeen, M. T., 1Ibrahim, H. M and 2Idowu, G. A.

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**ABSTRACT**

An experiment was carried out at Department of Crop Production nursery, School of Agriculture and Agricultural Technology, Federal University of Technology, Minna main Campus, Gidan Kwano during the month of March to June 2016, to determine maize variety that are tolerant to infestation of maize earworm (*Helicoverpazea*). Four maize varieties (Across98, NoMa1212, Oba super II and Dangwari) were screened for resistance to maize earworm. The treatments were fitted into completely randomized design (CRD). Data such as, cob number, damage and grain weight were collected and subjected to analysis of variance (ANOVA) using the SAS institute ( 2002-2003) version 9.1 with compatibility of 32 byte operating system. The result showed that the level of infestation of corn earworm differs among the four maize varieties with Across98 recorded less damage, cob number and higher number of grain weight, but on the other hand, Dangwari and NoMa1212 were noted to have greater damage, less number of cobs and less grain yield. Hence, Across98 and Oba super II maize varieties are recommended.

**Keyword:** *Helicoverpazea,* Across98, NoMa1212, Oba super II and Dangwari

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| H. M. Ibrahim., Z. O. Jubril, R. O. Oyewale, O. M. Olosunde, L.A. Hammed and M.A. Adebisi (2019) Effects of Scarification and Dipping Duration on the Seedling Emergence and Growth of Golden Shower Tree (Cassia fistula LINN). . Proceeding of 1st International Conference of Agriculture and Agricultural Technology (ICAAT) | XXXX |

ABSTRACT

A field experiment was carried out at the Horticultural nursery of Crop production department, Federal University of Technology, Minna, between April and August 2017. The aim of the research was to compare the effect of scarification and dipping duration on the seedling emergence and growth of Cassia fistula (Golden shower). Golden shower is a multipurpose plant widely used for its ornamental and environmental beautification but it has problem of hard seed coat dormancy which affect the rate, speed and percentage of germination, thus limit seedling production. Scarification method by using mechanical means and acid hold promise in breaking the dormancy of the seed of golden shower. Field trials were conducted to determine the best method of scarification and dipping duration for optimum germination and seedling growth using gibberellic acid and mechanical method at different dipping duration of 10, 20, and 30 minutes. In the experiment, a 2x4 factorial arrangement in a Complete Randomized design with five replicates, two factors(i) made up of scarification method by the use of gibberellic acid and by mechanical means (ii) dipping duration of 10, 20, and 30 minutes. and the use of one, two and three lines and untreated (control). Data collected on germination and seedling growth parameters, were subjected to Analysis of variance (ANOVA) using DMRT and means were separated using Least Significant Difference (LSD) at 5 % level of probability. In the experiment, highest germination percentage (77 %) was recorded in the seeds treated mechanically, followed by the seeds treated with GA, (60 %) and the untreated seeds had the least germination percentage (53 %). Also seeds dipped in GA, for 30 minutes had the highest percentage germination followed by 20 minutes dipped and seeds dipped for 10 minutes had the least while seeds with three lines had the highest (83 %) followed by the seeds with one line and the seeds with two lines had the least germination percentage. Data were also collected on plant height, number of leaves, leaf area, number of branches and stem girth. It is therefore, concluded that the highest germination and growth yield were recorded on seeds treated mechanically and the interaction effect showed that mechanical scarification using three lines improves the breaking of seed dormancy in *Cassia fistula* (golden shower) and it enhance mass propagation of the ornamental tree.

*Cassia fistula,*gibberellic acid, mechanical scarification, dipping duration

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| H. M. Ibrahim, B. K. Ameh, R. O. Oyewale, O. M. Olosunde, L. A. Hammed, and M. A. Adebisi (2018) Germination and seedling growth of flame of the forest (*Delonix regia*) as affected by scarification method and dipping duration. State University, Keffi, Faculty of Agriculture, Shabu-Lafia Campus. Proceeding of 36th Annual Conference of the Horticultural Society of Nigeria (HORTSON), Lafia , November 18-22, 2018 at Nasarawa | Xxxx |

ABSTRACT

A field experiment was conducted at the Horticultural nursery of Federal University of Technology, Minna to investigate the influence of scarification method and dipping duration on the germination and seedling growth of flame of the forest (*Delonix regia*). The treatments consisted of two factors (i) Scarification methods used in breaking dormancy: H2SO4(70 %): Gibberellic acid (0.2 g/L) and untreated (control) (ii) Dipping duration of 10, 20 and 30 minutes. The treatments were arranged in 2x4 factorial in a completely Randomised Design with five replications. Data collected on germination parameters, were subjected to Analysis of variance and treated means were separated using Least Significant Difference (LSD) at p<0.05. Scarification method had a significant effect on *Delonix regia* seeds treated with H2SO4 at 30 minutes dipping had the highest germination percentages (88 %) at (9 – 30 Days After Sowing) followed by seeds dipped for 20 minutes (65 %) and 10 minutes (50 %). Seeds of *Delonix regia* treated with GA3 had the highest number of branches per plant atdipping duration of 30 minutes, while seeds treated with GA3 had the broadest leaf area (268.4 cm2) at dipping duration of 30 minutes. Seeds treated with GA3 at 30 minutes dipping had the tallest plant height of (52.0 cm) followed by those dipped for 20 minutes (49.0 cm) and 10 minute (46.0 cm). Control (untreated) seeds recorded the lowest number of branches (15), with the least plant height of (27.6 cm).

Keywords: *Delonix regia*, tetraoxosulphate (vi) acid, Gibberellic acid, Dipping duration.

R.O. Oyewale, E.M. Nneji, L.Y. Bello, M.T. Salaudeen and H. M. Ibrahim. (2018) Efficacy of Some Botanical Extracts on the Population and Severity of Infestation of Flea Beetles on Okra (Abelmoschus esculentus L. Moench). . Proceeding of 5th National Annual Conference of the Crop Science Society of Nigeria. 7th to 11th October, 2018, at Hall of Fame, University of Nigeria, Nsukka, Nigeria

A field trial was carried out at the Teaching and Research farm of the School of Agriculture and Agricultural Technology, Federal University of Technology, Minna, Niger State (latitude 90.401 North and longitude 60.30I East) in 2017 cropping season to determine the efficacy of some bio- pesticides for the management of flea beetle infestation on okra. There were 15 plots, each having four ridges 4m long and 0.75m apart, each plot had a 12m2 gross area separated with 1m margin in between plots. Three bio-pesticide formulations: Neem-bark extract (10 grams per litre), Hot-pepper wax (10 grams per litre), mixture of neem-bark extract and hot pepper wax (5 grams each per litre) compared to a synthetic insecticide (laraforce) at 2 ml per litre, and an untreated control. All the treatments used had three (3) replications arranged in a Randomized Complete Block Design (RCBD). The population of flea beetles (*Podagricauniforma*and *Nisotradilecta*) were taken before and after treatments for four weeks from third week after planting. All data collected were analysed using analysis of variance (ANOVA) and the means separated with Least Significant Difference (LSD) test at 5% level of significance. The results showed that all the treatments had significant effect on the flea beetle population, and infestation of okra leaves.

**Keywords; Flea beetles, bio-pesticides, mixture, neem-bark, hot pepper wax, laraforce.**

Oyewale, R. O., Abdulazeez, A., Afolabi, S. G., Ibrahim, H. M. (2019) Effect of Jatropha Oil on the Management of Fall Armyworm (Spodoptera Frugiperda je smith.) In Minna, Niger State.. The Society for the Conservation of Phytofuel and Sciences at 9th JATROPHA INTERNATIONAL CONFERENCE AND EXHIBITION 2019

ABSTRACT Field research was carried out in the Teaching and Research Farm of Federal University of Technology, Minna to evaluate the effect of Jatropha oil on the management of fall armyworm. The experiment was arranged in Randomised Complete Block Design (RCBD) with three replicates and six varieties. 45 ml/ L of Jatropha oil was applied every week for four weeks using Knapsack sprayer. Data on severity of fall armyworm infestation, plant height, stem diameter, number of ears, number of rotten ears, fresh and dry cob weight and grain yield were subjected to Analysis of Variance (ANOVA) the means were separated using Duncan Multiple Range Test (DMRT). The result indicated that OPV maize variety recorded the highest grain yield while Oba super 6 demonstrated a tolerance against the infestation of fall armyworm (Spodoptera frugiperda). Therefore farmers could plant OPV maize variety for its high grain yield and Oba super 6 for its tolerant against the infestation of fall armyworm. Keywords: Maize, Fall armyworm, Jatropha, Spodoptera frugiperda, Variety