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Science & Technology

*Presents*

# WORLD FOOD SAFETY DAY VIRTUAL WORKSHOP

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**Moderator**

**Dr. O.A. Obadina**

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 Zoom **11:00amWAT**

**Modalities**

- Focus Groups
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MONDAY  
**08**<sup>th</sup>  
JUNE, 2020

Interested participants should send their topics with 200 words of abstract to: [obadinaw@gmail.com](mailto:obadinaw@gmail.com) latest by June 04, 2020. A message will be sent to participants with their time for presentation by June 06, 2020

Admittance: **FREE**

## Effects of sprouting on proximate, vitamin and anti-nutrient compositions of finger millets

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### Abstract

Food safety is a serious concern particularly for developing countries. To prevent hunger and malnutrition, there is need to research for alternative and cheaper ways to improve food nutrients. Sprouting is a food processing technique used to impede anti-nutrient interactions and make nutrients available in food crops. This work was designed to determine the effect of sprouting on nutrient compositions of finger millets. Finger millets were sprouted separately for nine days after which, sprouts were collected at three days intervals and evaluated for proximate, vitamins and anti-nutrient factors using standard analytical methods. The results showed that seeds sprouted for six days had the highest nutrients values. Proximate compositions of sprouted seeds increased significantly compared to the control values ( $3.23\pm 0.01$  to  $4.74\pm 0.02\%$ ,  $1.15\pm 0.03$  to  $1.42\pm 0.02\%$ ,  $12.34\pm 0.03$  to  $24.61\pm 0.05\%$  and  $68.35\pm 0.08$  to  $78.49\pm 0.04\%$ ) for moisture, ash, protein and carbohydrates respectively. Vitamins contents of sprouted seeds also increased significantly compared to the control values ( $0.870\pm 0.040$  to  $4.237\pm 0.015\text{mg}/100\text{g}$ ,  $0.867\pm 0.020$  to  $3.147\pm 0.012\text{mg}/100\text{g}$  and  $0.117\pm 0.007$  to  $2.390\pm 0.006\text{mg}/100\text{g}$ ) for niacin, tocopherols and folic acids respectively. However, anti-nutrient properties of sprouted seeds reduced beyond that of the control values ( $132.67\pm 38.39$  to  $479.48\pm 33.71\text{mg}/100\text{g}$ ,  $511.46\pm 45.34$  to  $965.46\pm 41.51\text{mg}/100\text{g}$ ,  $20.00\pm 8.19$  to  $33.11\pm 12.63\text{mg}/100\text{g}$ ,  $113.00\pm 18.13$  to  $181.33\pm 30.17\text{mg}/100\text{g}$  and  $0.19\pm 12.01$  to  $0.33\pm 17.02\text{mg}/100\text{g}$ ) for phytic acids, saponins, tannins, cyanogenic glycosides and oxalates respectively. This study thus showed that sprouting improved the nutritional value and reduced the anti-nutrient factors in finger millets.

**Key words:** Sprouting, Food safety, Nutrients, Malnutrition, Finger millets.