# Farmer's knowledge and management practices of Fall armyworm, *Spodoptera frugiperda* (J.E. Smith, 1797) (Lepidoptera, Noctuidae) in the Central region of Burkina Faso

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## 1    ABSTRACT

The fall armyworm, *Spodoptera frugiperda* (J.E. Smith) is a crop pest originating from America that has become global. This study aimed to assess the level of knowledge and management practices of fall armyworms among farmers of the Central region of Burkina Faso. A survey of maize growers was carried out between July and November 2022 in this region, using a semi-structured questionnaire. The attacks severity of maize plants and maize fields infestation levels were assessed by the Davis and Williams (1992) scale. The results showed that 100 farmers, including 94 men and 6 women, were involved. They had 23 to 80 years old, were mostly less educated (91%) and were familiar (99.98%) with *S. frugiperda* at all stages of development. The cropping practices in the study area were mono-cropping (54%) and intercropping (46%) with peppers, cowpea, and sorghum. Most farmers (78%) applied organic and mineral fertilizers (NPK, Urea) during maize production; and have used traditional varieties of maize (86%).The severity of leaf attack of maize was medium in all fields surveyed; and the average of their infestation levels was between 89±0.15% and 94±0.09% and 89±0.15%. Farmers mainly use synthetic and botanical pesticides to reduce the intensity of attacks. Nine plant species belonging to 06 families and 08 genera have been used as botanical pesticides. *Azadirachta indica* A. Juss (50.87%) and, *Capsicum annum* L (21.05%), followed by *Allium sativum* L (08.77%) and *Nicotiana tabacum* L (07.02%) were the most identified species. Botanical pesticides could be an alternative to synthetic pesticides. Further studies would be necessary to demonstrate the effectiveness of botanical pesticides.