

Identification of alternative weed hosts of the fall armyworm (*Spodoptera frugiperda* J.E. Smith) in maize crops at several infestation sites in Yamoussoukro, Central Côte d'Ivoire

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1 SUMMARY

Maize is an important cereal crop in Côte d'Ivoire but its production has serious constraints, like invasion of the fall armyworm, *Spodoptera frugiperda*. This caterpillar is hosted by spontaneous plants growing in and around maize crops. The aim of this study was to identify alternative host plants for the fall armyworm, *Spodoptera frugiperda* of maize in infestation sites in Yamoussoukro, Côte d'Ivoire. Sampling was carried out in 15 plantations in different parts of the city. The inventory method used was the “tour de champ”, which is a floristic inventory technique making it possible to identify the different species in a plot as exhaustively as possible by covering the basic surface unit in different directions. At the end of this study, the results revealed that there are indeed alternative hosts of the armyworm that contribute to the infestation of maize crops. It identified 69 plant species belonging to 53 genera and 17 families. The species most heavily attacked by the armyworm were *Amaranthus spinosus* (Amaranthaceae), *Croton hirtus* (Euphorbiaceae), *Brachiaria lata* (Poaceae), *Panicum maximum* (Poaceae) and *Rottboellia cochinchinensis* (Poaceae). The impact of the armyworm is that it affects the development of maize plants, resulting in lower yields. The presence in the field of a wide variety of alternative hosts amplifies this scourge. The results obtained provide information on various aspects that favour invasion, in particular the presence of grassy species in and around maize crops. This main aspect should be taken into account when selecting control methods.