

# Use of tropical basil to reduce *Hellula undalis* F. incidence on cabbage in south Benin (West Africa)

Yarou B. B.<sup>1,2</sup>, Assogba Komlan F.<sup>2</sup>, Mensah A. C. G.<sup>2</sup>, Tossou E.<sup>3</sup>, Serge S.<sup>2,4</sup> Verheggen F.<sup>1</sup> and Francis F.<sup>1</sup>

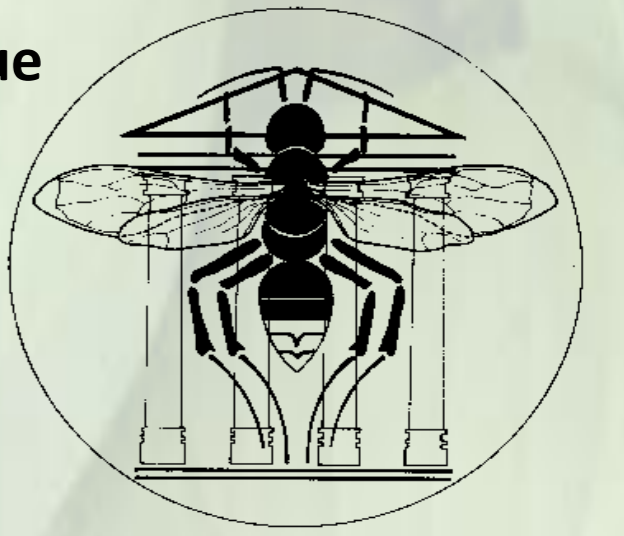
<sup>1</sup>Laboratoire d'Entomologie fonctionnelle et Evolutive, Agro Biochem, Gembloux Agro-bio Tech, Université de Liège (ULg) - Passage des Déportés, 2 - 5030 Gembloux, Belgique

<sup>2</sup>Programme Cultures Maraîchères (PCM), Institut National des Recherches Agricoles du Bénin (INRAB)- 01BP 884 Cotonou, Bénin

<sup>3</sup>International Institute of Tropical Agriculture (IITA-Benin), 08 BP 0932 tri-postal Cotonou, Bénin

<sup>4</sup>Cirad UR Hortsys, Montpellier, France, TA B-103/C-34398 Montpellier Cedex 5-France

boni.yarou@doct.ulg.ac.be; boniyarou1981@gmail.com



## Introduction

*Hellula undalis* Fabricius (Lepidopteran), is one of the most cabbage pests in Benin



Larvae gnaw the leaves



Heart gnawing by larvae



Multi-head cabbage



Figure 2: Tropical basil (*Ocimum gratissimum* L.)

Figure 1: *Hellula undalis* larvae damage on cabbage

In this study, the potential of intercropping cabbage with tropical basil (Figure 2) to manage *H. undalis* population was evaluated.

## Methodology

Experiments were carried out at the experimental site of the Vegetable Crop Program of the National Institute of Agricultural Research of Benin during rainy and dry season.



Sole cabbage (SC)



Cabbage intercropped with tropical basil (CIT)



Cabbage plot surrounded by tropical basil (CST)

- Four replicates for each treatment in randomized complete block.
- *Hellula undalis* larvae were counted weekly for 10 weeks.
- Multi-heads cabbage number was evaluated at the harvest.

Figure 3: Design of the different treatments

## Results

Tropical basil effect on *H. undalis* population (Figure 3a) and damage (Figure 3b) on cabbage.

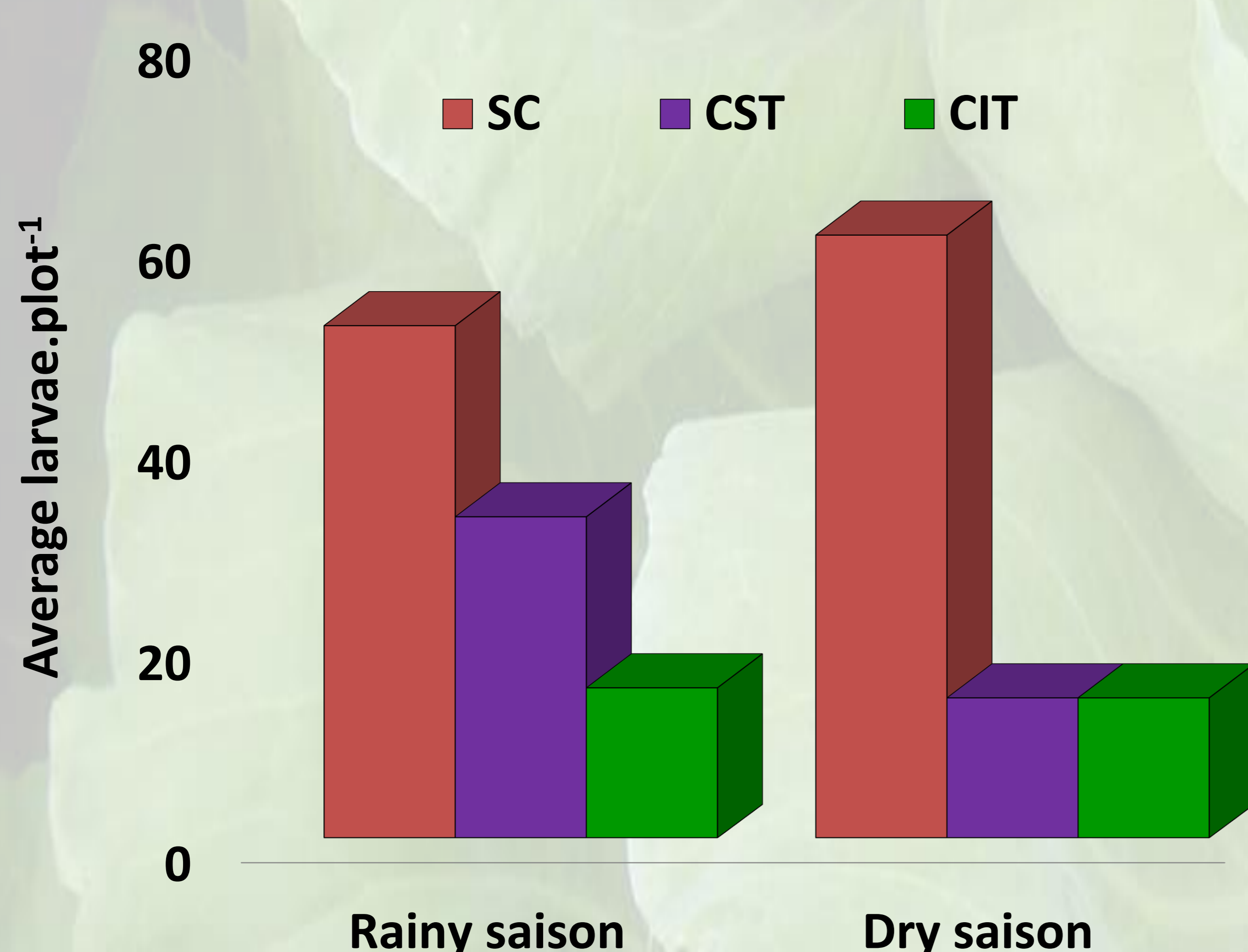


Figure 3a: Number of *H. undalis* larvae for each treatment according seasons

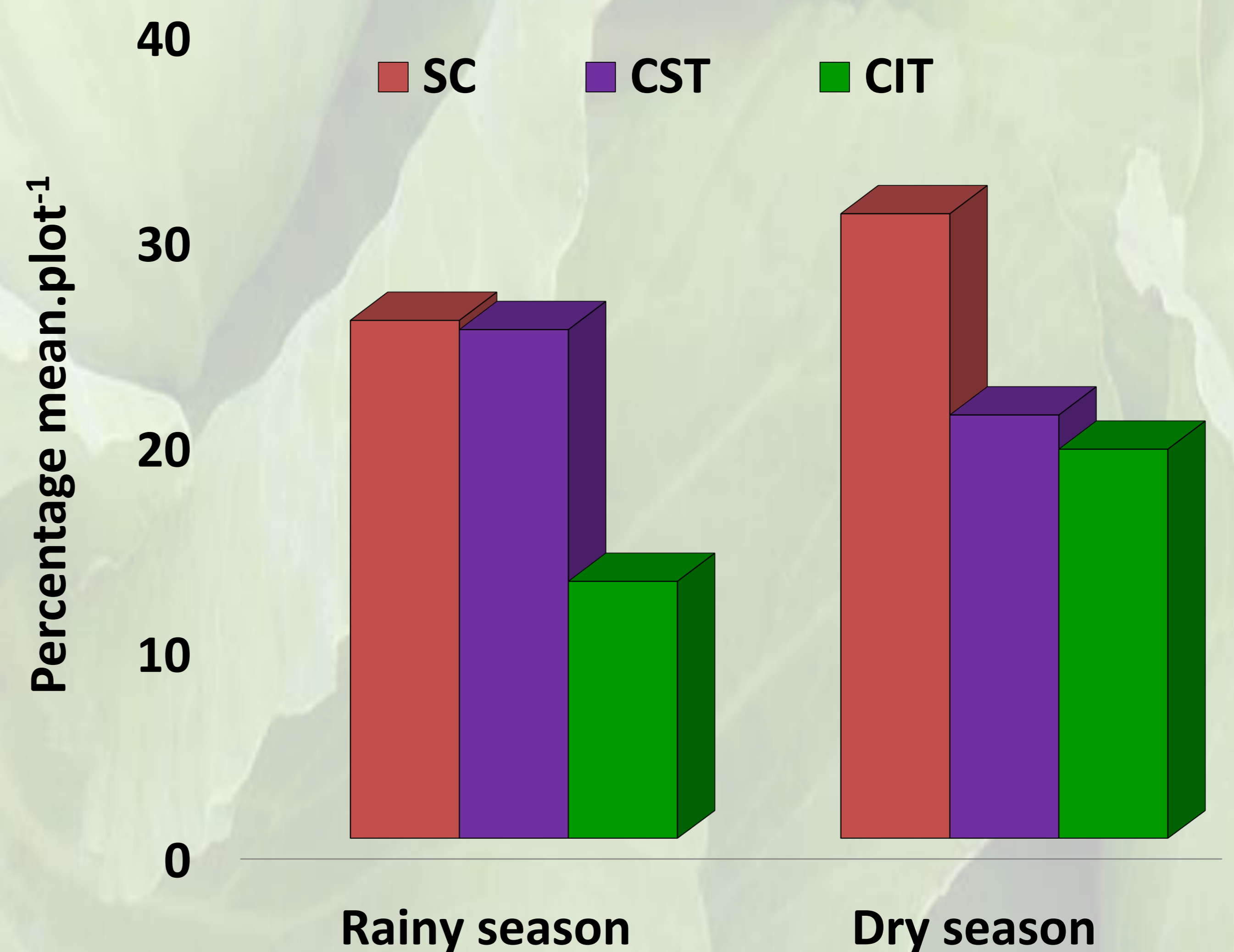


Figure 3b: Proportion of multi-heads cabbage for each treatment according seasons

## Conclusion

Tropical basil can contribute to reduce the abundance and damage of *H. undalis* on cabbage.

## Acknowledgments

