

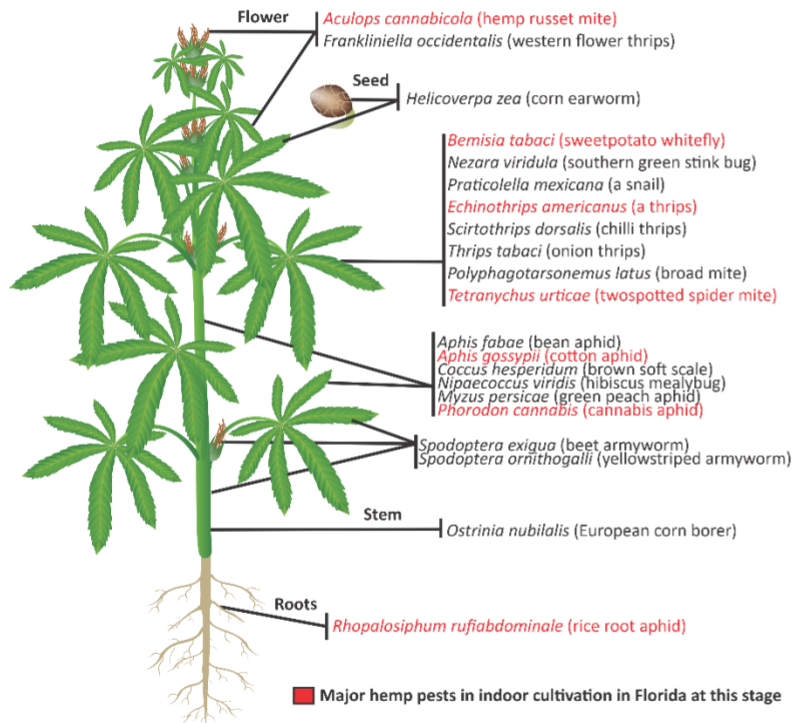
# Hemp Pests in Florida

Muhammad Z Ahmed<sup>1,2</sup>, Cindy L McKenzie<sup>1</sup>, Lance S Osborne<sup>3</sup>

<sup>1</sup>Subtropical Insects and Horticulture Research Unit, Agricultural Research Service, United States Department of Agriculture, 2001 S Rock Rd., Fort Pierce, FL 34945,

<sup>2</sup>Department of Entomology and Nematology, Mid-Florida Research and Education Center, University of Florida-IFAS, 2725 S Binion Rd., Apopka, FL 32703,

<sup>3</sup>muhammad.ahmed@usda.gov



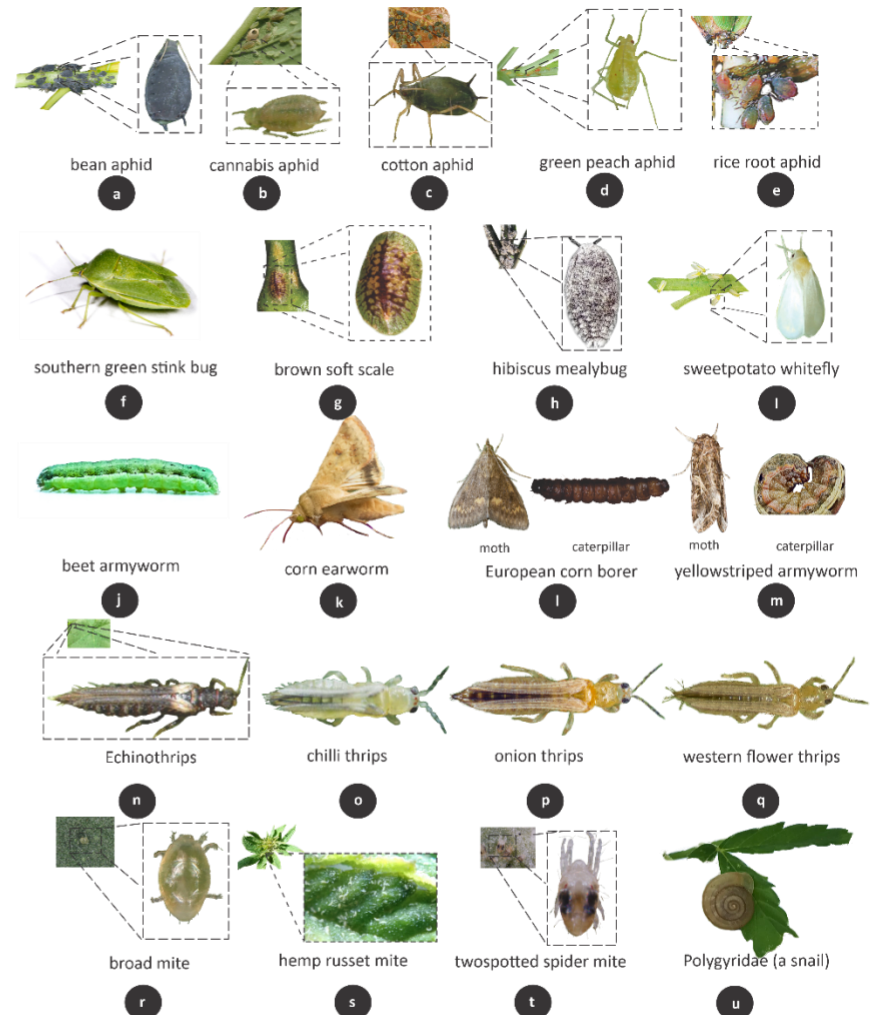
**Figure 1.** Possible major insects and non-insects pests of hemp, *Cannabis sativa* (Rosales: Cannabaceae) in the field and greenhouse hemp productions in Florida and their most common damaging sites on the hemp plant based on the published literature.

**Note:** Different life stages of the same species could feed on different sites on the hemp plant.



Version 1.0, May 7, 2022

Disclaimer: This field guide is to help in tentative field identification. Therefore, it is vital to confirm the identity of species, especially those of regulatory concern, with a taxonomist who is an authority in the respective group and deposit specimens of new records as a voucher in easily accessible collections.



**Figure 2.** Images of 21 possible major pests of hemp, *Cannabis sativa* (Rosales: Cannabaceae) in Florida based on published literature. *Aphis fabae* (bean aphid), shutterstock image#1051455161 (a); *Phorodon cannabii* (cannabis aphid), naked eye view and 30X close-up, Forestry image# 5565673, Whitney Cranshaw (Colorado State University) (b); *Aphis gossypii* (cotton aphid), Lyle Buss (University of Florida) (c); *Myzus persicae* (green peach aphid), 1240874539 (d); *Rhopalosiphum rufiabdominale* (rice root aphid), naked eye view and 30X close-up, Whitney Cranshaw (Colorado State University) (e); *Nezara viridula* (southern green stink bug), 13117654 (f); *Coccus hesperidum* (brown soft scale), naked eye view and 30X close-up, Choi and Lee 2018 (g); *Nipaeococcus viridis* (hibiscus mealybug, also known as lebeck mealybug in Florida), 1528587215, Zee Ahmed (USDA) (h); *Bemisia tabaci* (sweetpotato whitefly), 1133859911 (i); *Spodoptera exigua* (beet armyworm), caterpillar, 748269370 (j); *Helicoverpa zea* (corn earworm), moth, 1194930283 (k); *Ostrinia nubilalis* (European corn borer), 1388353520 (adult), 1014038218 (immature) (l); *Spodoptera ornithogalli* (yellowstriped armyworm), 377856997 (adult), 465030050 (immature) (m); *Echinothrips americanus* (a thrips, known as Echinothrips or poinsettia thrips), a naked eye view and 30X close-up, Babu Panthi (University of Florida) (n); *Scirtothrips dorsalis* (chilli thrips), 30X close-up, Lance Osborne (University of Florida) (o); *Thrips tabaci* (onion thrips), 30X close-up, 1416146786 (p); *Frankliniella occidentalis* (western flower thrips), 30X close-up, Lyle Buss (University of Florida) (q); *Polyphagotarsonemus latus* (broad mite), 10X and 30X close-up, Whitney Cranshaw (Colorado State University) (r); *Aculops cannabicola* (hemp russet mite), 30X and 100X close-up, Zee Ahmed (USDA) (s); *Tetranychus urticae* (twospotted spider mite), 10X and 30X close up (t); Polygyridae (a snail) Zee Ahmed, (USDA) (u). Naked-eye view otherwise mentioned with captions. The sizes of specimens in the images may not necessarily correspond with their actual sizes.