



Figure 1 Agricultural fields of Castor in Savli, Vadodara, Gujarat



Figure 2 Agricultural fields of Cabbage in Chhani, Vadodara, Gujarat



Figure 3 Damage assessed in Cotton fields, Savli, Vadodara, Gujarat



Figure 4 Damage of *Spodoptera litura* in Castor leaf



Figure 5 Tomato leaf infested by *Spodoptera litura*



Figure 6 The leaf of cabbage showing feeding of *Spodoptera litura*



Figure 7 Egg mass of *Spodoptera litura* underside of Castor leaf



Figure 8 Castor leaf completely damaged by *Spodoptera litura*

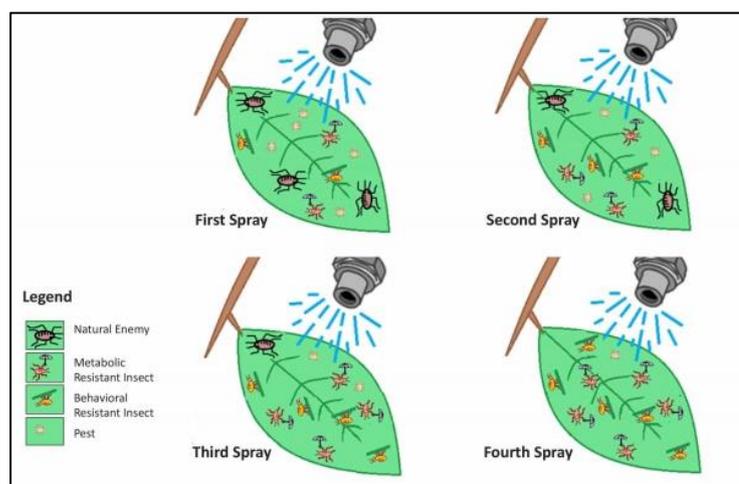


Figure 9 The conceptual diagram of resistance development in insect pests

(Source: <https://www.greenhousecanada.com/inputs/crop-protection>)

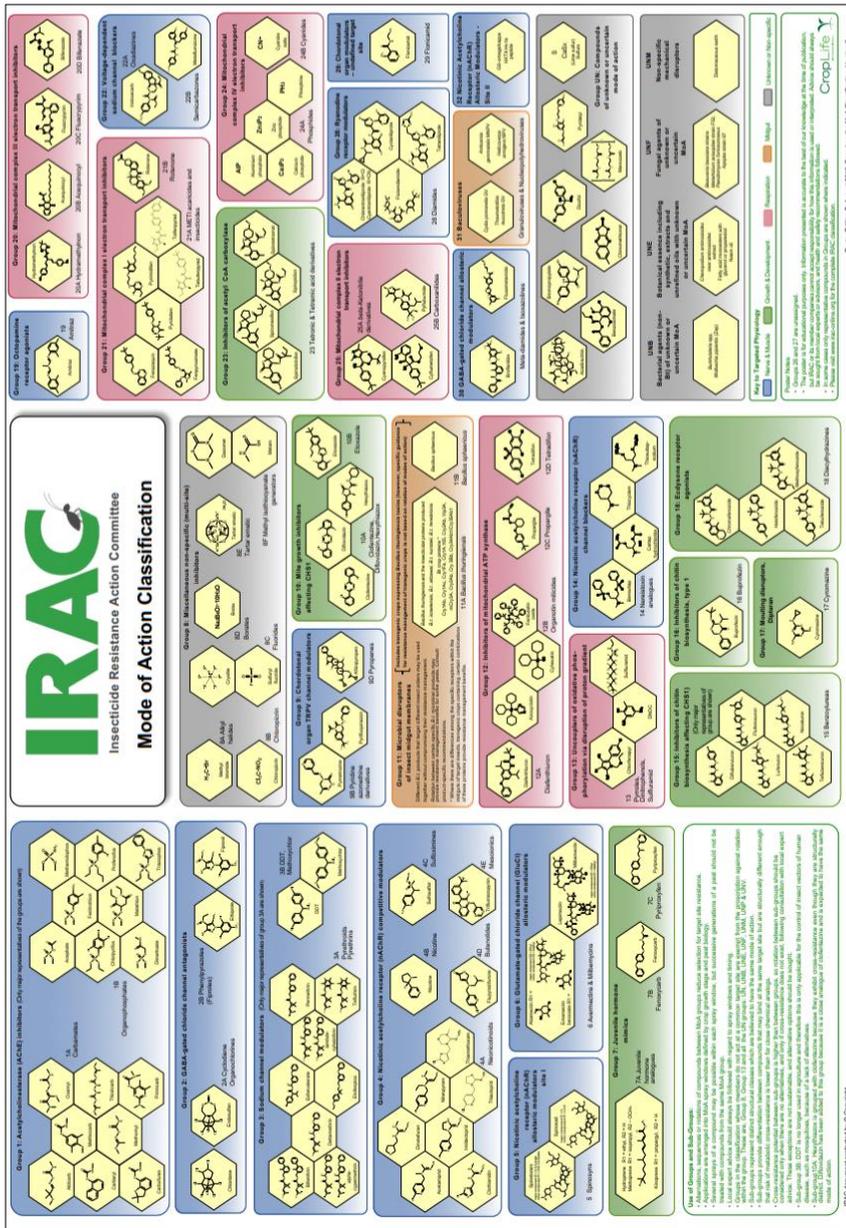


Figure 10 IRAC mode of action classification of insecticides (Sparks & Nauen, 2015)



Figure 11 Heavy infestation of *Spodoptera litura*



Figure 12 Damage symptoms observed in Castor leaf



Figure 13 Damage symptoms observed in tomato leaf



Figure 14 Damage symptoms observed in the crop of maize



Figure 15 Damage symptoms observed in the crop of cabbage

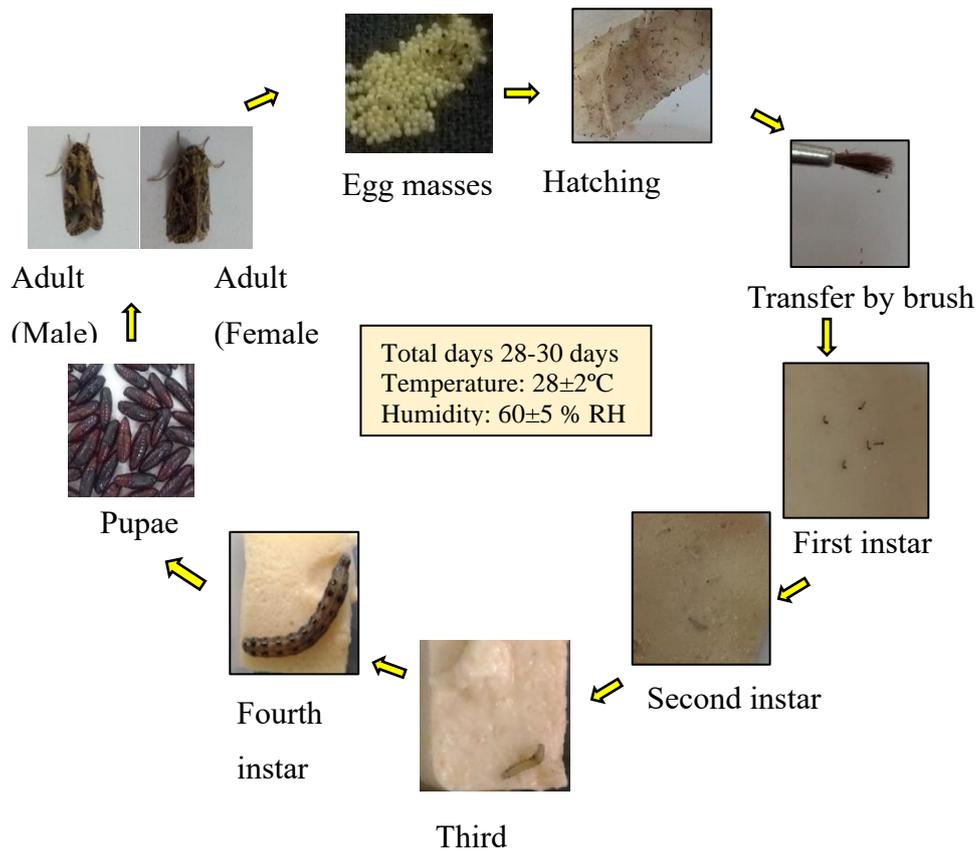


Figure 24 Life cycle of *S.litura* maintained in laboratory



Figure 16 Artificial diet for rearing of *Spodoptera litura*



Figure 17 Hatching of larvae taken with care by Camlin brush



Figure 18 First instar larvae of *S.litura* transferred on artificial diet

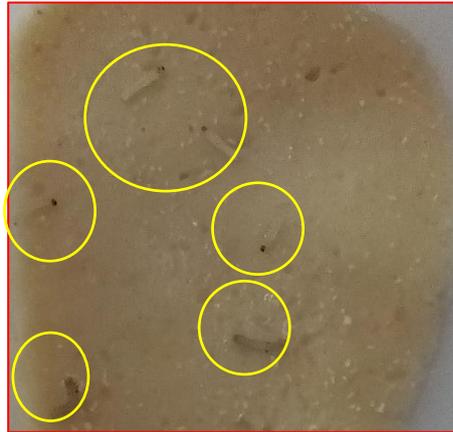


Figure 19 Second instar larvae of *S.litura* reared on artificial diet



Figure 20 Pre-fourth and Fourth instar larvae of *Spodoptera litura*



Figure 21 Healthy pupae of *Spodoptera litura* reared in laboratory



Figure 22 Plastic box with partition for rearing process



Figure 23 Oviposition cages, larval culture of *Spodoptera litura*



Figure 24 Careful rearing of *Spodoptera litura*



Figure 25 Healthy cotton leaf for leaf-dip bioassay



Figure 26 Leaf discs cut out of healthy cotton leaf



Live larvae



Moribund larvae



Dead larvae

Figure 27 Symptomatology parameters in larvae after exposure insecticides