





**eating the roots , sometimes these roots are yield of the crop and it is the source of food to humans such as sugar beet (ratoons ) .**

**Insects of field crops are vary in their type of feeding and the damages they cause to , because they have various types of mouthparts , and different life style . also different Host plants .**

#### **11. Course objective:**

**In this course we will talk about insects in general and types of eggs, Larvae and pupae, then we mention the types of mouth parts among field crop insects and the damages they cause. in this course also we will talk about the most common insect pests of field crops (i.e. multi family insects) including click beetle , white ant, Mole cricket ,Ants, and Grasshoppers , these Insects may be found in almost all Agriculture fields of crops.**

**In addition we will talk about (the most destructive insects pests of cereal crops such as (wheat, barley , rice and corn)and the insects are(Sunn pest, Hessian fly , wheat thrips, wheat Aphid, Wheat stem saw fly, Rice stem borer etc.)we describe all stages of them morphologically and determine the damaging stage with description of the damages and symptoms.**

**Then we will talk about (description of stage morphologically, damaging stage, damages and remarks) of the following crops (Leguminous crops such as broad bean , bean , pea ,chickpea),industrial crops: Cotton insects, Oil crops :Sun flower, Sesame and Safflower  
Finally we will talk about Sugar beet insects in detail .**

#### **12. Student's obligation**

**In this part the role of students is as follow :**

**Students attendance in Lecture and Examination, preparing reports about some important course subjects , writing an assignment on any field visiting , doing daily quiz , giving samples .**

#### **13. Forms of teaching**

**Various teaching methods are used such as power point (Data show) , white board , participating students for answering questions in lecture , explanation videos, and giving home work .**

#### **14. Assessment scheme**

**1- (25 mark) out of (40) for the theoretical examinations**

**2- (15 mark) out of (40) for the practical examinations, and this include:**

**a- (10 mark) for two examinations.**

**b- 3 marks for quizzes,**





**2. True or false type of exams:**

**1- Sunn pest is one of the most destructive pests of leguminous plants.**

**(False) it is of the cereal crops (wheat).**

**2- larvae are the damaging stage of click beetle .(true)**

**3. Multiple choices:**

**1- wireworm is the larvae of :**

**a- Locusts      B- butterfly      C- click beetle**

**20. Extra notes:**

**My wish in completing these lectures we will be able establish experts in the field of plant protection especially field crops.**

**21. Peer review**

**پیداچوندری هاومل**