

國立嘉義大學九十七學年度 農藝學系碩士班招生考試試題

科目：專業英文

一、中翻英 (每小題 2 分，共 10 分)

1. 生質能源 2. 農藝作物 3. 基因體學 4. 分子標誌 5. 春化作用

二、英翻中 (每小題 2 分，共 10 分)

1. Biological circadian rhythms 2. Phytoalexin 3. Juvenile phase
4. Plant molecular pharming 5. Principal component analysis

三、請將下列短文翻譯成中文

1. Using transgenic plants as edible vaccines will greatly reduce the cost of vaccines and enable developing countries to combat some major diseases prevalent there. In developed countries, transgenic plants will soon be used to produce a variety of mammalian proteins (such as antibodies) for therapeutic and diagnostic purposes. (10 分)
2. Sustainable agriculture should not be merely seen as a rejection of conventional agricultural practices, but rather acceptance of agricultural practices such as: (1) Integrated biological and cultural practices for pest control. (2) Tillage and cropping systems that minimize soil erosion and reduce water loss. (3) Reduction in use of inorganic fertilizers through more accurate and precise application and substitution with organic fertilizers and green manures. (4) Crop rotations to minimize buildup of weed, disease, and insect populations. (20 分)
3. The sex chromosomes are an exception to the rule that all chromosomes of diploid organisms are present in pairs of morphologically similar homologs. As early as 1891, microscopic analysis had shown that one of the chromosomes in males of some insects, such as grasshoppers, does not have a homolog. This unpaired chromosome was called the X chromosome, and it was present in all somatic cells of the males but in only half the sperm cells. The biological significance of these observations became clear when females of the same species were shown to have two X chromosomes. (25 分)
4. For breeders, agroecological diversity of environments where most field crops are grown represents a "double-edged sword". The diversity complicates breeding and testing of improved genotypes with adequate adaptation, but it also permits identification of extreme environmental conditions that guarantee selection pressure from important stresses. (25 分)