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| **Obligatory module or**  **Selective module** | **Management of Postharvest Pest and Disease** | | **PNH 3290** |
| **Semester** | **VI** | | |
| **Module Level** | **Bachelor** | | |
| **Module Coordinator** | **Prof. Dr. Ir. FX. Wagiman, SU** | | |
| **Lecturer(s)** | 1. Prof. Dr. Ir. FX. Wagiman, SU   Dr. Suryanti, S.P., M.P.   1. Dr. Ir. Siwi Indarti, M.P.   Dr. Ir. Sri Sulandari, SU | | |
| **Type of Module** | **100 minutes lecture**  **Practical** | | |
| **Status:** | **C (compulsory course)** | | |
| **Exam** | **Written and Presentation** | | |
| **Number of participants** | **50** | | |
| **Credit Points:** | **2/1** | | |
| **Learning outcomes:**  After completing lectures and practicum, students are expected to be able to (1). explain the problems of post-harvest products, namely (a) deterioration of product quality and decrease in product quantity, (b) biological (pest, pathogen), mechanical, physical and chemical factors affecting products, (c) economic and social impacts of pests and diseases, (2) explain product handling techniques during processing, transportation and storage, (3) explain the management systems of post-harvest pests and diseases, and (4) provide alternative solutions to problems of post-harvest pests and diseases | | | |
| **Contents:**  Postharvest products; terminology, characteristics, and deterioration Post-harvest pests; Order of Coleoptera, Lepidoptera, other orders, and Vertebrates Warehouse, packing and storage techniques Warehouse Ecology, post-harvest pest management and control Post-Harvest Disease, Yield and Food Loss, Food Waste Post-harvest Physiological Damage Post-harvest Biotic Products Good Post Harvest Handling to prevent product damage due to post-harvest disease Storage and distribution of products to prevent damage from post-harvest diseases Mycotoxins in fresh products and seeds | | | |
| **Which previous course required? Principles of Crop Protection, Principles of Plant Pathology, Principles of Plant Pest Science, Plant Pathogen, Plant Pests Identification, Ecology of Plant Pests and Diseases** | | | |
| **Literature:**  Haines, CP. 1991. Insects and arachnids of tropical strored products : their biology and identification. (A training manuals). 2nd ed. (revised). Natural Resources Institute, Central Avenue, UK. 246p.  Hall, D.W. 1970. Handling and storage of food grain in Tropical and subtropical areas. FAO, Rome  Kader, A.A. 1992. Postharvest Technology of Horticultural Crops.  Wills, RHH, TH Lee, D. Graham, WB McGlasson, and EG Hall. 1981. Post Harvest : An introduction of the Physiology and Handling of Fruit and Vegetables New South Wales Univ. Press. Austarlia.  Baur, F.J. (Ed.). 1985. Insect Management for Food Storage and Processing. American Association of Cereal Chemists. St. Paul. Minnesota. 384 p.  BIOTROP. 1986. Biotrop Third Training Course on Pests of Stored Products. Volume IIA and IIB. Compilation of Lecture Notes. Bogor, Indonesia.  Cotton, R.T. 1963. Pets of stored grain and grain products. Burgess Publishing Company. Minneapolis, Minnesota. 318 p.  Harris, K.L. and C.J. Lindbad. 1976. Postharvest Grain Loss Assessment Methods. A Manual of Methods for the Evaluation of Postharvest Losses. American Association of Cereal Chemicals. 193 p.  Justice, O.L. and L.N. Bass. 1978. Principles and practices of seed storage. Agriculture Handbook Number 506. Science and Education Administration. USDA, Washington, D. C. 289 p.  Wagiman, F. X. 2014. Post harvest pests and their management (Hama Pasca Panen dan Pengelolaannya). Gama Press, Yogyakarta.  Anonim. …. Training notes on insect and mite identification and biology. Modules I and II. Tropical Products Institute. Ministry of Overseas Development, London. 116p. | | | |
| **Material provided:**  Reading materials  Speciments | | | |
| **Requirements for exam:**  Mastery of knowledge and understanding of various aspects of the post-harvest pests and diseases | | | |
| **Teaching method(s)** | | 100-minute face-to-face lectures per week for 14 times | |
| Workload (hrs).   1. Theoretical of course: 14 x 100 minutes 2. Lab work: 7 x 120 minutes 3. Home studies: 14 x 2 x 100 minutes | | | |