**Pest Vertebrate**

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| **Obligatory module or**<br>**Selective module** | **Pest Vertebrate** | **PNH 2107** |
| **Semester** | III | |
| **Module Level** | Undergraduate | |
| **Module Coordinator** | Prof. Dr. Ir. FX. Wagiman, SU | |
| **Lecturer(s)** | Prof. Dr. Ir. FX. Wagiman, SU<br>Dr. Tri Harjaka, SP.,MP. | |
| **Type of Module** | 50 minutes lecture<br>Practical | |
| **Status:** | C (Compulsory course) | |
| **Exam** | Written and Presentation | |
| **Number of participants** | 64 | |
| **Credit Points:** | 2/1 (5.02 ECTS) | |
| **Description:** | Discussion of the importance of pest vertebrates. Classification of vertebrate pests. Characterize morphology, biology, and ecology of various types of vertebrate pests. Strategy and control technology. | |
| **Academic goal (competency):** | 1. Students are able to explain the damage and losses caused by vertebrate pests in various types of crop commodities and post-harvest products<br>2 Students are able to explain the morphological and bioecological features of vertebrate pests and the symptoms of attacks on various types of plant commodities and post-harvest products<br>3. Students are able to explain the ecological and economic-based pest management and vertebrate management system; integrated pest management (IPM), principles, control technology. | |

**Course outcomes:**

CO1 = Students are able to understand and explain the impact of economic losses due to pest attacks by vertebrate pests

CO2 = Students are able to know, be able to understand, and explain morphological, bioecological features, signs and symptoms of attacks from types of pest vertebrates

CO3 = Students are able to understand the ecological and economic management system for vertebrate pest management

CO4 = Students are able to develop abilities, competencies, and creativity in efforts to manage and control pest vertebrates based on integrated pest management systems (IPM) to prevent and / or minimize the impact of economic and ecological losses caused

**Contents:**

**Lecture:**

1. Introduction; the problems and economic impacts of pest vertebrates
2. The rats; morphology, bioecology, control measures
3. The squirrel; morphology, bioecology, control measures
4. The hedgehog; morphology, bioecology, control measures
5. The wild boar; morphology, bioecology, control measures
6. The macaca; morphology, bioecology, control measures
7. The bat; morphology, bioecology, control measures
8. The bird; morphology, bioecology, control measures
9. The ferret; morphology, bioecology, control measures
10. The elephant; morphology, bioecology, control measures
11. Ecologically and economically based management of pest vertebrates; IPM

**Practicum**

1. Introducing pest vertebrates in the laboratory
2. Introducing pest vertebrates in the zoo
3. Study on feeding behavior and losses caused by the pest vertebrates
4. Fieldtrip to rice fields and plantations

**Which previous course required?** Plant Protection

**Literature:**


Priyambodo, S. 2003. Buku Praktikum Vertebrata Hama. Lab. Vertebrata Hama, Jurusan HPT, Fakultas Pertanian IPB.

Priyambodo, S. 2005. Bioekologi dan Pengelolaan Tikus. Pusat Kajian Hama Terpadu, Departemen Proteksi Tanaman. Fakultas Pertanian IPB.

Sianturi, J., H. T. Widarto, M. Sinaga, T. Saragih, M. Thahir, N. I. Kuntarti. 2006. Pengendalian Hama Terpadu Bajing. Balai Pengembangan Proteksi Tanaman Perkebunan Sumatera Utara. Medan.

Singleton, G., L. Hinds, H. Leirs & Z. Zhang (eds.). 1999. Ecologically-Based Management of Rodent Pests. ACIAR, Canberra.

Singleton, G. R., L. A. Hinds, C. J. Crebs & D. M. Spratt (eds.). 2003. Rats, Mice and People: Rodent Biology and Management. ACIAR, Canberra.


**Material provided:** Reading materials**,** Speciments

**Requirements for exam:**75% attendance set by the Faculty of Agriculture

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| **Teaching method(s)** | Student Center Learning, Classes, Special assignment related to the subject matters |

Workload (hrs).

1. Theoretical of course: 14 x 50 minutes
2. Lab work: 7 x 120 minutes
3. Home studies: 14 x 2 x 100 minutes