



Subject Module
 Department of Agrotechnology
 Faculty of Agriculture
 University of Islam Malang

Module Handbook

Module Title	Pesticides and their Application Techniques
Module Level, if available	Undergraduate, Study Program of Agrotechnology
Subject Code	MKP 60601
Headings, if available	-
Subject (MK)	Pesticides and their Application Techniques
Semester	5
Course Coordinator	Dr. Ir. Djuhari, M.Si.
Teaching Team	-
Language of instruction	Indonesian Language/English
Linkages with the Curriculum	Study Program : Agrotechnology Specialization: Agrotechnology Type: Compulsory /Elective
Learning Methods and Duration	<ol style="list-style-type: none"> 1. Lecture: 100 minutes/meeting (8 meetings) 2. Research Based Learning through Laboratory Work, experiment : 170 minutes/meeting (6 meetings) 3. Assignments and Presentation (individual and group)
Student Study Load	<ol style="list-style-type: none"> 1. Lecture: 100 minutes/meeting (8 meetings) 2. Laboratory Work: 170 minutes/meeting (6 meetings) 3. Assignments/quiz/presentation 4. Attendance: 75% of total attendance
Credit Weight	3 credits
Requirements for Passing the Subject	<ul style="list-style-type: none"> • Attendance >75% • The final score of all the components of the learning evaluation >44 <p>The final score component:</p> <ul style="list-style-type: none"> • 25% Midterm Exam • 25% Final Exam • 20% Laboratory Work • 20% Assignments/Presentation (individual and group) • 10% Presence
Prerequisite Subject	----

<p>Learning Outcomes</p>	<p>The expected learning outcomes are:</p> <ol style="list-style-type: none"> 1. Have an attitude of creative and innovative thinking in their work in accordance with professional ethics in the field of agriculture (ILO 1) 2. Able to work independently or in a team, and use various methods of communication (ILO 4) 3. Able to solve problems that arise in the field of agrotechnology and related fields of science (ILO 5) 4. Able to apply agricultural practices based on <i>Good Agricultural Practices</i> (ILO 8) 5. Able to manage plant production system (ILO 9) 6. Able to design enterprise opportunities in the field of plant production. (ILO 10)
<p>Learning Content</p>	<p>After completing this subject, students are able to:</p> <ol style="list-style-type: none"> 1. Examines various types of pesticides and their application techniques, and applies them in a sustainable crop production system 2. Perform various pesticide application techniques 3. Calculate dosage, solution concentration, LD 50, LC 50 in pesticide application 4. Evaluate the application of pesticides that are safe for humans, livestock, and the environment <p>The topics include:</p> <ol style="list-style-type: none"> 1. Introduction <ul style="list-style-type: none"> • History of Pesticides • Definition of Pesticides • Classification of Pesticides 2. Introduction of Pesticides: <ul style="list-style-type: none"> • Based on Chemical Compounds • Based on Target • Based on how the poison works 3. Pesticide Formulations <ul style="list-style-type: none"> • Flour (Powder) • Liquid (Liquid) • Granular (Granules) • Emulsified Concentrate 4. Pesticide Toxicity: <ul style="list-style-type: none"> • Pesticide Residue Hazards • Signs of Pesticide Poisoning 5. Pesticide Application Equipment <ul style="list-style-type: none"> • Hand Sprayer • Power Sprayer • Duster • Fogging 6. Pesticide Evication and Calibration <ul style="list-style-type: none"> • Usage Dosage • Concentration of Use • Calibration 7. Negative Impact of Pesticides on Pests <ul style="list-style-type: none"> • Resistance and resurgence to the negative effects of pesticides • How to deal with Negative Impacts

	<p>8. Bio Pesticides</p> <ul style="list-style-type: none"> • Potential of Pesticides from Plants • Making various pesticides from plant • Potential of Biological Pesticides • Making Various Biological Pesticides <p>9. Horticultural Plants and Pesticide Applications</p> <ul style="list-style-type: none"> • Use of Pesticides at Horticultural centers • Socialization and education <p>10. Pesticides and Integrated Pest Management</p> <ul style="list-style-type: none"> • Principles of IPM • Selection and use of pesticides
Test Terms and Forms	<p>Examination requirements: A minimum of 75 % attendance to attend the final exam</p> <p>Forms of examination: Essay</p>
Learning Media	LCD Projector, Screen, Design of Learning Management System, Practicum Manual
References	<p>Main references:</p> <ol style="list-style-type: none"> 1. Panut Djojsumarto (2020) Pestisida Pertanian. Agromedia Pustaka. 2. Panut Djojo Sumarto (2008) Pestisida dan Aplikasinya. Agromedia Pustaka 3. Fait, <i>et. al.</i> (2002) Preventing Health Risks from the Use of Pesticides in Agriculture, WHO. 9241590998.pdf (who.int) <p>Supporting references:</p> <ol style="list-style-type: none"> 1. Al Qur'an dan Terjemahannya 2. Undang-Undang (UU) No. 12. Tahun 1992. Tentang Sistem Budidaya Tanaman 3. Peraturan Pemerintah (PP) No.6 Tahun 1995. Tentang Perlindungan Tanaman 4. Khaerudin. 1996. Mengendalikan Hama dan Penyakit Tanaman Kacang-kacangan. Trubus Agrisarana. 5. Putra, S.N. 2001. Hama Lalat Buah dan Pengendaliannya. Kanisius. Yogyakarta. 6. Triharso. 2004. Dasar-dasar Perlindungan Tanaman. Gadjah Mada University Press. Yogyakarta. 363p. 7. Kalshoven, L.G.E. 1981. The Pest of Crops in Indonesia. Ichtiar Baru-Van Hoeve. Jakarta. 701p. 8. Untung, K. 2006. Pengantar Pengelolaan Hama Terpadu. Edisi Kedua. Gadjah Mada University Press. Yogyakarta. 384p. 9. Oka, I.N. 2005. Pengendalian Hama Terpadu dan Implementasinya di Indonesia. Gadjah Mada University Press. Yogyakarta. 10. Pracaya. 2007. Hama dan Penyakit Tanaman. Edisi Revisi. Penebar Swadaya. Jakarta 11. Sinaga, S.M. 2009. Dasar-dasar Ilmu Penyakit Tumbuhan. Penebar Swadaya. Jakarta