

<b><u>AGB-843</u></b>	<b><u>Agrochemicals</u></b>	<b>3(3-0)</b>
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### **Course Description**

Agricultural Chemicals or Agrichemicals is one of the integral components of the agriculture sector as they play a major role in enhancing crop productivity. It is therefore essential to have an understanding regarding the different types of chemicals and other requirements associated with these chemicals. It is also important to understand how to correctly apply these chemicals in the field and how to minimize their impact on health and environment. This course provides a comprehensive overview of all these aspects related to Agrichemicals

### **Educational Objectives**

The course focuses on

- Basic knowledge of the types of agricultural chemicals and their composition
- Concept of labeling and product safety
- Proper application and calibration techniques

### **Course Outcomes**

Upon successful completion of this course, the students should be able to

- Distinguish between different types of agrichemicals and their usage
- Understand the significance of product labeling and product safety
- Understand different application techniques and their efficiency

### **Course Contents**

- Classification of Agrichemicals
  - Insecticides; herbicides; fungicides; nematocides; synthetic fertilizers; hormones; other chemical growth agents
- Product Formulations
  - Solutions; Ultra Low Volume; Emulsifiable concentrates; soluble powders; wettable powders; suspension concentrates; water dispersible granules;
  - Granules
  - Aerosol dispensers
- Product Labels
  - Contents; Claims for use; Restricted Chemical Product net contents

- Product Safety, Transport, Storage and Disposal
  - Material Safety Data Sheets (MSDS); Environmental Risks; Personal Risks; Personal Protective Equipment; Toxicity
  - Transportation
  - Managing Agrichemical Resistance
- Agricultural Chemical Drift Management
  - Strategies for reducing chemical risks; Spray Application Technology; Record Keeping; Nozzle Selection; Droplet generation and droplet behavior
- Calibration Techniques
  - Calibration of equipment
- Laws and Regulations for Agrichemicals
- Integrated Pest Management (IPM)

### **Recommended Books**

- Ashgate Handbook of Pesticides and Agricultural Chemicals by George W. A. Milne, 2000
- Agricultural Chemical and the Environment: Issues and Potential Solutions. (2<sup>nd</sup> Edition) by R E Hester, R M Harrison (ed.) 2016
- Chemical Pesticides by Jørgen Stenersen. 2004