YBN UNIVERSITY
Established by the Act of Government of Jharkhand Act 15, 2017
Gazette Notification No. 505, Dated 17th July 2017
As per Section 2(f) of UGC Act. 1956

SCHOOL OF AGRICULTURAL SCIENCE

COURSE STRUCTURE/SCHEME

FOR

DIPLOMA IN AGRICULTURE EXTENSION SERVICES FOR INPUT DEALERS

(DAESI)

(One Year Course)

Applicable w.e.f. Academic Session
[2024-2025 till revised]

ONE YEAR DIPLOMA IN AGRICULTURE EXTENSION FOR INPUT DEALERS (PESTICIDES AND FERTILIZERS)

Objectives:

- Orientation of input dealers on location-specific crop production technologies of broad-based agriculture with reference to field problems.
- Building the capacity of input dealers in efficient handling of Inputs.
- To impart knowledge about the laws governing regulation of agricultural Inputs.
- To make input dealers an effective source of farm information at the village level (one stop shop) for the farmers.

Duration of the Course:

Minimum duration	1year
Maximum duration	2 years
Course Fee	Rs. 30,000
Minimum Age	No bar
Maximum Age	No bar

Eligibility:

10+2 Senior secondary pass-outs

Syllabus for Diploma in Agriculture Extension Services for Input Dealers

Course Curriculum(Semester-I)

COURSE CODE	COURSE TITLE	CREDITS	DISTRIBUTION OF CREDITS				EXAM.			TOTAL MARKS
			L	T	P	C	MID-I	IA	END SEM	
1Y1DAESI101	Plant Protection & Pesticide Management	5	3	2	0	5	20	20	60	100
1Y1DAESI102	Planning for Agro Ecological Situations	5	3	1	1	5	20	20	60	100
1Y1DAESI103	Soil Health Management	5	3	2	0	5	20	20	60	100
1Y1DAESI104	Rainfed farming	5	3	1	1	5	20	20	60	100
1Y1DAESI105	Seed and Seed Production	5	3	2	0	5	20	20	60	100
1Y1DAESI106	Irrigation techniques and their Management	5	3	1	1	5	20	20	60	100
Total		30								

Course Curriculum(Semester-II)

COURSE CODE	COURSETITLE	CREDITS	DISTRIBUTION OF CREDITS				EXAM.			TOTAL MARKS
			L	T	P	C	MID-I	IA	END SEM	
1Y2DAESI201	Weed Management	5	3	2	0	5	20	20	60	100
1Y2DAESI202	Management of Farm Implements and Machineries	5	3	1	1	5	20	20	60	100
1Y2DAESI203	Pest and Disease Control	5	3	2	0	5	20	20	60	100
1Y2DAESI204	Crop Production Technology of major local crop	5	3	1	1	5	20	20	60	100
1Y2DAESI205	Acts, Rules and Regulations related to Inputs (Pesticides &Fertilizers)	5	3	2	0	5	20	20	60	100
1Y2DAESI206	Extension Approaches and Methods	5	3	1	1	5	20	20	60	100
Total		**30**								

1Y1DAESI101- PLANT PROTECTION AND PESTICIDES MANAGEMENT

Theory

Recommended herbicides for weed control in different field crops, Important weeds of different crops, Classification of Herbicides, Plant Pathology, Classification of Insecticides, Disease Carrier/ Casual Organism, Entomology, Pest Control in different crops, Integrated Pest Management, Bee Keeping, Major Insecticides, Causes of Colors/Bitterness in Fruits/Vegetables

Practical

- ✓ Recommended herbicides for weed control in different field crops,
- ✓ important weeds of different crops,
- ✓ Classification of Herbicides
- ✓ Plant Pathology
- ✓ Classification of Insecticides,
- ✓ Disease Carrier/ Casual Organism,
- ✓ Entomology,
- ✓ Pest Control in different crops,
- ✓ Integrated Pest Management,
- ✓ Bee Keeping,
- ✓ Major Insecticides
- ✓ , Causes of Colors/Bitterness in Fruits/Vegetables

1Y1DAESI102- PLANNING FOR AGRO ECOLOGICAL SITUATIONS

Theory

Overview of Agricultural Production Systems, Agro-ecological situation and Agro-eco system approach, Agro-ecological situation and Agro-eco system approach, Weather parameters and their impact on Agricultural Production, Suitable cropping systems for the existing Agro-ecological situation, Relevance of Agro-meteorological information for crop production**.**

Practical

- ✓ Visit to a Agro-meteorological laboratory to acquaint with various weather parameters.

1Y1DAESI103-SOIL HEALTH MANAGEMENT

Theory

Soil-Profile, Types, Characteristics, Properties (Physical, Chemical and Biological), and Importance of soil testing, method of soil sampling, interpretation and farm advisory based on soil test results, Problematic soils and their management, Macro-micro nutrient deficiencies and their symptoms, Integrated nutrient Management, Lipid Fertilizers, Plant Growth Regulator, Methods of Fertilizer application: Broadcasting method, top dressing, liquid starter fertilizer solution, application of fertilizer in irrigation water, foliar application of spray fertilizers, soil application, foliar application, manure and fertilizer and their classification, single, combined and mixed fertilizers, Bio fertilizers or inoculants, soil amendments.

Practical

- ✓ Hands on experience in Soil sampling,
- ✓ Hands on experience in interpretation and advice based on soil test results,
- ✓ Field visit to farmers' field/Research Station / KVK / Bjofertilizer / vermicompost production units (four sessions),
- ✓ Identification of deficiency symptoms of different crops.

1Y1DAESI104- RAINFED FARMING

Theory

Crop Planning in Rainfed Areas, Importance of water management in crop production, Natural resource management for Dry land Agriculture, Climate change and adaptation strategies for rainfed agriculture, Integrated Watershed Management.

Practical

- ✓ Visit to Watershed areas

1Y1DAESI105- SEED AND SEED PRODUCTION

Theory

Difference between seeds and grains, Importance of quality seeds in crop production, Seed treatment-Importance and procedure, Types of seeds, seed storage and maintenance, principles and practices of seed production, seed certification process

Practical

- ✓ Hands-on-experience on Seed treatment,
- ✓ Identification of different types of seeds based on various categories of labels,
- ✓ Germination test etc., and
- ✓ Field visits to seed production plots.

1Y1DAESI106- IRRIGATION TECHNIQUES AND THEIR MANAGEMENT

Theory

Basic principles in irrigation, water use efficiency system and methods of irrigation, installation and management of micro irrigation system (sprinkler and drip irrigation), Budget requirement for installation of micro irrigation system

Practical

- ✓ Visit to Progressive Farmers' Field to acquaint with drip and sprinkler system
- ✓ Visit to Agro-Service Centers
- ✓ Visit to field or identification of different weeds
- ✓ Hands -on-experience on operation of farm
- ✓ Farm Implements, plant protection equipments and its maintenance

1Y2DAESI201-WEED MANAGEMENT

Theory

Importance of weed management in crops, types of weeds, integrated weed management (Physical, chemical, biological method)

Practical

- ✓ Exposure to various weeds and weed management practices.

1Y2DAESI202-MANAGEMENT OF FARM IMPLEMENTS AND MACHINERIES

Theory

Farm Mechanization: Scope and importance, Name and utility of various farm implements and machinery, Sources and approximate cost of Farm implements and machinery, Repairs and maintenance of farm implements and machinery, Custom hiring centers: concept and importance in present context as a business model.

Practical

- ✓ Hands-on-experience in handling farm implements and equipment

1Y2DAESI203-PEST AND DISEASE CONTROL

Theory

Importance of pest and disease control in agriculture, difference between harmful and beneficial insects, insect and disease symptoms, difference between nutrition deficiency and disease symptoms, classification of pesticides, New generation pesticides, compatibility of Agro-chemical, Storage pests and their management, Harmful effect of indiscriminate use of agricultural inputs, Integrated pest management, Residual Analysis, Precautionary measures in procurement handling and application of chemicals and other agricultural inputs, First aid.

Practical

- ✓ Hands-on-experience on differentiating the pest and diseases by drawing, colouring and labeling of insects and their damages, disease symptoms and nutrient deficiencies.
- ✓ Field Visit -Identification of useful and harmful insects/identification of symptoms diseases/ Visit to Bio-control Laboratory.
- ✓ Agro-ecological situation analysis in field by the participants.
- ✓ Visit to warehouses/ godowns/market yards.
- ✓ Hands-on-experience on handling of agrochemicals during their application, and usage of first aid during unforeseen situations.

1Y2DAESI204-CROP PRODUCTION TECHNOLOGY OF MAJOR LOCAL CROPS

Theory

Cereals: Paddy, SRI cultivation, Jowar, Bajra, Maize, Pulses: Red gram, Green gram, black gram and Bengal gram, Oilseeds: groundnut, Seamum, Safflower, Soybean and Castor, Commercial Crops: Cotton, Chillies, sugarcane, Turmeric etc. Horticulture Crops: Mango, Sapota, Guava, Custard Apple, Amla, Grape and Pomegranate, Vegetables: Tomato, Brinjal, Cole crops, Cucurbits, medicinal and aromatic plants, Floriculture, Landscaping and Lawn maintenance.

Practical

- ✓ Visit to Progressive Farmers' Field to show the standing crops which are predominantly grown in the concerned district

1Y2DAESI205- ACTS, RULES AND REGULATIONS RELATED TO INPUTS (PESTICIDE AND FERTILIZERS)

Theory

Seed Act, Insecticide Act, Fertilizer Control Order, Essential Commodity Act, Consumer Protection Act, Food Adulteration Act, APMC Act, Consumer Protection Act, Sales Tax/ VAT etc., Benefits of above acts, Rules and regulation related to Agricultural Inputs to farmer and for the traders.

Practical

- ✓ Presentation by the participants on Acts, Rules and Regulations related to Agricultural Inputs

1Y2DAESI206- EXTENSION APPROACHES AND METHODS

Theory

Communication skills, Negotiation, Motivation, Counseling: Application of these concepts for convincing the farmers for better adoption of technologies, Extension Reforms: Concept, Organizational mechanism and role of input dealers in the organizational structure, Cyber extension: Concept, various agricultural information sources, how to access and disseminate agricultural related information to the farmers, market-led extension: meaning, Role of Input dealers in promoting forward and backward linkages of farmers, Extension Methods such as

Training, Demonstration, Exhibition, Kisan, melas purpose and procedure for organizing each methods, Value and ethics in business, Kisan Call Centre, Major flagship programs of Central/State Governments related to agricultural development. Title, Purpose/objectives components, who are eligible beneficiaries and benefits,

Practical

- ✓ Hands-on-experience in using computers for accessing agriculture and market information.
- ✓ Hands-on-experience in designing, developing and delivery of messages related to crop production, weather and market information through mobile phones.
- ✓ Hands-on-experience in organizing extension methods