



Certificate Course in Wildlife Conservation and Management



Course coordinators:
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 **Add-on Certificate Course in Dairy Technology (30 Hours)**

Special Focus: Dairy Sector in Jharkhand

Duration: 30 Hours

Mode: Classroom + Practical

Target Group: Students of science stream

Course Objectives:

1. To introduce the basic principles of dairy technology and milk processing.
2. To provide awareness of the dairy industry in Jharkhand, including key challenges and opportunities.
3. To demonstrate essential skills in milk testing, hygiene, and small-scale processing.
4. To promote value addition and entrepreneurship in the rural dairy sector.

Course Structure & Modules:

Module No.	Module Title	Duration	Mode
1	Introduction with special reference to Jharkhand	2 hrs	Classroom
2	Basics of Milk Composition, Quality & Adulteration	3 hrs	Classroom
3	Clean Milk Production and Handling Practices	2 hrs	Classroom
4	Introduction to Processing of Milk and Local Dairy Products	4 hrs	Classroom / Demonstration
5	Value Addition, Packaging, and Marketing in Rural Dairy	2 hrs	Classroom
6	Government Support & Entrepreneurship in Jharkhand's Dairy Sector	2 hrs	Classroom
7	Practical	15 hrs	Laboratory

Module Highlights:

- ✓ **Module 1: Dairy Sector in Jharkhand**
 - Status of milk production and consumption in Jharkhand
 - Indigenous cattle and dairy cooperatives (e.g., Medha Dairy)
 - Scope for rural dairy entrepreneurship
- ✓ **Module 2: Milk Quality & Adulteration Tests**
 - Milk composition: Fat, SNF, water
 - Use of lactometer, alcohol test, organoleptic testing
 - Simple adulteration detection techniques
- ✓ **Module 3: Clean Milk Production**
 - Importance of hygiene in milking and transport
 - Personal and equipment hygiene
 - Simple cooling and preservation techniques
- ✓ **Module 4: Processing of Milk**
 - Small-scale production of curd, paneer, ghee, khoa
 - Low-cost processing equipment overview
 - Traditional vs modern techniques



Detailed Module Description:

Module 1: Introduction to Wildlife Conservation

- Definition and importance of wildlife conservation
- Threats to wildlife: habitat loss, Invasive species, poaching.
- Concepts of in-situ and ex-situ conservation

Module 2: Protected Areas of Jharkhand and wildlife legislation

- Overview of Protected areas: Wildlife sanctuaries, National parks in Jharkhand and wildlife corridors
- Role of forest departments, NGOs, and local communities
- Wildlife act of 1972 and its recent amendments.

Module 3: Field Techniques in Wildlife Monitoring (Field-based)

- Animal census and population estimation methods
- Camera trapping, transect walks, and pugmark identification
- Vegetation sampling, habitat assessment
- Bird watching and acoustic monitoring
- Captive breeding techniques

Module 4: Technology in Wildlife Conservation (Practical/ Field-based)

- Use of Technology: Role of GIS and GPS in wildlife monitoring
- Drones and thermal cameras in anti-poaching and tracking (e.g., MSTRIPES)
- Mobile apps and software tools (e.g., SMART, eBird, CyberTracker)

Module 5: Wildlife management: Case Studies

- Project elephant and Jharkhand, Project Cheetah, Project Tiger, Project Vulture.
- Tiger Reserve success stories: Sariska and Ranthambore, Palamu Tiger Reserve – challenges and prospects
- Human-wildlife conflict mitigation in Jharkhand
- Community-based conservation: Role of local tribes

Module 6: Capstone Field Project

- Conducting a mini field survey in a local protected area
- Preparing a field report with findings, analysis, and conservation recommendations
- Concept of ecotourism
- Group presentations and evaluation



Assessment & Certification:

- Attendance (minimum 80%)
- Field project report and presentation (40%)
- Final assessment (60%) – written + practical
- Certificate awarded upon successful completion

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