

**Course Code : ANU 302**

**Course Title : Fodder Production and Pasture Management**

**Credit Hours : 3(2+1) Full marks: 75 Theory: 50 Practical: 25**

## **OBJECTIVES**

Upon the completion of this course, the students will be able to know about the fodder production including cultivation practices, major fodder and pasture species grown and their management considering its practical application.

## **I. SYLLABUS**

Introduction: terminology related to fodder and pastures. Climate and soil types. Factors affecting chemical composition and nutritive value of fodder. Fodder plant growth development and yield. Morphology of forage grasses. Cultivation practices of common annual and perennial fodder grasses and legumes. Common pasture species and their management. Pasture establishment, and nutrition of grazing animals. Preservation of fodder.

## **II. Course Breakdown**

### **A. Lecture**

<b>S.N.</b>	<b>Topic</b>	<b>No.of Lectures</b>
1.	1.1 Introduction; feeds and feeding situation in Nepal	1
	1.2 Common terminology of fodder and pasture	1
2.	2.1 Edaphic factors affecting pasture and fodder crops	2
	2.1.1 Climate and its variation	
	2.1.2 Soil types	
	2.2 Factors associated with fodder production	2
	2.2.1 Chemical composition and nutritive value	
	2.2.2 Species and varietal differences	
3.	3.1 Fodder plant growth, development and yield	1
	3.2 Morphology of forage grasses: vegetative grass tiller, and reproduction growth in forage grasses	1
4.	Cultivation practices of common annual and perennial fodder grasses (Oats, Jawar, Bajar, Teosinte, Maize, Napier, Blue panic, Molases, Mulato, Para grass, Signal grass)	7
5.	Cultivation practices of common annual and perennial fodder legumes (Siratro, Centrocema, Berseem, Lucern, Joint vetch, Desmodium, Stylosanthes, Forage peanut, Butterfly pea and Glycine)	4
6.	Cultivation, establishment and yield of common pasture species (Perennial ryegrass, Cocksfoot, Tall fescue, phalaris, White clover, Red clover, Lotus and Low fertility grasses)	5

7.	7.1 Pasture establishment; seed quality, sowing, soil environment	1
	7.2 Cultivated seed beds and management of pasture Nutrition of grazing animals; nutritive value of pasture, herbage intake and composition	1
8.	8.1 Preservation and conservation of fodder/ forage	1
	8.1.1 Hay making, steps, advantage and disadvantage	1
	8.1.2 Silage making, process, steps, advantage and limitations	1
<b>Total</b>		<b>30</b>

## B. Practical

S.N.	Topics	No.of Practicals
1.	Common features used in identifying vegetative grasses	1
2.	Identification of seasonal fodders (grasses and legumes)	1
3.	Identification of some common pasture grasses	1
4.	Identification of some common pasture grasses	1
5.	Identification of common fodder trees and common tree fodder	1
6.	Preparation of herbarium sheet	1
7.	Cultivation of seasonal fodder covering winter and summer seasons	2
8.	Forage fodder sampling	2
9.	Proximate analysis	3
10.	Determination of green and dry matter yield	1
11.	Determining/estimating botanical composition of the pasture mass	1
<b>Total</b>		<b>15</b>

## REFERENCES

- Banarjee, G.C. 1986. A Text Book of Animals Nutrition, Published by Mohar Primlani, Oxford and IBH Publishing Co. Pvt. Ltd.
- Bayer, W. and A. W. Bayer. 1998. Tropical Agriculture Forage Husbandry. ICAR, MacMillan.
- Devkota, N.R. 2005. A Practical Manual on Basics of Pasture Research and Study. Devkota and Devkota Family Publishing, Kathmandu, Nepal. P50.
- Pandey, R. S. 1997. Fodder and Pasture Development in Nepal. Udaya R.D. Service (p.) Ltd. Kathmandu Nepal.
- Pandey, K.K 1982. Fodder Tree and Tree Fodder in Nepal. Swiss Federal Institute of Forestry Research. Birmensdr of, Switzerland.
- Pathak, N.N. and R.C jakhmila. 1983. Forage and Livestock Production. Bikash Publishing House. New Delhi.