Lecture Plan

Name of the college: Government college of arts science and commerce Sanquelim-Goa

Name of Faculty: Anuja Naik

Subject: Botany (Economic and Medicinal botany)

Paper code: BOD 103 Program/Course: T.Y B.Sc. Division: A

Academic year: 2024 - 2025 Semester: V Total Lectures: 45

Course Objectives: This course is designed to give an overview of how plants are indispensable to humans. It gives a broad exposure of the various aspects of plants such as their origin, plant resource utilization, conservation and ethnobotany.

Course Learning Outcome: Gain knowledge of various economically and medicinally important plant species.

Utilize the knowledge of cultivation and uses of plants in day to day life.

Have an insight on crop research organizations involved in improvement of different economically important crops

Month	Lect From:	ures To:	No. of lecture s allotted	Topic, Subtopic to be covered	Learning outcome	Exercise/ assignment	ICT Tools	Reference books
July	17/07/2024	20/07/2024	1	Unit 1:concept of centre of origin; wild relatives of cultivated plants. Unit 2: Identification, brief botanical description, cultivation	Students are able to identify and recognize the different centers of the origin of wild cultivate species. Students are able Identify, describe	Students are instructed to talk with their parents regarding the use of malt of rice and list the uses.	Power point presentation	Economi c botany by BP Pandey.

			practices and	state and list the		botany by
			utilization of	cultivation		V.Verma
			the	practices and		
			a. Cereals and	utilization of the		
			millets – Rice.	Cereals, millets		
				and wheat plant.		
			Wheat plant			
			Maize and Ragi			1
			plant.	Students are		
			b. Pulses: Red	able Identify ,		
			gram and black	describe state	Students are	
			gram	and list the	instructed to talk	
				cultivation	with their parents	
21/07/202	27/02/202		black gram and	practices and	regarding	
4	1	3	green gram	utilization of the	different recipes	
4	1	3	green grain	Cereals and	of pulses	
					of pulses	
				pulses.		-
				Students are		
				able Identify ,		
				describe state		
				and list the		
				cultivation		
				practices and		
			spices and	utilization of the		
			condiments-	Spices and		
			Chilies and	condiments		
			black pepper	(chillies and black		
				pepper)		_
				Students are able		
				Identify , describe		
				state and list the		
				cultivation		
				practices and		
				utilization of the		
			cinnamon,	(cinnamon and		
			ginger	ginger)		_
			turmeric and	Students are able	Students are	
28/07/24	31/07/24	3	cardamom	Identify , describe	instructed to talk	

Students are able Identify, describe state and list the cultivation practices and utilization of the Beverages (tea) 1/08/24 3/08/24 1 Tea Beverages (tea) Students are able Identify, describe state and list the cultivation practices and utilization of the Beverages (coffe) Coffe Beverages (coffe) Students are able Identify, describe state and list the cultivation practices and utilization of the Beverages (coffe) Students are able Identify, describe state and list the cultivation practices and utilization of the Vegetable oil sources - Vegetable oil source (sesame groundnut) Students are able Identify, describe state and list the cultivation practices and utilization of the Vegetable oil state and list the cultivation practices and utilization of the Vegetable oil state and list the cultivation practices and utilization of the Vegetable oil state and list the cultivation practices and utilization of the Vegetable oil state and list the cultivation practices and utilization of the Vegetable oil state and list the cultivation practices and utilization of the Vegetable oil state and list the cultivation practices and utilization of the Vegetable oil state and list the cultivation practices and utilization of the Vegetable oil state and list the cultivation practices and utilization of the Vegetable oil state and list the cultivation practices and utilization of the Vegetable oil state and list the cultivation practices and utilization of the Vegetable oil state and list the cultivation practices and utilization of the Vegetable oil state and list the cultivation practices and utilization of the Vegetable oil state and list the cultivation practices and utilization of the Vegetable oil state and list the cultivation practices and utilization of the Vegetable oil state and list the cultivation practices and utilization of the Vegetable oil state and list the cultivation practices and utilization of the Vegetable oil state and list the cultivation practices and utilization of the Vegetable oil state and list th					state and list the cultivation practices and utilization of the (turmeric and cardamom)	with their parents regarding different spiritual uses of turmeric.	
Students are able Identify, describe state and list the cultivation practices and utilization of the Beverages (coffe) Students are able Identify, describe state and list the cultivation practices and utilization of the sources - Vegetable oil sources - Vegetable oil source (sesame groundnut) Students are able Identify, describe state and list the cultivation practices and utilization of the source sesame groundnut and groundnut)	1/08/24	3/08/24	1	_	Students are able Identify, describe state and list the cultivation practices and utilization of the		
Students are able Identify , describe state and list the cultivation practices and utilization of the Sources - Vegetable oil Sesame, source (sesame groundnut and groundnut) Students are able Identify , describe state and list the cultivation practices and utilization of the	1/00/24	3/00/24			Students are able Identify, describe state and list the cultivation practices and utilization of the		
Sesame, groundnut and groundnut) Students are able Identify, describe state and list the cultivation practices and utilization of the				e. Vegetable oil	Students are able Identify, describe state and list the cultivation practices and utilization of the		
cultivation practices and utilization of the				Sesame,	source (sesame and groundnut) Students are able Identify, describe		
August 5/08/24 10/08/24 3 Vegetable oil soybean, source (soybean and coconut)				-	cultivation practices and utilization of the Vegetable oil source (soybean		

					Students are able Identify, describe state and list the cultivation practices and		
				mustard	utilization of the		
				(including	Vegetable oil		
				extraction)	source (mustard)		
					Students are able		
					Identify , describe		
					state and list the cultivation		
					practices and		
					utilization of the		
				f. Fibre yielding	Fibre yielding		
				plants - Cotton,	plants (cotton.		
				coir.	coir)		
					Students are able		
					Identify , describe		
					state and list the		
					cultivation		
				into and accord	practices and	Students were	
				jute and agave (including types	utilization of the Fibre yielding	asked to extract	
				of fibres and	plants (jute and	the fiber from	
	12/08/24	17/08/24	3	extraction).	agave)	agave leaf.	
					Students are able		
					Identify , describe		
					state and list the		
					cultivation		
					practices and		
					utilization of the		
				g. Fruit crops -	Fruit crop		
				Mango,	(mango and		
				jackfruit,	jackfruit) Students are able		
				hanana			
	19/08/24	24/08/24	3	· ·	• •		
	19/08/24	24/08/24	3	banana, cashew	Identify , describe state and list the		

				cultivation	
				practices and	
				utilization of the	
				Fruit crop	
				(banana and	
				cashew)	
				Students are able	
				Identify , describe	
				state and list the	
				cultivation	
				practices and	
				utilization of the	
				Fruit crop	
			pineapple and	(pineapple and	
			рарауа	papaya)	
			ραραγα	Students are able	
				Identify , describe	
				state and list the	
				cultivation	
				practices and	
				•	
			h / a = a t a la la	utilization of the	
			h. Vegetable	Vegetable	
			crops - Red	crops(red	
			amaranth,	amaranth)	
				Students are able	
				Identify , describe	
				state and list the	
				cultivation	
				practices and	
				utilization of the	
				Vegetable	
			radish, knol-	crops(radish,	
			khol	khol-khol)	
				Students are able	
				Identify , describe	
				state and list the	
				cultivation	
26/08/24	31/08/24	3	okhra	practices and	

	1	1	1		1	•	1
					utilization of the		
					Vegetable		
					crops(okhra)		
					Students are able		
					Identify , describe		
					state and list the		
					cultivation		
					practices and		
				i. Sugar and	utilization of the		
				starch crops -	Sugar and starch		
				Sugarcane	crop(sugarcane)		
					Students are able		
					Identify , describe		
					state and list the		
					cultivation		
					practices and		
					utilization of the		
					Sugar and starch		
	2/09/24	7/09/24	2	potato	crop(potato)		
		,,,,,,,		pease	Students are able		
					Identify , describe		
					state and list the		
					cultivation		
					practices and		
					utilization of the		
					Sugar and starch		
	09/09/24	14/09/24	1	yam.	crop(yam)		
	05/05/21	11/05/21	1	yann	Students are able		
					Identify , describe		
				j. Rubber	state and list the		
				yielding plants -	cultivation		
				Hevea	practices and		
				brasiliensis	utilization of the		
				(including	Rubber yielding		
				tapping and	plant (Hevea ,		
				processing)	brasiliensis)		
Septembe				k. Timber	Students are able		
_	16/00/24	21/00/24	2				
r	16/09/24	21/09/24	3	plants - Matti,	Identify , describe		

1			l	Sailo,	state and list the		ı
				Sallo,	cultivation		
					practices and		
					utilization of the		
					Rubber yielding		
					plant (timber,		
					matti, sailo)		
					Students are able		
					Identify , describe		
					state and list the		
					cultivation		
					practices and		
					utilization of the		
					Rubber yielding		
				Shisham	plant (shisham)		
					Students are able		
					Identify , describe		
					state and list the		
					cultivation		
					practices and		
				Bamboo	utilization of the		
				(including wood	Rubber yielding		
				properties)	plant (bamboo)		
				, , ,	Students are able		
					Identify , describe		
					state and list the		
					cultivation		
					practices and		
				I. Miscellaneous	utilization of the		
				- Dye (Bixa	miscellaneous (
				orellana),	Bixa orellana),		
				Essential oil	Essential oil		
				(Eucalyptus)	(Eucalyptus) Students are able		
					Identify , describe		
				1	state and list the		
	22/00/24	20/00/24		Insecticidal	cultivation		
	23/09/24	28/09/24	3	(Neem)	practices and		

				Unit 3: A brief	utilization of the miscellaneous insectisidal(neem)	
				account of the	Students are	
				chief chemical	able to list the	
				constituents	chief chemical	
				and uses of the	constituents and	
				following plant drugs used in	uses of the plants used in	
				indigenous and	indigenous and	
				allopathic	allopathic	
				systems of	systems of	
				medicine:	medicine:	
				Hemidesmus	Hemidesmus	
0.41				indicus,	indicus, Garcinia	
October	-			Garcinia indica,	indica, Students are	
					able to list the	
					chief chemical	
					constituents and	
					uses of the plants	
					used in	
					indigenous and	
					allopathic	
				Dankania	systems of	
				Boerhaavia diffusa,	medicine: Boerhaavia	
				Alstonia	diffusa, Alstonia	
				scholaris,	scholaris, Datura	
	1/10/24	5/10/24	2	Datura metel	metel	
					Students are	
				Holarrhena	able to list the	
				antidysenterica	chief chemical	
				, Piper longum,	constituents and	
	7/10/24	12/10/24	3	Syzygium	uses of the plants used in	
	1/10/24	12/10/24	1 3	cumini,	useu III	

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					indigenous and
					allopathic
					systems of
					medicine:
					Holarrhena
					antidysenterica,
					Piper longum,
					Syzygium cumini,
					Students are
					able to list the
					chief chemical
					constituents and
					uses of the plants
					used in
					indigenous and
					allopathic
					systems of
					medicine:
				Strychnos nux-	Strychnos nux-
				vomica,	vomica,
				Terminalia	Terminalia
				bellerica.	bellerica.
	1				Students are
					able to list the
					chief chemical
					constituents and
					uses of the plants
					used in
					indigenous and
					allopathic
					systems of
				Adathoda	medicine:
				vasica and	Adathoda vasica
				Tinospora	and Tinospora
				cordifolia.	cordifolia.
				Unit 4: Brief	Students are
				account of	able to describe
	14/10/24	19/10/24	3	research	the different
1	17/10/24	17/10/4	J	i eseai cii	uic difficient

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				organisations	research			
				involved in	organization			
				improvement	involve in			
				of different	improvement of			
				crops in India:	crops such as			
				ICAR	ICAR			
					Students are			
					able to describe			
					the different			
					research			
					organization			
					involve in			
					improvement of			
					crops such as			
				ICRISAT	ICRISAT			
					Students are			
					able to describe			
					the different			
					research			
					organization			
					involve in			
					improvement of			
					crops such as			
				CRRI	CRRI			
					Students are			
					able to describe			
					the different			
					research			
					organization			
					involve in			
					improvement of			
					crops such as			
	21/10/24	22/10/24	1	SBRI	SBRI			
							<u> </u>	
			l .					