



Rayat Shikshan Sanstha's
D. P. Bhosale College, Koregaon

Department of Zoology

INDEX

Skill based Certificate Course on Dairy Farming

Year 2019-20

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Rayat Shikshan Sanstha's

D.P. Bhosale College, Koregaon

Department of Zoology

NOTICE

2019-20

Date:- 28/01/2020

All the students of B. Sc. II & III are here by informed that Department has organized "**Skill based Certificate Course on Dairy Farming**" from Monday 3rd February 2020. All student are informed that they should remain present for course on time. It may clearly noted that fine will be collected from absent students.


Incharge


Head,

Department of Zoology

Skill based Certificate Course

On

Dairy Farming





Rayat Shikshan Sanstha's

D.P. Bhosale College, Koregaon

Skill based Certificate Course

on

Dairy Farming

Organized by

Department of Zoology

Course Incharge

Mr. Jawale C. B.

Course Duration: 03 Feb. 2020 –11 Mar. 2020

Rayat Shikshan Sanstha's
D.P. Bhosale College, Koregaon
Syllabus

Title – Add on Certificate Course on Dairy Farming

Total Hrs- 30

B. Sc. II & III (Zoology)

THEORY

Unit 1

Dairy development in India, Milk and Milk Products, Nutritive value of milk Milk production in India.

Role of milk and milk products in human nutrition.

Unit 2

Dairy Cattle Breeds: Indigenous and exotic, Dairy Cattle: Anatomy – Nutrition – Physiology

Unit 3

Dairy Chemistry: Milk Composition, Physicochemical properties of milk . Composition of milk

Unit 4

Dairy Microbiology: Milk and Microbes: Common micro- organisms in milk, spoilage of milk, Fermentation of milk

Unit 5

Dairy Processing and Technology: Milk collection, transportation & Grading of milk, Standardization, Pasteurization, Homogenisation of milk, packaging of milk, cleaning and sanitation

PRACTICAL

1. Manufacture of Fat rich dairy products cream
2. Pasteurization , Homogenisation
3. Freezer, Evaporator – their Principles and designs
4. Boiler - Installation, operation and design ,Boiler efficiency Cream separators - Principle of Heat Exchange , Energy consumption in different milk processing operations Refrigeration requirements in different dairy processing operations
5. Food safety and Quality assurance strategies ISO and certification – Packaging of Market Milk and Milk products –Advancements in Liquid Milk and Milk Products Packaging.
6. Maintenance of records for silkworm rearing.





Rayat Shikshan Sanstha's

D.P. Bhosale College, Koregaon

Department of Zoology

Year : 2019-20

Skill based Certificate Course

on

Dairy Farming

Objectives

1. To educate students in techniques of dairy production and management for careers with dairy farms and associated dairy businesses and industries.
2. Increase Rural Employment Opportunities through Entrepreneurship.
3. Safe, quality milk should be produced from healthy animals using management practices that are sustainable from an animal welfare, social, economic and environmental perspective.
4. To provide veterinary health care and diagnostic facilities.
5. To provide quality breeding services to enhance productivity.
6. Up gradation and conservation of indigenous breeds.

Learning Outcomes

After completing this program, participants will be able to:

1. Apply good practice in the following areas of Animal health, Milking hygiene, Nutrition (feed and water), Animal welfare, Environment, Socio- economic management.
2. Efficiently start and manage a Dairy farm
3. Construct and maintain shed for cattle
4. Prepare and give recommended feed and water for livestock
5. Maintain health of livestock along with productivity


In Charge

Certificate Course


Head,

Department of Zoology



Rayat Shikshan Sanstha's

D.P. Bhosale College, Koregaon

Department of Zoology

Skill based Certificate Course on Dairy Farming

Time Table - 2019-20

Theory & Practical

Time	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
10.15-11.15 Theory	CBJ	NAS	SSP	SAK	TNK	CBJ
08.30-10.30 Practical	CBJ	NAS	SSP	SAK	TNK	CBJ

CBJ – Mr. C. B. Jawale

NAS – Ms. N. A. Shaikh

SSP – Ms. S.S. Pawar

SAK- Ms. S.A. Kokil

TNK- Ms. T.N. Kadam

Jawale
NS
S.Pawar
S.A.Kokil
T.N.Kadam

Jawale
Head

Department of Zoology
D. P. Bhosale College Koregaon



Rayat Shikshan Sanstha's
D.P. Bhosale College, Koregaon

Department of Zoology

Skill based Certificate Course on Dairy Farming

Time Table- 2019-20

Theory & Practical

Date	Time	Theory / Practical	Name of the teacher
03/02/2020	10.15-11.15	Theory	Mr. C. B. Jawale
04/02/2020	10.15-11.15	Theory	Ms. N. A. Shaikh
05/02/2020	10-15-11.15	Theory	Ms. S.S. Pawar
06/02/2020	10.15-11.15	Theory	Ms. S.A. Kokil
07/02/2020	10.15-11.15	Theory	Ms. T.N. Kadam
08/02/2020	08.30-10.30	Practical	Mr. C. B. Jawale
10/02/2020	10.15-11.15	Theory	Mr. C. B. Jawale
11/02/2020	10.15-11.15	Theory	Ms. N. A. Shaikh
12/02/2020	08.30-10.30	Practical	Ms. S.S. Pawar
13/02/2020	10.15-11.15	Theory	Ms. S.A. Kokil
14/02/2020	10.15-11.15	Theory	Ms. T.N. Kadam
15/02/2020	10.15-11.15	Trip	
17/02/2020	10.15-11.15	Theory	Mr. C. B. Jawale
18/02/2020	10.15-11.15	Theory	Ms. N. A. Shaikh
20/02/2020	10.15-11.15	Theory	Ms. S.A. Kokil
22/02/2020	10.15-11.15	Theory	Mr. C. B. Jawale
24/02/2020	08.30-10.30	Practical	Mr. C. B. Jawale
25/02/2020	10.15-11.15	Theory	Ms. N. A. Shaikh
26/02/2020	10.15-11.15	Theory	Ms. S.S. Pawar
27/02/2020	10.15-11.15	Theory	Ms. S.A. Kokil
28/02/2020	08.30-10.30	Practical	Ms. T.N. Kadam
29/02/2020	10.15-11.15	Theory	Mr. C. B. Jawale
02/03/2020	10.15-11.15	Theory	Mr. C. B. Jawale
03/03/2020	10.15-11.15	Theory	Ms. N. A. Shaikh
04/03/2020	10.15-11.15	Theory	Ms. S.S. Pawar

05/03/2020	08.30-10.30	Practical	Ms. S.A. Kokil
06/03/2020	08.30-10.30	Practical	Ms. T.N. Kadam
07/03/2020	08.30-10.30	Practical	Mr. C. B. Jawale
09/03/2020	08.30-10.30	Practical	Mr. C. B. Jawale
11/03/2020	08.30-10.30	Practical	Ms. S.S. Pawar


Head
Department of Zoology
D. P. Bhosale College Koregaon




Rayat Shikshan Sanstha's
D.P. Bhosale College, Koregaon
Student list 2019-20

Skill based Certificate Course on Dairy Farming

Sr. No.	Roll No	Name of the Students
1	3371	Bandgar Tejas vilas
2	3372	Bhoite kunal vitthal
3	3373	Bhosale Mahesh ankush
4	3374	Bhosale Pooja dattatray
5	3375	Bhosale Priya dattatray
6	3376	Chavan Samadhan shrikamt
7	3377	Disale Rohan ramesh
8	3378	Ghorpade Rushikesh shrimant
9	3379	Jadhav Ankita bapuu.
10	3380	Jadhav Harshda sanjay
11	3381	Jagdale Mahesh sopan
12	3382	Kadam Manasi sanjay
13	3383	Matkar Ashutosh pandurang
14	3384	Matkar Dinesh ashok
15	3385	More Dhanshri vinod
16	3386	More Shivam tanaji
17	3387	More Sneha pramod


Head
Department of Zoology
D. P. Bhosale College Koregaon

Roll No.	Name of the Student	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
3371	Bandgar T. V.			TVB	TVB	TVB	TVB	TVB	TVB		TVB	TVB	TVB	TVB	TVB	TVB		TVB	TVB		TVB		A		TVB	TVB	TVB	TVB	TVB	A
3372	Bhoite K. V.			BKV	A	BKV	BKV	BKV	BKV		BKV	A	BKV	BKV	A	BKV		BKV	A		BKV		A		BKV	A	BKV	BKV	BKV	A
3373	Bhosale M. A.			BMA	BMA	BMA	BMA	BMA	IA		BMA	BMA	BMA	BMA	BMA	BMA		BMA	A		BMA		BMA		BMA	BMA	IA	BMA	BMA	A
3374	Bhosale P. D.			Bhosale	Bhosale	A	Bhosale	Bhosale	Bhosale		Bhosale	Bhosale	Bhosale	A	Bhosale	Bhosale		Bhosale			Bhosale		Bhosale		Bhosale	Bhosale	Bhosale	Bhosale	Bhosale	A
3375	Bhosale P. D.			PDB	A	IA	PDB	A	PDB		PDB	A	PDB	A	PDB	PDB		PDB	A		PDB		A		PDB	PDB	PDB	A	PDB	PDB
3376	Chavan S. S.			S.S.chavan	A	S.S.chavan	S.S.chavan	A	S.S.chavan		A	S.S.chavan	S.S.chavan	S.S.chavan	S.S.chavan	S.S.chavan		S.S.chavan	A		S.S.chavan		S.S.chavan		A	S.S.chavan	S.S.chavan	A	S.S.chavan	A
3377	Disale R. R.			DRB	A	DRB	A	DRB	DRB		DRB	DRB	DRB	DRB	A	DRB		DRB	DRB		DRB		D.D.B		A	DRB	DRB	A	DRB	DRB
3378	Ghorpade R. S.			RSG	A	RSG	RSG	A	RSG		RSG	A	RSG	RSG	RSG	RSG		RSG	RSG		RSG		RSG		RSG	RSG	RSG	RSG	RSG	RSG
3379	Jadhav A. B.			ABJ	ABJ	ABJ	ABJ	A	ABJ		ABJ	A	ABJ	ABJ	ABJ	ABJ		ABJ	ABJ		ABJ		ABJ		ABJ	ABJ	ABJ	ABJ	ABJ	A
3380	Jadhav H. S.			HSJ	HSJ	HSJ	HSJ	HSJ	HSJ		A	HSJ	HSJ	A	HSJ	A		HSJ	A		HSJ		HSJ		HSJ	HSJ	HSJ	A	HSJ	A
3381	Jagdale M. S.			MST	MST	MST	MST	A	MST		MST	MST	MST	A	MST	MST		MST	MST		MST		MST		MST	MST	MST	MST	MST	A
3382	Kadam M. S.			MSK	MSK	MSK	MSK	MSK	A		MSK	MSK	MSK	MSK	MSK	MSK		MSK	MSK		MSK		MSK		MSK	MSK	MSK	MSK	MSK	MSK
3383	Matkar A. P.			DAM	DAM	DAM	DAM	DAM	DAM		DAM	DAM	DAM	A	DAM	DAM		DAM	DAM		DAM		DAM		DAM	DAM	DAM	DAM	DAM	A
3384	Matkar D. A.			DAM	A	DAM	DAM	DAM	DAM		DAM	DAM	DAM	DAM	DAM	DAM		DAM	DAM		DAM		A		DAM	DAM	DAM	DAM	DAM	A
3385	More D. V.			DK	DK	DK	DK	DK	DK		DK	DK	DK	A	DK	DK		DK	DK		DK		DK		DK	DK	DK	DK	DK	A
3386	More S. T.			STY	STY	A	STY	STY	STY		STY	STY	STY	A	STY	STY		STY	STY		STY		STY		STY	STY	STY	A	STY	A
3387	More S. P.			SMZ	SMZ	SMZ	SMZ	SMZ	SMZ		SMZ	SMZ	SMZ	SMZ	SMZ	SMZ		SMZ	SMZ		SMZ		SMZ		SMZ	SMZ	SMZ	SMZ	SMZ	A


Head
 Department of Zoology
 D. P. Bhosale College Koregaon

D.P. Bhosale College, Koregaon

Skill based Certificate Course on Dairy Farming

STUDENT ROLL CALL

Month : March 2020

Roll No.	Name of the Student	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
3371	Bandgar T. V.		A	TVB	TVB	A	TVB	TVB		TVB		A																				
3372	Bhoite K. V.		BKV	BKV	BKV	BKV	BKV	A		BKV		BKV																				
3373	Bhosale M. A.		BMA	BMA	BMA	BMA	BMA	BMA		BMA		BMA																				
3374	Bhosale P. D.		Bhosale	A	Bhosale	A	Bhosale	A		Bhosale		Bhosale																				
3375	Bhosale P. D.		PDB	PDB	PDB	PDB	PDB	PDB		PDB		PDB																				
3376	Chavan S. S.		SSCHAVAN	SSCHAVAN	SSCHAVAN	SSCHAVAN	SSCHAVAN	A		SSCHAVAN		SSCHAVAN																				
3377	Disale R. R.		DRB	DRB	DRB	DRB	DRB	DRB		DRB		DRB																				
3378	Ghorpade R. S.		A	RSG	RSG	A	RSG	A		RSG		A																				
3379	Jadhav A. B.		ABS	ABS	ABS	ABS	ABS	ABS		ABS		ABS																				
3380	Jadhav H. S.		HST	HST	HST	HST	HST	HST		HST		HST																				
3381	Jagdale M. S.		A	MST	MST	A	MST	A		MST		A																				
3382	Kadam M. S.		MOK	MOK	MOK	MOK	MOK	MOK		MOK		MOK																				
3383	Matkar A. P.		APM	APM	APM	APM	APM	APM		APM		APM																				
3384	Matkar D. A.		DAM	DAM	DAM	DAM	DAM	DAM		DAM		DAM																				
3385	More D. V.		DK	DK	DK	DK	DK	DK		DK		A																				
3386	More S. T.		STM	A	STM	STM	STM	STM		STM		STM																				
3387	More S. P.		SM	SM	SM	SM	SM	A		SM		SM																				

(Signature)
 Head
 Department of Zoology
 D. P. Bhosale College Koregaon

Rayat Shikshan Sanstha's

D. P. Bhosale College, Koregaon

Department of Zoology

Question Paper

Skill based Certificate Course on Dairy Farming

Marks : 30

Instructions

1. All the questions are compulsory
 2. Questions to the right Indicate full Marks
 3. Draw neat and Labelled diagrams wherever necessary
-

Que. 1: Long questions (Any 2)

20

- a. With neat labelled diagram describe the life cycle of silkworm.
- b. Describe the dairy cattle breeds.
- c. Explain Milk Composition and Physicochemical properties of milk.

Que. 2: Write short notes on following (Any 2)

10

- a. Milk and Milk Products.
- b. Fermentation of milk.
- c. Role of milk and milk products in human nutrition.



Rayat Shikshan Sanstha's
D.P. Bhosale College, Koregaon
Student list 2019-20

Skill based Certificate Course on Dairy Farming

Marklist

Sr. No.	Roll No.	Name of the Students	Que. 1 20	Que. 2 10	Total 30
1	3371	Bandgar Tejas Vilas	17	09	26
2	3372	Bhoite Kunal Vitthal	18	09	27
3	3373	Bhosale Mahesh Ankush	15	09	24
4	3374	Bhosale Pooja Dattatray	14	06	20
5	3375	Bhosale Priya Dattatray	15	08	23
6	3376	Chavan Samadhan Shrikamt	18	08	26
7	3377	Disale Rohan Ramesh	17	07	24
8	3378	Ghorpade Rushikesh Shrimant	16	07	23
9	3379	Jadhav Ankita Bapuu.	17	09	26
10	3380	Jadhav Harshda Sanjay	18	07	25
11	3381	Jagdale Mahesh Sopan	15	09	24
12	3382	Kadam Manasi Sanjay	17	08	25
13	3383	Matkar Ashutosh Pandurang	19	09	28
14	3384	Matkar Dinesh Ashok	16	09	25
15	3385	More Dhanshri Vinod	17	08	25
16	3386	More Shivam Tanaji	18	09	27
17	3387	More Sneha Pramod	19	09	28

J. Pawale
Head

Department of Zoology
D. P. Bhosale College Koregaon



**Rayat Shikshan Sanstha's
D. P. Bhosale College, Koregaon**

Department of Zoology

Report

Skill based Certificate Course on Dairy Farming

Animal husbandry and agriculture are synergistically involved and are the important source of income and employment in rural areas. Among them, dairying provides security to farmers, especially when agriculture fails. Dairy farming is essential to millions of poor households across the country not only as a source of income but also as a major source of protein, supplementary nutrition, fertilizer, fuel and a store of wealth.

Dairy is an important source of subsidiary income to small/marginal farmers and agricultural laborers. In addition to milk, the manure from animals provides a good source of organic matter for improving soil fertility and crop yields.



The gobar gas from the dung is used as fuel for domestic purposes as also for running engines for drawing water from well. The surplus fodder and agricultural by- products are gainfully utilized for feeding the animals.

Department of Zoology has offered this course for B.Sc. II and B.Sc. III students.

This course was conducted during the 03rd February 2020 to 11th March 2020.

During this period the lectures and practicals were conducted by resource faculties. In this period department has organized one short trip to Eskal Dairy Farm for practical demonstration. Mr. C.B. Jawale, Miss N.A. Shaikh, Miss S.S. Pawar, Miss S.A. Kokil and Miss T.N. Kadam conducted the practicals and theory period. During this period 17 students have been enrolled of this course.



Dairy Products Processing Unit

Candidates pursuing a course in dairy technology have a lot of scope and career opportunities in this field because the field of dairy technology plays an important role in India's agriculture-based industry. The rapid expansion of dairy industry in India has created huge demand for skilled professionals in this field.



Milk Processing Unit

Sawab
Head
Department of Zoology
D. P. Bhosale College Koregaon



"Education through Self-help is our Motto"- KARMAVEER
Rayat Shikshan Sanstha's

D.P. Bhosale College, Koregaon

District – Satara. (M.S.)
NAAC Reaccredited 'A' (with CGPA 3.12)

Skill based Course

CERTIFICATE



This is to certify that **Mr. / Miss.** ----- **Class :** -----

has successfully completed "**Skill based Certificate Course**" on -----

----- From ----- to ----- Organized by Department of Zoology, D. P. Bhosale College,
Koregaon, District- Satara, (M.S.).

Incharge

Head
Department of Zoology