

# A New Strategy of Dairy Farm Management for Enhancement of Milk Yield

PUPPALA UPENDER

Lecture,

Department of Biology,

Sreemaatae Manikeshwari Independent PU College, Bidar, karnataka, India.

Received: Feb. 21, 2018

Accepted: March 26, 2018

## ABSTRACT

*Dairy farming from being a conventional family run businesses, today has developed immensely to a sorted out dairy industry with innovative specializations in all aspects of the procedure. We have seen enormous development in dairy farming hardware that assistance present day dairy farms to oversee thousands of dairy cows and buffaloes. This colossal lift in the business has made a ton of farming occupations for the general population. Be that as it may, a considerable lot of the dairy farms still oversee and run natural dairy farms for the most part in towns and supply the drain to get prepared by extensive organizations and at long last pitch to the retail outlets. Anybody picking to go in for dairy farming must have a honest to goodness adore for the welfare of cows and buffaloes as dairying requires extend periods of time of tiring and unforgiving work without there being any occasion. Further to be an effective dairy farmer one must have a decent learning about all parts of logical management of dairy animals and in addition management of dairy business. The selection, breeding, feeding, management, housing and healthcare necessities of high review crossbred cows and hereditarily predominant buffaloes are diverse in numerous regards from our customary techniques for cattle rearing. In this paper, a best approach is talked about to make and run a supportable dairy farm that gives greatest benefits to the firm and additionally deals with the impacts of dairy farms on environments and animals for a more drawn out period.*

**Key Words:** Dairy Farm Management, breeding, feeding, farming, cattle rearing, Dairy Farming.

## I. Space Requirements of Dairy Farming Animals

Animals require shield for protection and comfort. They can perform better under positive natural conditions. Housing of animals require starting money to the degree the dairy farmers can bear. The animals are to be shielded from high and low temperature, solid daylight, substantial precipitation, high humidity, ice, snowfall, solid breezes, ecto-parasite and endo-parasites. The comfortable temperature run for dairy types of cattle, buffaloes and goats is 150C to 270C. Climatic pressure happens when the temperature goes 50C beneath or over this range.

High humidity joined with high temperature makes more pressure animals in tropics. Precipitation in cool atmosphere additionally causes worry in mild zone. Solid breezes additionally exasperate the conditions both in tropics and calm atmosphere. A few procedures are accessible to give alleviation from sweltering climate conditions for lactating dairy cows. In tropical and sub-tropical atmospheres, all around ventilated shed is a need at purposes of high warmth stretch, for example, encourage outbuildings, loafing territories, and in holding zones. It is critical to give an adequate stream of air through the working in which the animals are kept to guarantee ideal warm conditions for dairy animals.

### Dairy Breeds:

India is a rich storehouse of bubaline hereditary assets nbsp There are 9 types of buffaloes in the nation i.e,

1. MurrahBuffalo
2. Nili RaviBuffalo
3. BhadawariBuffalo
4. JaffarabadiBuffalo
5. SurtiBuffalo
6. MehsanaBuffalo
7. NagpuriBuffalo
8. Breeding Strategies for Sustainable BuffaloProduction
9. LocalNonDescriptBuffaloesUnderLowtoMediumInputProductionSystem

## II. Fodder Management in Dairy Farming

### Following the main Feed Contents:

1. Maize
2. Jowar SorghumBicolor
3. Bajra or Pearl Millet PennisetumTyphoides

4. Teosinte Euchlaena Mexicana Schrad
5. Cowpea Vigna Unigiculata
6. Berseem Trifolium Alexandrinum L
7. Oats Avena Sativa

Daily Dairy Farm Management: This ought to be every day rehearse at the domesticated animals/dairy farms for appropriate transfer of farm squander including compost, pee and waste feed and so on, to enhance the farm cleanliness and to lessen the smell issues on dairy farms, including legitimate selection of a farm site, general farm management and fertilizer land application procedures, and treatment of excrement by substance or different means.

### III. Disease Control and Management in Dairy Farming

Tick invasion is one of the real limitation in tropical condition for dairy, Goat, Sheep and other household animals. Tick likewise spread numerous parasitic maladies in animals and individuals. Counting that it suck blood from animals, so creature may not ready to deliver well (Milk, Meat and so forth). It additionally create skin maladies. There are real things to be considered while controlling ticks-Farmers used to concoction control against ticks yet it is unidirectional means they splash bug spray on the group of animals, this will murder ticks or other ecto parasites yet couldn't control ticks or other ectoparasite in stow away encompassing/region. Eg: ticks may stow away in breaks, Crevices in animals shed. It additionally cover up under stone, Boulders, Dampened territories, Waste material places in and around animals shed.

Ticks are extremely solid against unforgiving climatic circumstances. It is accepted that one tick may lay 1500 eggs for every cycle. So think about these things, farmers ought to do following things:

- Clean animals shed and encompassing preceding controlling creature shed. Evacuate the stubble or waste material which may go about as concealing ground for ticks.
- Remove or mortar the breaks and fissure of mass of animals shed. Expel weeds and stubbles 15 to 20 feet around the animals shed.
- If conceivable consume the dividers and in addition concealing grounds of ticks with fire firearm with legitimate safety measure.
- Spray suggested bug sprays under the supervision of veterinarian on creature body and additionally creature shed around the same time.
- If invasion of ticks is extreme at that point do spaying at standard interim like 15 to 29 days up to the control of ticks. At that point do these practices of control at normal 3-4 months interim. Extraordinarily before rainstorm and after September month (Initiation of winter season).

There are couple of synthetic bug sprays which are utilized as a part of controlling ticks

Trade Name	Content	Class	Concentration in Water	
			Spraying on Animal Body	Spraying in Shed
Butox (15, 50, 250, 1 Ltr)	Deltamethrin 12.5 mg/ml	Pyrethroid	2-3 ml/lit	5 ml/lit
Ektomin (15, 50, 1 Ltr)	Cypermethrin 100 EC	Pyrethroid	1ml/lit	20ml/lit
Clinar (15, 50, 1 Ltr)	Cypermethrin 100EC Pyrethroid		1ml/lit	20ml/lit
	Cypermethrin 100 EC	Pyrethroid	1 ml/lit	20 ml/lit
Taktik (50, 250 ml)	Amitraz 12.5% w/v	Pyrethroid	2ml/lit	4 ml/lit
Cythion (250, 500, 1, 5 Ltr)	Malathion 50% w/v		Organo 5 ml/lit Phosphate	10 ml/lit

Try not to utilize Benzene Hexa chloride powder (BHC), DDT for control of ecto parasite as it is restricted and not broken down for a long time in condition.

In natural way, highly thought arrangement of normal salt is utilized to control ticks however it has restricted achievement.

#### IV. Dairy Farming Reproduction/Breeding Management Reproductive characteristics of cattle and buffaloes:

	Timeframe	Cattle (Range)	Buffalo (Range)
1	Sexual season		Polyoestrus
2	Age at puberty (months)		15(10-24) 21(15-36)
3	Oestrus cycle length (Days)		21(14-29) 21 (18-22)
4	Oestrus sign duration (hrs)		18(12-30) 21 (17-24)
5	Gestation length (Days)		280(278-293) 315 (305-330)
6	Age at first calving (months)		30(24-36) 42 (36-56)
7	Calving intervals (Months)		13(12-14) 18 (15-21)

#### Signs of oestrus in cattle and buffaloes:

- Standing to be mounted by other cows Attempt to mount other cows
- Stringy mucous hanging from vulva Mucus smeared on buttocks Increased restlessness
- Drop in milk yield
- Reduced feed intake Frequent Bellowing
- Chin resting on cow's rump by other cows, tail raising Vulval oedema
- Frequent urination

#### Best time for breeding of cattle and buffaloes:

- Animal body weight below 250 kgs – not suitable for breeding. Animal body weight above 250 kgs fit for breeding.
- If oestrus signs observed in morning-breed the animal at evening.
- If oestrus signs observed in evening- breed the animal at next day morning.

#### Knowing the reproductive status of dairy animals:

18 hours (an average of 12-30 hours) of oestrus signs—Normal Less than 12 hours / absence of oestrus signs-abnormal (anoestrus)

#### Management:

1. Unobserved oestrus might be because of administrative inadequacies and brief time of oestrus.
2. The dairy animals ought to be watched for warm signs no less than three times each day.
3. Wall outlines, breeding wheels, group screens and individual dairy animals records might be utilized for recognize the oestrus.
4. Teaser bulls (vasectomized or by applying cook's garment) are valuable in recognizing heat in substantial number of animals particularly bison cows.
5. Provision of satisfactory lighting to enhance oestrus identification.
6. Silent/frail/Suboestrus are most normal in wild ox cows and regular in baby blues period. In this cyclical changes in the genital organs happens yet the indications of warmth are not shown or not watched. This requires rectal examination by qualified veterinary specialist.
7. Extra feeding of a focus blend or grains like maize, Cholam, kambu. And so on., and in any event little measure of green grub alongside different roughages.
8. Mineral blend ought to be legitimately supplemented

9. After breeding the animals ought to be checked for pregnancy inside 45-60 days by qualified veterinary specialist.

10. Uterine pathology and hormonal boosts ought to be handled by qualified veterinary specialist

### V. Calf Management



#### *Calf management.*

#### **Care and management immediately after calving in Dairy Farming:**

- Cleaning the udder and hind quarters of cattle.
- Mucus removal from the face and nostrils of calf and induction of respiration. Allowing the calf to suck the colostrum.
- Naval cord ligation.
- Watching of cow for placenta expulsion.

#### **Essential requirements in a calf house in Dairy Farming:**

- Dry bedding.
- Well ventilated environment.
- A specific minimum cubic air capacity per calf.
- A draught free environment at calf level.

#### **Floor space requirement for calves in Dairy Farming:**

Age of calves (months)	Covered area ( m <sup>2</sup> )	Open area(m <sup>2</sup> )	No. of calves/pen
0-3	1.0	2	24 / pen
3-6	1.5	3	16/ pen
6-12	2.0	4	12/pen

#### **Feeding and watering space requirements for calves in Dairy Farming:**

Feedingspace(cm)	Watering space(cm)
50 / calf	50 / calf

**Feeding schedule for calves in Dairy Farming:**

Age of calf	Body weight (kg)	Quantity of milk(kg)	Concentrates	Green fodder
From birth to 4 <sup>th</sup> week	25	2.5		
			Smaller rate	Smaller rate
4 to 6 <sup>th</sup> week	30	3.0	50 to 100 grams	Smaller rate
6 to 8 <sup>th</sup> week	35	2.5	100 to 250grams	500 grams
8 to 10 <sup>th</sup> week	40	2.0	250 to 350 grams	750 grams
10 to 12 <sup>th</sup> week	45	1.5	350 to 500grams	1.0 kg
12 to 16 <sup>th</sup> week	50	—	500 to 750grams	1.5 kg
16 to 20 <sup>th</sup> week	55	—	750 to 1000 grams	2 kg
20 to 24 <sup>th</sup> week	60	—	1 to 1.25 kg	
6 to 9 <sup>th</sup> month	60	—	1 to 1.25 kg	2 kg
9 to 15 <sup>th</sup> month	70 to 100	—	1.25 to 1.5 kg	3 kg
15 to 20 <sup>th</sup> month	100 to 150	—	1.5 to 2.0 kg	5 to 8 kg
	150 to 200	—	2.00 to 2.25kg	
	200 to 300	—	2.25 to 2.50kg	8 to 15 kg
				15 to 20 kg
Above 20 months				20 to 25 kg

**Vaccination particulars for calfs in Dairy Farming:**

Age	Vaccination
8 weeks before weaning	Black quarter (1st vaccine)
2-4 months	FMD first vaccine
6-8 months	FMD booster vaccine
6 months	Anthrax Black quarter (2nd vaccine) Hemorrhagic septicemia vaccine
	Brucella vaccine
4-8 months	
Early once	FMD vaccine

## VI. Milking Practices in Dairy Farming

1. Training of milkers ought to be finished by a man from the draining machine organization. This individual has great information about science of draining, machine draining and additionally with the outline, capacity and upkeep of the draining gear. The prepare
2. The idea of machine draining ought to be presented gradually and by people who the cattle are utilized to and feel comfortable with under the supervision of a specialist.
3. ing ought to incorporate presentation methodology, draining schedule, handling of the machine, cleaning and support and in addition certain parts of the everyday administration of the machine.
4. Installation of the draining machine and some other alteration in the dairy farm ought to be made well ahead of time of the changing to machine draining.
5. It is most fitting to begin with calves since it is simpler to habituate yearlings than more seasoned cattle to machine draining.
6. Calm animals that are comfortable with hand draining ought to be chosen. The udders and nipples of the animals ought to be uniform as for compliance and size. Cattle in warm or undesirable animals or animals with past let-down-issues ought not be chosen.
7. Drain the old and chose animals as regular by hand however let the vacuum draw run amid draining. This will make the animals familiar with the commotion. Put the pump on before real draining, yet after the cattle have been tied up, generally the animals might be startled by the sudden commotion. Rehash the methodology (ordinarily 2 to 4 times) until the point when all cattle are familiar with the commotion

## VII. Government Schemes for Dairy Farming

As the large portion of the states in India and in addition Central government gives money related help to set up dairy farms in provincial regions, Find out with Respective state Government Dairy office or NABARD (National Bank for Agriculture and Rural Development) for Loan Facility.

## VIII. Conclusion

Dairy farming is a potential subsector for generation of income and employment. 75- 80 percent of farm families of small farmers, marginal farmers and landless labourers are employed in this sub sector. Dairying is an important sector that generates employment with lower investment. It is estimated that an investment of Rs 10 lakh in dairying generate 290 man years of employment where as same investment can generate only 120 man years employment in crop production. India is the largest live stock holding country in the world with regard to buffalo population. Murrah (distributed in Haryana, Punjab), surti, mehasena (distributed in gujarat ) desi buffalo breeds contribute for good yield of milk in india. Sahiwal and red sindhi desi or indigenous cow breeds contribute for good yield of milk in india. India is the largest buffalo milk producer in the world with milk produced 146.31 million tonnes of milk. Due to integrated co - operative system of milk collection, transportation, processing and distribution are the main causes for good yield of milk in india. Gujarat, Rajasthan, Punjab, Maharashtra, Uttarpradesh and Andhrapradesh are important regions in india to produce high yield of milk.

## References

1. Casey, J.W., Holden, N.M. Analysis of greenhouse gas emissions from the average Irish milk production system. *Agric. Syst.* 2005;86:97-114 (b).
2. Cederberg, C., Mattsson, B. Life cycle assessment of milk production—A comparison of conventional and organic farming. *J. Clean. Prod.* 2000;8:49-60.
3. Del Prado, A., Misselbrook, T., Chadwick, D., Hopkins, A., Dewhurst, R.J., Davison, P., Butler, A., Schröder, J., Scholefield, D. SIMS(DAIRY): A modelling framework to identify sustainable dairy farms in the UK. Framework description and test for organic systems and N fertiliser optimisation. *Sci. Total Environ.* 2011;409:3993-4009 ( ).
4. Flysjö, A., Cederberg, C., Henriksson, M., Ledgard, S. How does co-product handling affect the carbon footprint of milk? Case study of milk production in New Zealand and Sweden. *Int. J. Life Cycle Assess.* 2011;16:420-430.
5. Humphreys, J., O'Connell, K., Casey, I.A. Nitrogen flows and balances in four grassland-based systems of dairy production on a clay-loam soil in a moist temperate climate. *Grass Forage Sci.* 2008;63:467-480.