Bioved, **30**(1) : 103–105, 2019 http://biovedjournal.org/

Impact of managemental practices on the performance of cattle farming at organized dairy farm

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Received November 4, 2018 and Accepted January 13, 2019

ABSTRACT : Cow rearing is a most popular enterprise for milk production. Cows are steady and major sources of milk. The experiment was conducted at government cattle farms in Arajiline Block of Varanasi District. The different data were collected related to certain factors, viz., type and status of the herd size, general management practices like breeding, feeding, housing and health care etc. may affect the production of cow. Study had concluded that provide proper housing management practices for increasing the production of cow and milk and provide superior germ plasm and adopt new technology of breeding for improving the cow production.

Key Words : Cattle, management practices, dairy farm, breeding, nutrition, disease control measures.

Cow has been domesticated to improve the socio-economic condition of mankind, under the below poverty line and having good status of living of life. Most of these species thrive well under a breed of agro-climatic condition with a certain minimum management and nutritional requirements are met with. They are efficient producer of milk and drafting with ploughing as compared to other livestock species. Foreign and cross-bred of cow are used to commercial production of milk and milk product. Cow alone account for about 58 per cent of the total livestock population. The national economy is closely related with agriculture and livestock. It is therefore, an idea of great importance that the cows are maintained in good health and provide proper management, housing and hygiene. The productive potential of cows stock are controlled by three principle factors, (i) genetic makeup, (ii) Nutritional and (iii) environmental including the climatic condition. In addition to the health status of animals, is profound importance. The stocks when in good health are able to make best use of the genetic potential and their nutrition. In Current years, there has been pronounced trend toward adopting intensive method of raring livestock. The universally are feeding, breeding, weeding and heeding. Both the male and female selected for breeding should have be superior genetic merit. They should be known potentialities and possess desirable qualities. Weeding and culling aims at cutting the uneconomic animal through castration so that they are prevented from reproducing and do not unbeneficiary strain the resources of the owner. Each animal should be fed on a balanced ration calculated on body requirement for maintenance and production. Both over-feeding and under-feeding at the time of calf stage are uneconomic, the former being wasteful and the latter deficient apart from providing more costly in long run. Good animal management and general supervision including housing, care and maintenance of proper hygiene condition in day today. The basic requirements for the welfare of cow are provision of adequate accessible fresh water and nutritionally adequate food as required. Provision of adequate ventilation and suitable environmental temperature, freedom of movement and availability to stretch the body and protection from injuries and disease in case of open paddock.

Materials and Methods

The Arajiline block which has one government cattle farm namely; (i) Sahanshahpur, has been selected for the purpose of this study. This block is situated 30 km away from Varanasi district in hilly area. Government cattle farm Sahanshahpur Arajiline Varanasi maintained proper records and collection of data is based on these records only. The Department Office collected farm records to different manage mental practices. Total milk production/day 180 L./day, total milking cow 44, total dry cow 24, total heifer 66, total calf 28, total cultivated land 60.00 ha, Feeding pattern Twice daily, Service system natural, milking method full hand method. The record made available for information and the analysis of work are as follows: Herd Size, Housing Management, Breeding Management, Feeding Management, Production of Cow, Health and Hygiene. These data were put under processing and analyzed. The results are presented scientifically in the form of different tables, graphs, appendices, etc.

Green and Dry Fodder (According to season):-

Replication	Season	Green Fodder		Dry Fodder	
		Leguminous	Non-leguminous	Leguminous	Non-leguminous
1.	Kharif	Lucerne, Moth	Maize, chari	Lucerne hay	Paddy Straw
2.	Ravi	Berseem, Jai	Sorghum	Jai hay	Wheat Straw, Wheat, Bhoosa
3.	Zayad	Cowpea Guar	Napier, para gross	Arharbhoose	Oat Hay

Results and Discussion

The information collected and interpretation obtained have been discussed under the following sub heads:

(i) System of Housing: Basically in plain, three system of housing is used, Tail to tail, in tail to tail system of housing one ideal cattle space requirement 1.2m and for standing floor 1.5m and for manger 1.4m, in neer part of manger height 60cm and outer part of manger height 55cm, it is a ideal manger for cattle. In head to head system of housing, one manger is common for both side cattle stanchion and in one row system. But Singh (1982) compared the growth response under shed, loose house and alternating between shed and open in buffalo heifer calves. He observed that the relative growth rate as well as daily weight gain were higher in the loose house during winter and summer.

(ii) Method of breeding: Generally, the natural breeding methods or pattern used on dairy Farm, because the Natural method is cheap and best for breeding purpose. The age of first service in indigenous dairy cattle like- Gangatiri, Gangatiri is a dual purpose breed in 24 to 36 months ready for first service and at the first service age, body weight of heifer or cattle 230 kg. Ali *et al.* (2015) had found that cows with poor condition were highly likely to be non pregnant by day 300 after calving compared with those with relatively good condition.

(iii) Feeding of cattle: Cattle feeding depend on the herd size of farm and milk production of cattle. According to body weight of lactating cow on 100 kg body weight given 6 kg of green fodder and 4-6 kg provided wheat straw for one lactating cow per day, concentrate given on the basis of milk production 3 liter on 1 kg concentrate. Patel and Tripathi (1995) collected records of 436 and 278 Surti buffaloes maintained at two different places. The results suggested that age at 1st calving might be reduced mostly through better feeding and managemental practices.

(iv) Water Requirement: Clean and fresh water without and contamination given for lactating cow 32.5 litre drinking and 100 litre of water for all purpose. Krishna *et al.* (1975) reported that total water input per unit of dry matter consumed, increase significantly during summer than winter. Fahimuddin (1975) also found a significant ($P<0.05$) increase in water intake of buffaloes under high environmental temperature.

(v) Health and hygiene: There are various bacterial, viral and parasitic diseases found at the Government Cattle Farms:

Bacterial diseases

Black Quarter: It is a highly contagious disease usually occurs after the onset of rains and causing considerable loss in flocks. The disease is caused by an organism known as *Clostridium chauvaet.*

Enterotexaemia: It is very deadly disease and causes heavy losses in cattle. It is caused by a bacteria and is highly infective.

Johness Disease: It is also known as paratuberculosis. This seems to have been introduced to India through imported sheep from the west and now prevail in may of the organized farm in the country and rural area. The sheep are susceptible to this condition. It is caused by *Mycobacterium paratuberculosis*.

Viral Diseases

Cow pox: is highly contagious disease occurring in the farm.

Rinderpest: It is a highly contagious disease casing heavy mortality. It is caused by filterable virus, which affects sheep and goat as well.

Foot and mouth disease (FMD): This is highly contiguous disease causing severe loss of condition in the stock through usually not fatal.

Parasitic Disease

Tape worm: It is an internal parasitic tape worm which has a round head followed by a chain of float oblong or square section. The head is fixed to the well of the intestine and the long float in the intestinal fluids.

Flukes or Trematode worm: These are characterized by a life cycle different from other stomach worm. These worms cause very serious diseases in sheep. One of them is liver rot or liver fluke caused by a worm caused by a filterable virus causing heavy losses.

Control Measures

The diseases are controlled by medicine and vaccination programmes. The vaccination programme should be done before start of rainy season and repeated annually. Farmers are responsible for the health of their livestock. Sometimes, the government has to step in and help prevent or combat a disease. Ensure adequate hygiene at their place of business and be alert to symptoms of disease. Sethi *et al.* (1994) conducted a study to compare the effect of heat stress under four shelter management on buffaloes during summer season , viz. covered shed with sides closed (T1), shed and given 2 showers at 11.00 brand 15.00 hr (T2), tied under tree shade from 8.00 a.m. to 5.00 p.m. (T3) and exposed to direct sun rays and given two showers (T4). Pulse rate, respiration rate and rectal temperature (2.6°C) was observed in T4 followed by T2. Animals under T2 and T3 were more comfortable but T3 exhibited least adverse changes in physiological parameters.

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