1) REVIEW OF LITERATURE:-

Dairy is one of the important economic activity of the region under study. Therefore, some experts in different disciplines have already selected the theme dairy as their research topic for M.Phil as well as Ph.D. degrees.

S. B. Sarang (1982) has studied dairy farming in Kolhapur district for his Ph.D. degree. He studied spatial distributional patterns, temporal growth, economics and working of milk producers in the study region. Gholap T.N. (1987) has also studied distribution of livestock and fodder supply in Maharashtra for his Ph.D. degree. Khatakale A.B. (1995) has studied dairy farming in Solapur district for his M.Phil degree. He studied pertaining to spatio temporal analysis of milch animals and assesses the fodder and feed resources and their requirements. Devikar A.A. has studied geographical study of dairy enterprise of Baramati tahsil for his Ph.D degree.


Glimmer D.A. (1970) studied the spatial distribution of livestock in the Republic of Ireland. He studied the vital importance of livestock in the rural economy and observed regional variations in the concentration of livestock. He employed Weavers modified techniques for studying animal association regions in Ireland and accordingly delineated the livestock regions. Randhwa M.S. (1962) made a detailed study of Indian agriculture and animal husbandry. He observed that dairy was supplementary occupation in the agricultural farming system in India. He studied the regional variation in milk productivity of cow and buffaloes. Gore K. (1969) studied Indian Agriculture which was mixed in nature and closely associated with livestock. He found that cows were the initial source for milk production, but he observed that there was pronounced regional variations in the pattern of dairy farming. Mishra (1979) studied the development of cattle and dairy. Ghosh (1974) analysed the requirements of feed and fodder to the existing number of
cattles in the country. He also calculated the availability of feed and fodder in the country. Khan (1979) made an another attempt to supply the dairy development and its contribution to rural prosperity. He has discussed the Operation Flood Scheme-I in detail.

Vishwanathan (1979) studied the role of co–operatives in dairy development in India. He found that per capita availability of milk was less than 110 grams per head per day. Gopalkrishnan C.A. and Lal G.M. (1986) made an attempt to study livestock and poultry enterprises in relation to rural development. Ramanujan (1992) highlighted the role of dairy farming in rural development, especially dealing with the co–operative dairy in Maharashtra. Chattopadhyay (1993) considered dairy as the second labour source in India. He studied the distribution of milk and the nature of co–operative dairying.

Ahire (1979) has studied the distributional pattern of milk was affected by large size families rather than the small size families in villages around Mahatma Phule Krishi Vidhyapeeth, Rahuri.

Sinha (1991) studied the socio–economic aspects of dairy activity. He observed that majority of the members of dairy co–operative (60%) belonged to medium size families followed by small and large families.

Lohokare (1973) in his work on the pattern of cattle raising and dairy farming in the area of Nagpur Milk Scheme, studied different characteristics of dairy operators.
Jamadar (1973) studied the impact of different factors on milk production in the area of Government Milk Scheme, Chiplun. He also studied the important characteristics of dairy operators related to the dairy activity.

Mane (1977) studied the characteristic of dairy operators. His main aim was to find impact of literacy on dairy development of Kolhapur district. He observed that the percentage of operators completing higher education among the milk producer is very low as compared to those completing primary and secondary education. He also found that 9.7 percent milk producers have better management. They used to keep good milker cows and buffaloes, use the veterinary facilities and kept the records of different operators.

Saprey (1960) studied different aspects of dairy industry in Poona city. Rao (1985) studied the profitability of dairy activity in different categories of farm size. He compared the income derived from dairy activity and income derived from other agricultural operations.

Godbole (1966) in his study of milk supply in Maharashtra, pointed out that it was possible to increase supply of milk by encouraging milk production in rural areas and marketing it in the cities.


This paper presents the impact of microcredit on return from dairy in Mewat. A sample of 60 members from 30 Self Help Groups and
30 non-members from three blocks of Mewat was drawn for the present study. In order to isolate the impact of credit assistance for dairy, ordinary least squares technique was employed. The average buffalo milk production per household per day and productivity were found to be higher in case of member households than non-member households. The annual gross return from dairy was higher in member households in comparison to non-member households. The coefficient of credit dummy turned out to be positive and highly significant implying positive impact of microcredit on return from dairy.


In order to monitor the changes in heat dissipation through sweating and panting, oxygen consumption, heat production, heat storage, physiological responses (RR, RT and ST) and antioxidant enzymes status, five heifers of Murrah buffaloes were selected from herd and maintained under normal feeding and management followed at the farm. The animals were exposed to four exposure temperatures viz. 32, 35, 40°C with a constant relative humidity of 50% and sham control at 8.00am in a climatic chamber for three hours continuously. The pre exposure heat loss through skin ranged from 5433.49 ± 371.18 to 5749.63 ± 327.53 KJ/ hr. The heat loss through skin increased with the increase in climatic temperature (40°C). The maximum heat loss (8584.11 ± 262.48 KJ/ hr) was observed at III exposure conditions. The mean values of pre exposure pulmonary heat loss ranged from 528.26 ± 35.56 to 542.79 ± 14.6KJ/ hr. The percent increase in pulmonary heat loss over pre exposure values were greater at all the exposures compared to heat loss through sweating. The pre exposure oxygen consumption of heifers ranged from 1.38 ± 0.02 to 1.59 ± 0.01 lit/ min. The pre exposure
values of oxygen consumption increased after three hours of exposure at all the exposure conditions. The levels of antioxidant enzymes (superoxide dismutase and catalase) showed a linear increasing trend with the increase in the temperature from 32 to 40°C in the climatic chamber. The sweating, panting, oxygen consumption, physiological responses and antioxidant enzymes levels increased significantly (P<0.01) during different exposures, intervals of exposures and their interactions. All the parameters also showed a significant (P<0.01) positive relationship with the temperature humidity index. The results of the study indicated that the heat stress had an adverse impact on physiological status of buffalo heifers. Therefore, buffalo heifers require a protection from heat stress at higher temperature (40°C) exposure for maintaining body temperature.


The study was conducted in four villages of district Karnal namely Budhakheda, Kulwehri, Subhri and Ranwar, selected purposively. From each selected village, 30 respondents having at least one crossbred cow and one buffalo were selected randomly to constitute a total of 120 respondents for the study. Data were collected with the help of a pretested structured interview schedule. Data were then tabulated and put to suitable statistical tests and conclusions were drawn. About 70 percent of respondents having small sized milch herd always vaccinated their animals against Haemorrhagic Septicaemia (HS) whereas 75 percent always vaccinated against Foot and Mouth Disease (FMD). 73.91 percent of respondents having medium sized milch herd always vaccinated their animals against HS, 89.13 percent always vaccinated against FMD. 72.22 percent out of the respondents having large sized milch herd always vaccinated their animals against HS, 61.11
percent always vaccinated against FMD. Study of the problem of repeat breeding revealed that 6.16 percent of the crossbred cows belonging to respondents having small sized milch herd were repeat breeders and 1.93 percent of the buffaloes were repeat breeders. Out of the crossbred cows and buffaloes belonging to respondents having medium sized milch herd, 7.52 percent and 4.93 percent were repeat breeders, respectively. Whereas, 13.80 percent of the crossbred cows and 10.31 percent buffaloes belonging to respondents having large sized milch herd were repeat breeders. Average age at puberty was higher in small crossbred herd size and the average peak yield increased with increase in crossbred herd size. Average age at puberty, average age at first calving, average service period decreased and the average peak yield increased with increase in buffaloes herd size.

Raka Saxena, Smita Sirohi and Massoumeh N. Zadeh

This paper examines the effect of recent economic recession on dairy sector. The changes in dairy production, consumption, trade and prices of milk, feed and value added dairy products have been examined for world as a whole and in the Indian context during 2000-06 (normal situation) and after 2006 (under economic crisis). The Indian dairy sector has witnessed some disquiet trends in terms of slow down in export performance, but, the price trends have not shown volatility similar to the international markets as the sector largely caters to the domestic market where demand is also positively influenced by factors other than income growth. In case of total demand for value added
industrial dairy products, that have greater relationship with prevalent economic conditions, the effect of economic turndown is discernible in terms of declining import demand. The decline in exports, possible fall in domestic consumption of processed dairy products and declining trend in production of important dairy products may have adversely affected the economic performance of organized dairy processing sector in the country. In nutshell, under the existing dairy production system, as the synergy between international price trends and domestic production is somewhat weak, the susceptibility of dairy sector to current economic crisis has not been profound. However, the darker side of this implies that gains to the Indian dairy sector, especially the dairy farmers would be marginal once the world economy follows the recovery path.