

## STATISTICS TEACHING WITH AN EXAMPLE BIZHAN SHABANKHANI (BIostatISTICS), M.A.QAJAR KOOHESTANI (HEALTH)

### ***Introduction:***

When man started to have co existence with farm animals, the long term and permanent contact with such animals caused the transmission of infections with animal origin. At present more than 150 diseases common between man and animals threatening the health of farm animals. Noteworthy are the diseases such as brucellosis, plague, tuberculosis, anthrax, mad cow disease etc which are extremely life threatening and highly epidemic. (1,3,6,5,4) Due to increase of the world population and increasing need to the farm animals products led to establishment of large dairy farms with high number of animals. Expansion of dairy industry without improving hygienic conditions is followed by spread of disease particularly parasitic diseases. Considering the health of dairy products consumers and the society and also their diseases are transmissible to man particularly mycotic and parasitic diseases, and also geoclimatic conditions of north of Iran specially Mazandaran province which has a suitable situation for spread and reproduction of the diseases common between man and animals. There is a need to have a study on this particular issue hence, a research was designed and performed in all of the dairy farm establishments in Mazandaran province of Iran, in order to determine the hygienic conditions of such farms. Because it is believed that the expenses which are done on the prevention of such diseases are much less than the expenses for treatment. The main of this study is to determine hygienic indexes for animal husbandries. It is hoped that submission of the obtained data to the organizations such as, of ministries of agriculture (the department of veterinary) health and medical education (health deputy), power and environment organization help to permanent development and health of the society.

### ***Materials and methods:***

The main aim of this study was to determine the hygienic condition of Sari township dairy farms. This was a cross sectional study. The data were collected by surveying all of the animal husbandries present in Sari township by referring and having direct observation of the husbandry and measuring the quantitative variables such as: the distance of farms to the residential areas, number of the cattle's in each animal house, the space of the farms, and qualitative variables such as: standard method of removing wastes, for supply for the cattle, cleaning of the area etc. Considering lack of acceptable hypothesis and variables of used statistical research methodology, the variables were calculated on a basis of rate percentage. The dairy farms were divided into two groups of hill site and low land on the basis of geographic and climatic conditions in statistical analysis there was a comparison between these two groups and shown in percentage. Also the other variables such as: the distance between the dairy farm to the residential areas and transportation network, using of milking machine, drinking water supply, hygienic elimination of effluent and removing of waste were criteria for studying and compared statistically. In this study from the total 85 active dairy farms in Sari township 84 of were under observation one dairy farm excluded from the study due to partial obeying of hygienic disciplines and being large by keeping 9864 cattle's and covering more than 20 hectare land, and probable presence of wrong estimation for the comparison.

### ***Results:***

The number of active animal husbandries in Sari Township is 85 of which 84 were under observation. 67(79.8%) and 17 (20.2%) of them are located at hill site and low land areas respectively. The cattle's are living in open space, 54(64.3%) and 30 (35.7%) the units are located in the territory of pestilential areas and away from residential territory respectively.

The average distance of dairy farms to residential area is about 828.8 meters (maximum 3 kilometers and minimum 20 meters) the average number of the cattle in the farm is 32. In a statistical comparison between the number of farm cattle in hill site and low land areas the average was found to be 24 and 42 respectively. (Minimum and maximum number for hill site and low land have been 6 and 65, low and 220 respectively). Mean square area of dairy farm is 569-26. In 65% of the farms the space occupied by each cattle is not suitable (for each big cattle 5-6 square meters) respectively. In 71.6% of hill site and 41% of low land dairy farms the cattle's are living in unsuitable space which shows significant difference in 6% of the (dairy farms the roof was covered with metal sheet and in 94 with non metallic sheet. all the units have iron beam. and 84% did not have special store for disinfectants and pesticides. only in 7.1 of the units with facilities of storing pesticides observe health protective measures and 7.1% of the units are equipped with fire protection devices 69% of the units have roof

hay stock (hay and concentrated ).percentage of dairy farms with hay stock and concentrated are separate .

From the rest 31%, 37.9% are in hill site and 5.9% in low vund areas. With the significant difference ( $p < 0.01$ ). In 53.6% of the dairy farms the hay concentrated stocks are made of brick and cement. 57% of the units do not spread the units do not spread the bed with hay in order to keep warm the place in cold seasons this ratio 52% for hill site and 67% for low cunt dairy farms the difference is significant ( $p < 0.0001$ ) the washed off wastes of the bed in 38.1% antlered in absorbent well, in 10.7% in pool, in 95% in river and in 26.2% in the nearby land. Only in 52.4% of animal husbandries the place is washed and disinfected. Removing of wastes in 40.5% are added to the nearby land and in 59.5% are stored the ratio for the hill site is 46.3% and in low land is 17.6% with significant difference all of the animal husbandries are provided with a place or utensil for feeding of the animals in 95.9% they are deeded in hay rack constructed with brick and cement, and in 4.8 in wooden container. In 64.3% of the units the hay racks are washed is and only in 23.8% units the hay racks are disinfected after washing with water, the ratio in hill site is 13.4% and in fowl and areas is 67.7% whit significant difference.

Drinking water supply for the cattle and the stockbreeders is as follow:

60.7% from well. 15.5% from rural water supply, 20.2% from spring and 3.6% from river from milking of view in 24.8% of the units used milking machine and 70.2% by hand.

#### **Conclusion:**

This research indicated that, being low roof, using of metal shoot for covering roof, lack of ventilation system and wall of the keeping space together cause unsuitable condition for dairy cattle. It is observed that 79.8% and 20.2% of the animal husbandries are located in hill site and cow land anise respectively.

Hence it is concluded that, if the re cite cases of license issuing for the establishment of new animal husbandry the priority should be given to the hill site areas with suitable distance from sari township. There should be at least distance of 1000 meter away from residential areas, roods and industrial establishments. But is observed that 154 (64.3%) units do not notice this standard distance. In other words thy are located at the distances of 20 to 700 metros, which is important in view point of transmission of different diseases. 65% of the animal husbandries the cattle did not have suitable living spare (5-6square meters for big and 2-3 square meters for small) considering waste removing and storing of waste particularly in summer season which has a very suitable whether for the different insects and mice is indicator unhygienic condition of the place and the transmission of different parasitical infection specially diarrhea and also small of the spreading in the beautiful green areas of mazandaran province which has negative attraction for tourism industry. Negligence of the organizations such as environment existence, labor society, veterinary, health and treatment to his issue and not redering such animal husbandries to observe health and hygiene conditions would lead to a chain of spreading infectious diseases, which itself can cause jab leave of affected repole and intact is threatening the well being of the gaiety.

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