Limb health in rural conditions

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Lameness is one of the most important factors in cow health. Milk loss, fertility reduction and early culling are the most important outcomes of lameness. In rural area with improving breeding techniques and affinity of the owners to high producing cows, the importance of lameness was increased and needs more scientific works.

In current field study 2200 cows aged between 6 month to 13 years old were included. Data of age, breed, pregnancy, ratio, volume of concentrate, hoof trimmings were recorded in each cow. The above mentioned cows were kept in 400 rural farms in Lorestan province. Locomotion status of the cows (Back posture and leg scoring were evaluated.

Sixty percent of the cows over 5 parity had leg score 2 (deviation between 17-24) and were classified as moderately lame cows. Forty percent of the cows with parities between 2-5 were not normal and in the last group (cows between 6 month to two years) hoof deformities specially in the age less than 12 month were recorded.

Breeding techniques and changes of owners idea were affected on lameness status and may provide high financial loss. Lack of knowledge, lack of education and belief in this part can be corrected by intensive programs.

Study on annual and seasonal lameness prevalence in dairy cattle herds of kermanshah province: the first comprehensive study

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Lameness is one of the most important causes of economic loses in dairy cattle industry around the world. Therefor having information about the incidence, prevalence and causes of lameness in each area is necessary to design therapeutic, controlling and preventive measures. Kermanshah province; in west of Iran, has a considerable numbers of industrial dairy farms with about 10000 Holstein cow population. There was no any comprehensive study which had been done on lameness prevalence in Kermanshah dairies; though, this study was planned to evaluate lameness prevalence in industrial diary cattle herds in this province. This survey was performed in one-year duration (4 seasons) during years 2014 -2015 in 12 herds with various population. Regarding the herds sizes they were divided into 4 groups (small herds, n:5, medium herds, n:3, relatively large herds, n:2 and large herds n:2). Locomotion scoring (LS) was done based on 5 point Sprecher method in each 4 separate seasons. Cows with LS 3-5 were considered having lameness. Total of the 12605 cows have been scored in all seasons and the average annual lameness prevalence was calculated as 37.4%. The total number

of cows that have been scored and seasonal lameness prevalence in spring, summer, autumn and winter, were 3170 cows (35.3% lame), 3179 cows (36% lame), 3051 cows (37.7% lame) and 3105 cows (40.6% lame) respectively. Average annual lameness prevalence in 4 groups of herds was 35.6% in small herds, 40.6% in medium herds, 43.4% in relatively large herds and 32.5% in large herds. There are large variations in present reports about the rate of lameness prevalence in different countries and herds around the world; so It has been reported from 5% to more than 50%. These variations may be due to several factors such as; housing system, herd management system, herd size, climate, season, breed, nutrition, amount of milk production, quantity and quality of hoof care programs, and etc. With regard to direct and indirect large economic loses due to lameness in dairy cattle herds, it is necessary that farmers, Managers, veterinarians and other related persons to take more attention to this problem.

Key Words: Kermanshah province, dairy cow, Lameness prevalence

Solar horn hardness in different digital zones of the cows

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Lameness is a crucial welfare issue in modern dairy husbandry that could result in serious economic losses to dairy producers because of decreased milk yield, reduced fertility, and increased treatment costs and culling rates. Quality of the cow's claws, especially their hardness, may influence the likelihood that the cow will suffer from claw lesions. Although various factors (i.e., nutrition, genetics, etc.) affect claw quality, the environment in which the cow is housed is very important. Resistance of claw horn to environmental effects likely depends on its hardness because hardness influences rate of horn wear and erosion. Some researchers claim that this relationship puts cows with wet claws at a higher risk of developing claw problems because the horn resistance is diminished.

This current study was done in a dairy herd with total of 5800 dairy cows and 2780 milking cows. The average annual daily milk production of the farm recorded as 36 lit/day, cows milked three times a day and housed in free stall barns. Hoof care program were done on the following basis: monthly locomotion scoring, hoof bathing (3-4 days a week), regular hoof trimming at least two times a year by a professional veterinarian hoof trimmer, data recording and analysis.

Two groups of cows were selected. Group one on days in milk 120 and group two before drying were referred to trimming chute. Hardness recorded by shore D durometer. Data analyzed in each group and between the groups using two way ANOVA and p values under 0.05 consider significant. Hardness of the solar area in zones one and five (area of toe ulcers and necrosis), four (area of sole ulcer) and three (area of white line disease) were measured. The hardest area (mean $\pm$ SD) of the hoof in group one was located in zone 5 (37.11 $\pm$ 6.18) that