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Increasing Milk Production Using Dormant Alfalfa (*Medicago Sativa* L.) in the Peruvian High Plain (Puno)

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Abstract

Cattle production in Puno is the main economic activity in the region. Puno is the fifth milk producer in Peru and dairy has been developing at a fast rate during the last decade. An interesting alternative implemented within the last years by regional and NGO's initiatives includes the introduction of dormant alfalfa, a cultivar adapted to high altitude (4000 m.a.s.l.) and extreme cold weather conditions. Particularly alfalfa W350 with a dormancy type of 3.8 is able to survive under harsh climate conditions remaining dormant (May - October) to then start growing again during the rainy season from November to April. This study was conducted with a semi-structured survey for 24 dairy producers from 7 districts in the provinces of Puno, Huancane, Lampa and Melgar. The aim of the study was to identify the milk cost of production and the main components of dairy farms in a system using alfalfa as the main forage. SPSS software was used and generated three groups by size and milk cost of production € 0.27, 0.24 and 0.23/l of milk for the small, medium and large producer respectively. The average milk production per cow was 8.0, 9.9 and 10.2 for the small, medium and large scale farm. There is a difference between the proportion of lactating cows within the size of the farm with 39, 33 and 47% for small, medium and large dairy producers. The main cost components in milk production are labour and feeding with 44 and 39% respectively. The cost of milk production in Puno where dormant alfalfa is used as pasture forage was less in comparison with the intensive system developed in the Peruvian coast like Lima or Arequipa. Results show that the use of dormant alfalfa can help dairy producer in the High Plain as an alternative to provide food security and increase families' income.

Keywords: Dairy farmers, dormant alfalfa, milk cost production