



Silage making: Method of fodder conservation and entrepreneurship development: A success story

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Green forages are popularly known as the backbone of dairy sector as they play a crucial role in changing dairy farming into a profitable venture. Low productivity of the animals is mainly due to inadequate supply of nutrients. So, there is a prompt need for preservation of valuable nutrients from green forages including fodder tree leaves ensuring the sustainable availability of nutritious material for high yielding animals round the year. Silage is as nutritious as green fodders, as it conserves the nutrients in their original form and hence, it is as good for animal feeding as green fodder itself. Silage consists of chopping of green forage and storing them in a specially constructed underground or above ground structure, ensuring that no air or moisture enters into it. Current article describes the success story of Sh. Amarjit Singh a beneficiary farmer under Farmer FIRST Project who adopted silage making as an entrepreneurial venture and is earning the profit from this lucrative venture.

Keywords: Conservation, Entrepreneurship, Farmer, Fodder, Silage

GREEN forages are considered as one of the crucial factor of dairy farming as they play a vital role in transforming dairy farming into a profitable business. India is basically an agrarian country with huge livestock population making dairy and livestock industry an important subsidiary occupation for farmers. India has recently emerged as largest producer of milk (209.96 MT, 2020–21) in the world, but its livestock productivity is very low as compared to the other countries. Low productivity of the animals is ascribed mainly due to inadequate supply of good quality green fodder to dairy animals round the year. Poor supply of nutrients to livestock during scarcity period is a serious concern nowadays.

At present in Punjab, there is 26.70% deficiency of green fodder whereas dry fodder in the form of wheat straw and rice straw is available in sufficient quantity. During the lean period (May–June and November–December) the farmers have to feed straws and stover's along with the costly concentrates to fulfil the daily dietary requirement of milking animals. The straw and stovers are not nutritious feed and are often deficient in some vital nutrients and hence may produce nutritional deficiency diseases in farm animals, whereas concentrates are not economically viable. So, there is an urgent need for preservation of nutrients in the form of green fodder.

Silage, also called ensilage, are forage plants such as corn (maize), legumes, and grasses that have been chopped and stored in tower silos, pits, or trenches for use as animal feed. It is a fermented feed resulting from the storage of high moisture crops under anaerobic conditions in a structure called as silo that farmers use to feed their domestic animals, especially during the dry season. Silage is considered the better way to conserve forage crops. The main goal of silage making is to preserve as much of the nutritional value of the original crop as possible. It enables more economic use of plants with high yield of green mass and moreover it can be produced in off seasons also and can be used during the lean in place of green fodder as a source of good quality feed.

Success story of Amarjit Singh: Beneficiary farmer under Farmer FIRST Project

Amarjit Singh s/o Saudagar Singh is resident of adopted village Channanwal of district Barnala. Amarjit Singh is 48 years old and he has studied up to higher secondary. He is basically a dairy farmer having dairy animals and is also indulged in agriculture owning acres of land. He was facing problem of non-availability of quality green fodder during lean period and he was unable to feed his animals on high priced concentrate feed, which forced him to keep his animals on either



Silage bags for selling



Beneficiary farmer with Silage packing machine



Silo-pit

Glimpses of silage making intervention by Amarjit Singh (FFP beneficiary farmer)

wheat straw alone or with little bits of cakes. This made the animals deficient in various nutrients, which resulted in poor health, productivity and reproductive traits of his animals. He was very concerned about this problem as he was losing the daily milk production and was at the verge of selling his animals due to the lack of green fodder for the animals. He adopted this technology of silage making and showed keen interest for making silage as an entrepreneurial venture.

In 2016, he had came across the Farmer FIRST Project implemented by Guru Angad Dev Veterinary & Animal Sciences University (GADVASU). This project adopted five villages (Moom, Channanwal, Dhaner, Kalala and Mehal Kalan) of block Mehal Kalan of Barnala district and Amarjit's village was one of them. Silage making trainings proved a boon for Amarjit Singh as he got permanent solution for his problem of scarcity of green fodder during the dry and lean period. Experts of project gave the regular demonstration-cum-trainings on methods and procedures to make good quality of silage. Silage bags were also provided to the selected beneficiaries under the project just to motivate and popularize the making of silage among beneficiary farmers in operational area and to adopt it as entrepreneurial venture. Amarjit Singh took proper training and started making silage.

Initially he started is making silage in silage bags and since last four years, he has started using silo pits at large scale for making silage. He is very satisfied with this intervention and dictates its several advantages. Silage making has enhanced the fodder availability throughout the year to the animals which has helped in sustaining the quality of milk production, leading to minimum loss of nutrients, providing very laxative and palatable feed, reduced the extra burden of bringing daily green fodder from farm and chopping it. Moreover, animals have become much healthier with the feeding of silage and face very less health issues. The cost of silage bag is calculated around ₹2/kg of silage compared to cost of commercial available balage (bale

silage) which is ₹5/kg of silage. Feeding of homemade silage @25 kg/adult animal saves ₹75/day compared to feeding of silage purchased from market at above said rate. After experiencing these advantages, he has purchased silage packaging machines to make silage at larger scale and sells it in the market, so taking this intervention to commercial level and indulging himself into entrepreneurship of silage making.

Nowadays, Amarjit Singh has started selling the silage bags @ ₹625/q in their as well as in nearby villages and is making good profit from this silage making venture. In coming days, he is planning to expand his business along with other fellow farmers and marketing linkages in nearby cities.

SUMMARY

Amarjit Singh has become a prominent example in the operational area who has adopted this silage making intervention to such a greater extent in the operational area. Many farmers from same as well as from nearby villages got motivated after seeing his results on advantages of silage and started making silage as a routine feeding purpose for their animals. Today, about 60–70% of the farmers in the operational area of the project are making silage at their homes by taking trainings and expert advice from FFP Project team members regarding making good quality of silage and also guidance provided by Amarjit Singh, who keeps on pushing farmers to adopt this intervention as lucrative entrepreneurial venture. He also solves queries of other farmers regarding this technology through the use of social media like WhatsApp, Facebook, phone calls etc. He also motivates unemployed youth, small, marginal and landless farmers to prepare silage as an enterprise in their area for their livelihood concerns.

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