

Fodder conservation

for round the year availability through bag silage

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Location and selection of area

The project is operational in Barnala district of Punjab and was initially started with the adoption of 917 livestock families which were purposively selected from a cluster of five villages namely Mehal kalan (209 families), Dhaner (106 families), Moom (324 families), Kalala (100 families) and Channawal (178 families) of Mehalkalan block, district Barnala for this study. The operational area was around 60 km from the FFP centre i.e. GADVASU, Ludhiana.

A survey was conducted using Participatory Rural Approach (PRA) to evaluate the prevailing situations in the operational area. Only a very few families in the operational area were making silage that too occasionally. Lack of quality fodder during lean period and farmers inability to feed the animals on high priced concentrate feed, forced them to keep their animals on either wheat straw alone or with little bits of cakes. This made the animals deficient in various nutrients, which resulted in poor health and immunity, decreased production, poor infertility, etc. Round the year, there are two seasons when there is glut of fodder and lean period reported twice, in May-June and November-December, when there is acute shortage of green fodder. It is therefore necessary to conserve the

surplus fodder during the glut season.

OBJECTIVE

One of the prime objective was to bring awareness among the farmers to overcome the nutritional problems through fodder availability for the livestock throughout the year as an integrated approach in the livestock development and to enhance interest in the livestock farming.

INTERVENTIONS

Livestock based intervention

Green fodder conservation through silage making

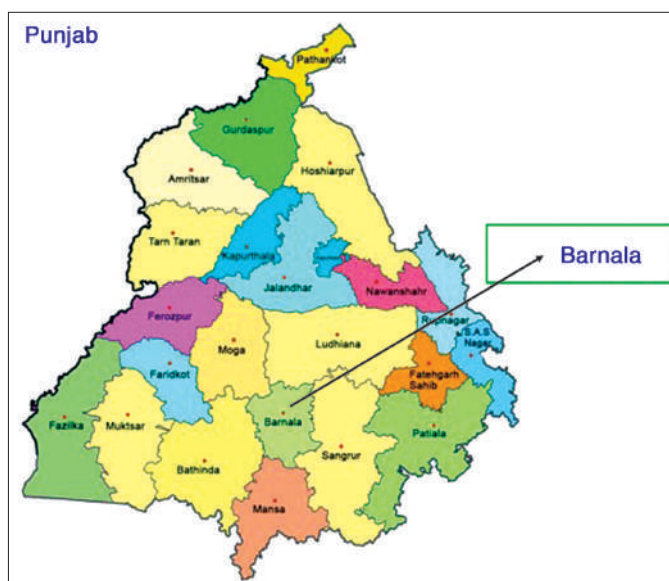
Silage is the any forage, crop residues or agricultural or industrial by-products preserved by acids, either artificially added or produced by natural preservation in the absence of air (Oxygen). The main goal of silage

making is to preserve as much of the nutritional value of the original crop as possible.

Bag silage: A double layered, seamless and 5 quintal capacity bags were procured and distributed to beneficiaries (388) in the operational area. Farmers were made aware about advantage of silage making in general as well as in bag and procedure of its manufacturing. Bag was filled with chopped green fodder and pressed manually. After filling, bag was tightly tied and left for 45 days. All the step and characteristics of silage remain same here except that in place of pit, bag is used.

Advantage of silage making

- It can be used during scarcity of green fodder or in lean period.
- Minimum loss of nutrients compared to other method of preservation.
- Succulent feed is made available round the year.
- It requires less area for storage as compared to hay.
- Helps in control of weeds as the fodder is harvested from field at bloom stage.
- No danger of fire to silage.
- It is palatable and laxative feed.
- The inclusion of unconventional feed stuff is possible through silage.
- Decrease the anti-nutritional factors



Map of location

(ANF) present in various fodder crops

Inputs

Initially farmers were cultivating low yield local variety of maize and were having no awareness about Napier Bajra cultivation. Keeping this in view, the following interventions were introduced.

- Maize fodder seeds and cutting of Napier Bajra
- Bags for silage

i) Fodder seeds and cutting in Farmer FIRST area: To enhance the fodder production in the operational area, J1006 maize fodder seed and 0.1 million cuttings of Napier Bajra hybrid (PBN-233) were procured from PAU and GADVASU farm and were provided to the beneficiary families for trial purpose. Maize fodder seed were given @ 4 kg/kanal and N. Bajra cutting were given @ 1200 cuttings/kanal. Previously farmers of the area were using some local variety of maize having low yield and no one was cultivating Napier Bajra. Seeing the results, farmers later on started cultivating this variety on regular basis and even farmers are providing N bajra cutting to other farmers of the area.

ii) Bag silage: Silage making and bag silage technique were demonstrated in all the five villages. Silage bags of 5 quintal capacity were provided to the selected beneficiaries. Homemade silage is much cheaper compared to commercially available silage. Bag silage required less space compared to conventional pit silage and technique was hailed and adopted well by small and marginal farmers of the area. Folder and Bulletin on silage making were published and were given to beneficiaries families for ready reference.

Outcome

The cost of bag silage is calculated around ₹ 2/kg of silage compared to



Cultivation of maize and Napier bajra



Training-cum-demonstration on silage



Testing of silage

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. Spoilage is less in bag silage compared to pit silage as only one bag is opened at a time. Besides this, silage feeding excludes the daily chores like cutting and brining of green fodder to home and then chopping thereby spares the labour for other work. This bag silage helps in lowering the drudgery of women especially from family of low land

holding or landless families rearing animals who daily bring fodder from the field. Bags can be shifted as and when required.

TRAINING

The regular demonstration cum training were performed to popularize the quality fodder cultivation and making of silage with silage bag technology. For the purpose, 31 trainings were conducted on this intervention.

IMPACT

Enhanced the fodder availability throughout the year to the animals which helps in sustaining the quality of milk production. Owing to the efforts done under the FFP, the farmers have started making the bag silage/silage, thus ensuring the quality fodder availability throughout the year.

DRAWBACKS

At the initial stage, farmers were non-receptive to be included in the project activities. However, with the consistent efforts of the team and utility of bags and silage, farmers accepted the technology. The adoption process of the intervention is great challenge which still remains, though convinced, are not able to adopt at their own expenses. The morbidity and mortality in the livestock as well as the disease conditions made dent in the sustainability of livestock rearing. The livestock intervention mostly required contact services in person for their applicability thus making trial/experiment less result oriented due to lack of clear controls.

WAY FORWARD

The unemployed youth/landless farmers can be engaged to prepare the bag silage as an enterprise in their area for their livelihood concerns.

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