

## **Integrated farming system (Sugarcane + Fodder crops + Dairy farming)**

**Background:-** Sugarcane is a major crop in irrigated area of Pune districts and livestock enterprise is

secondary income generating activity. Soil is medium black and alkaline in nature, pH ranging from 8.25-8.5,

EC is 1.0 to 2.

### **Profile of farmers:-**

Name of the farmer: - Mr. Gawade Bhimrao Balasaheb

Address: - At. Post. : - Medad Tal-Baramati Dist:-Pune

Mob.No. 9766238120 Age :- 36 Years Education:-12<sup>th</sup> Class. Land holding: - 6 ha.

Farming experience: - 16 Years

Yield of sugarcane is ranging from 45-55 tone /Acre. Conventionally he is tied up their animal for 24 hours on concrete flooring there is increased incidence of mastitis, leg injuries, Indigestion, Repeat breeding and acidosis in crossbred HF cows. They are burning sugarcane trash, Soil carbon content is low which is ranging from 0.4- 0.6 %.

**Interventions :-** KVK, Baramati has assessed the technology of loose housing system for crossbred HF cows with 5 farmers by using the sugarcane trash as Bedding material in the open paddock of cattle shed. In this system of housing 70 sq.ft area is provided under shed for feeding with concrete flooring and 125 sq. ft open paddock provided with sugarcane trash or wheat straw as bedding material which help to absorb the nutrients from urine and moisture from dung and manure production increases by 50% .It help to provide comfortable bedding for sitting and standing of animals. It helps to maintain animals clean and dry. This system helps to fascinate the animals' mild exercise which helps to reduce digestion problems. Drinking water is made available. in open paddock hence drinking water is available for 24 hrs. Animals are tied up at the time of milking in the morning, evening and concentrate feed is offer at the time of milking and 30-35 kg green fodder, 5-6 kg dry fodder is given to animals twice a day. Manure along with bedding material in the open paddock is removed by tractor mounted scrapper after every two month. This manure along sugarcane trash converted in good quality FYM .FYM is applied to

sugarcane crops and fodder crops which helped to increase carbon content and sugarcane yield upto 80-91Tone/acre.

This technology can be used by the dairy farmers in Maharashtra, AP, Telangana, Gujrath, Rajsathan under same situation. Seeing the success of this technology farmer has adopted plastic water storage tank, Fish farming in water storage tank, cultivation of fodder crops on the bunds of water storage tank and vegetable cultivation on the bank of water storage tank for family use, Biogas production, Drip irrigation for Sugarcane, use of calf

**Process:-** Loose housing system was assessed and promoted by KVK, Baramati through training, exposure visit and farmers to farmer interaction.loose housing system model was developed at KVK, Baramati and on the farmers field in Medad and jalgaon KP village through NICRA project also.Farmers farmer other state and disctricts are also visiting to thios model during their visit to KVK.

**Technology:-** Loose housing system

**Impact:-** More than 500 faremrs has adopted this technology in the area.

**Horizontal Spread :-** By seeing the success of this innovation SAAM TV has recorded and broadcasted this success story for 3 times. One article was published by KVK in SAKAL News paper and kvk has orgazised exposure visit of farmers participated in dairy farm management Training progeramme for 4500 farmersand more than 45000 dairy farmers from Maharashtra and other state has visited loose housing system model developed at KVK, and Farmers filed at Medad Tal .Baramati. 500 farmers in the area of Baramati adopted the loose housing system for their dairy Animals.

**Economic gains:-**

**Crops Yield (2014) :-**

Sr,no	Livestock and crops	Area /No.	Yield before intervention (2010)	Yield after intervention (2014)	% Increase in yield
1	Sugarcane	3.5 ha	137.5 t/ha.	220 t/ha	60%
2	Hybrid Napier	0.40 ha	200 t/ha	300t/ha	50%
3	Lucerne	0.20 ha	125 t/ha	150t/ha	20%
4	Sorghum	0.80 ha	37.5 t/ha	45 t/ha	20%

5	Maize	0.40 ha	44t/ha	55 t/ha	25%
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### Gross Income and Expenditure (2014)

Sr. no.	Particulars	Quantity	Unit price (Rs.)	Total (Rs.)
<b>A</b>	<b>Gross Income</b>			
1	Sale of sugarcane	400 tone	2500/-	1000000
2	Sale of milk (275 lit/day )	100375 lit.	25/-	2509375
3	Sale of animals/year	10 No.	80000/-	800000
4	<b>Total</b>			<b>4309375</b>
<b>B</b>	<b>Gross Expenditure</b>			
1	Purchase of Fertilizer			50000
2	Purchase of seed			15000
3	Purchase of concentrate	48 tone	20000/-	1200000
4	Purchase of pesticides and other chemicals	-	-	15000
5	Veterinary Expenses	-	-	10000
6	Labour	-	-	600000
7	Electricity			12000
8	Miscellaneous			10000
10	<b>Total</b>			<b>1912000</b>
	<b>Net Income</b>			<b>2397375</b>

1. FYM production of dairy farmers increased by 36 %
2. Incidence of mastitis is reduced by 90% as animals maintained clean.
3. Incidence of indigestion and Acidosis is reduced by 75%.
4. Increase in milk yield by 16 % and fat content in milk increased by 12%.
5. Soil fertility improved (organic Carbon -0.7-0.8 % and EC- 0.7-0.8 ) due to addition of FYM which is available from loose housing system.
6. Yield of Sugarcane increased by 60%