

Sheela Kumare – A model farmer from village Lonsawali

- Profile of Mahila Kisan :

Name: Sheela Kumare

Village: Lonsawali

GP: Lonsawali

Block: Wardha

District: Wardha

Livelihood Group Name: Jagrit Mahila Shetkari Samiti

Food Security Level: Sheela belongs to a poor family and faces food security problem during summer season. Usually women of her village prepare green gram cakes or *papad* in summer for use throughout the year and she says that till last year she could not afford to buy green gram for preparation of these food products. This is one example of how food insecure she feels in summer when earnings are low. When there is no employment in summer the family even could not afford to buy the vegetables and other daily needs of a family for cooking and other things. This year she has grown vegetables in her kitchen garden and cultivated pulses (green gram, black gram and pigeon pea) as mixed crop along with cotton and soya bean. She is happy that she is now able to meet the needs of her family even in summer months.

- Existing Resources:

Sheela's family owns 3 acres of rain fed land. Soil type is medium to light with very low productive potential. Her family owns a harrow, plough and spray pump .

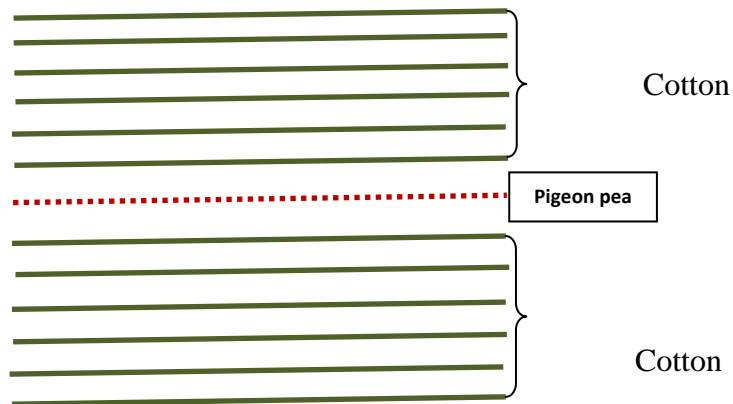
- Area of Land Intervened

Sheela practices sustainable agriculture on 3 acres owned by her family. Sheela was not aware of the sustainable agriculture practices before she became a member of the *samitis*/MKSP. She received information about sustainable agriculture practices through various trainings and exposures organized by MSSRF. After she got convinced by the

concept she started practicing sustainable agriculture on her farm, since 2013. This is the first year of her experience with sustainable agriculture practices.

- Pre-Intervention Scenario

In the year 2012-2013 she was doing conventional farming. The crops on her farm during the mentioned year were cotton and pigeon pea with the cropping pattern as follows.



*Spacing between cotton
and pigeon pea – 2 ft x 1 ft*

- Description of Intervention Planned and Process Undertaken

1. Soil testing – She tested soil sample from her farm to know the nutrient status of the soil and manage the need of application of chemical fertilizers.
2. Sowing across the slope – Her field is inclined and therefore she has used this technique.
3. Seed treatment – She treated the seeds with biofertilizers
4. Intercropping – She intercropped green gram and black gram in addition to the conventionally used pigeon pea with the main cotton/soyabean crop
5. Preparation of compost – She prepared 1 ton of farm yard manure and applied in her field
6. Growing trap crops – She has grown marigold as trap crop
7. Use of yellow sticky traps, pheromone traps and bird stands – She has sown sorghum on all four borders of her farm where birds would sit and thereby help in controlling pest attacks, mainly thrips.
8. Use of biopesticide – She used *Nimark* for pest control and *Trichoderma* as fungicide
9. Mulching and green manuring – She mixed residues of green gram and black gram in the soil after harvest and planted glyricidia on her farm bunds

- Trainings Attended

1. Vermicomposting
2. Technical back stopping

3. Seed treatment
4. Preparation of biopesticide
5. Goat farming
6. Mushroom cultivation
7. Integrated nutrient management
8. Integrated pest management
9. Soil and water conservation practices
10. Kitchen gardening

- Adoption of Technical Protocol

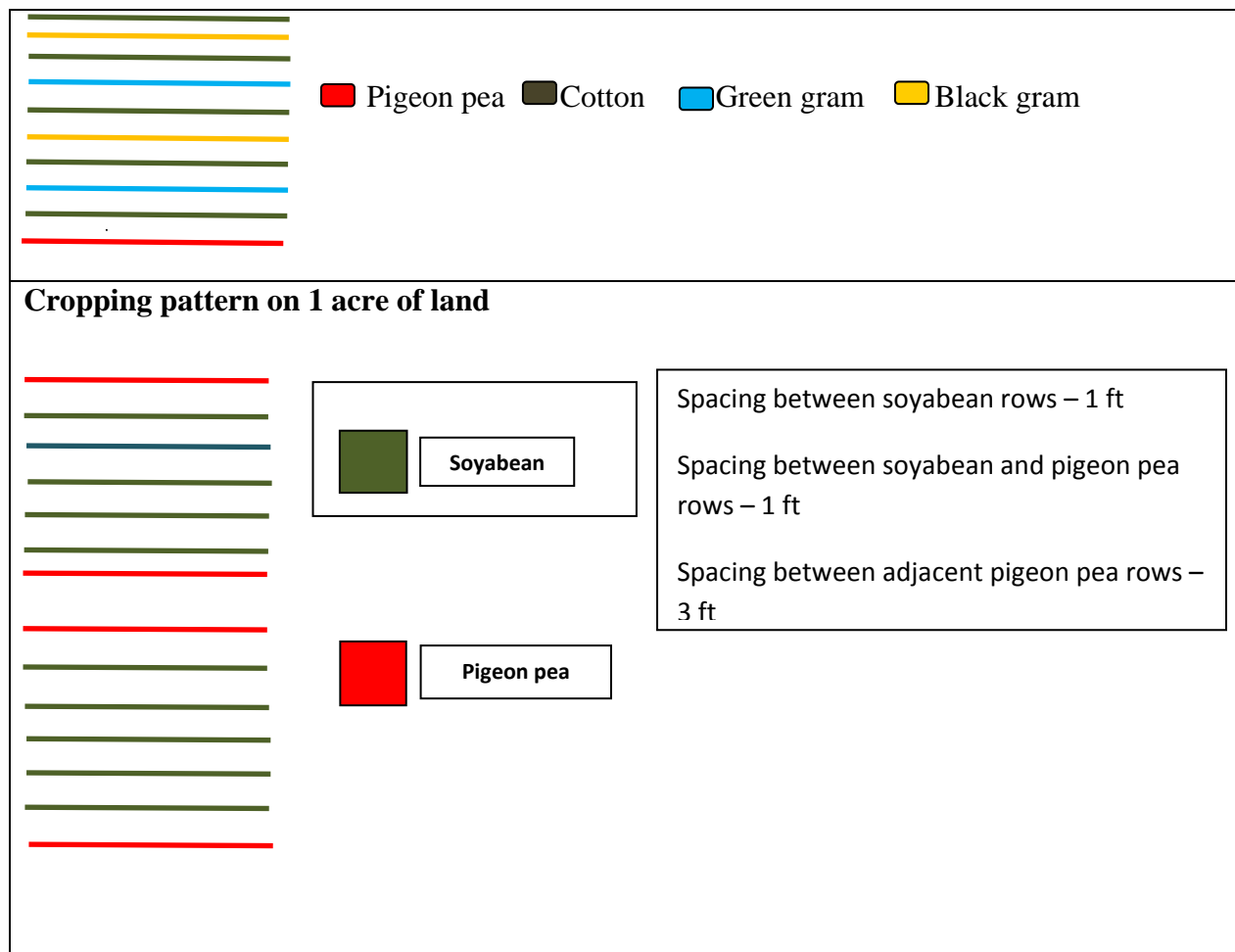
Adoption of practices across all four major components of sustainable agriculture has been undertaken.

Component	Adopted Practice
Soil and water conservation practices	Farm bunds Sowing across slope Opening of ridges and furrows
Seed Management Practices	Seed Treatment
Integrated Nutrient Management	Soil Test; Compost Biofertilizer Inter Cropping Green Manuring, Multi Crop system Mulching
Integrated Pest Management	Yellow Sticky Traps Phermone Traps Bird Stands Biopesticide Trap Crops

- Post Intervention Scenario

This year i.e. 2013-2014 , 2 acres of land is under cotton with an intercrop of green gram and black gram. Remaining 1 acre of land is under cultivation of soyabean and pigeon pea. The cropping pattern is as follows.

Cropping pattern on 2 acres of land	Spacing between two cotton rows – 3 ft x 1 ft Spacing between cotton and gram rows – 1.5 ft
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Analysing the cost of cultivation data presented by Sheila Kumare it is clear that the expenditure on chemical pesticides is nil in the year 2013-14 when she started practicing sustainable agriculture. From an expenditure of Rs 4200 for 3 acres or Rs 1400/acre spent on chemical pesticides in 2012-13, she has cut down this expenditure totally by resorting to self prepared bio pesticides. This is an extremely important output of the MKSP programme. As regards nutrient management, the soil test done in her field has indicated very low levels of prosperous in her land and therefore she was advised to use SSP as a straight fertilizer instead of complex fertilizer (as was her practice till 2012-13) along with other nutrient management practices such as application of organic manure, bio fertilizers etc. Her expenditure on chemical fertilizers has more than halved ever since she resorted to sustainable agriculture from Rs 5750 to Rs. 2400 between 2012-13 and 2013-14. She has used only such nutrients that are required for her soil as per recommendations given in the soil test report. Sheila also noted that only in 2013-14 she managed her cultivation without borrowing money.

Details on Cost of Cultivation

Agriculture Interventions	2012-2013 (Cost in Rs)	2013-2014 (Cost in Rs)
Ploughing (tractor)	1800	2250
1 st Harrowing (tractor)	1500	1650
2 nd harrowing (oxen)	1500	1500
Broad carsting of organic manure (4 trolleys)	6600	1500 (FYM prepared at home. Quoted cost is for transportation of FYM to the field)
Preparation of furrows	800	800
Purchasing of seeds		
Cotton	6650	3720
Pigeon pea	340	480
Soyabean		1580
Sowing of seeds	1000	1900
1 st hoeing	1800	2000
Weeding	3375	1700
2 nd hoeing	1800	2000
Cost of chemical fertilizer	5750 (5 bags DAP + 3 bags urea)	2400(4 bag SSP + 2 bag urea)
Labor charges for first application of chemical fertilizer	400	400
3 rd hoeing	1800	-
Weeding	2200	1700
Labor charges for second application of chemical fertilizer	400	400
Spraying	4200 (3 times)	Nimarka+biveriya (3 times) 2 % DAP + urea (2 times)
Labor cost of spraying	600	1000
4 th hoeing	7200	-
Harvesting		
Cotton	12500	6100
Pigeon pea	1250	1065
Soyabean		1500
Black gram		400
Green gram		700
Total input cost	63465	34345

Following table shows gross income from farm in last two years.

Crops	2012-2013		2013-2014	
	Production	Sale (Rs)	Production	Sale (Rs)
Cotton	25 qt	92500	10.5 qt	44100
Pigeon pea	4 qt	12000	3.5 qt	15225
Soyabean			4 qt	15200
Green gram			1 qt	2850
Black gram			1 qt	2950
Gross income		104500		80325

Cost benefit ratio –

Financial turnover	2012-2013	2013-2014
Total input cost (Rs)	63465	34345
Gross income (Rs)	104500	80325
Net profit (Rs)	41035	45980
Cost benefit ratio	1:1.65	1:1.34

Even though cotton crop output has suffered a great deal this year due to very heavy rainfall, Sheela is happy that she has not lost out everything. She said, “This year there was heavy rainfall exceeding up to average 1600 mm in Wardha district. Other farmers suffered as there was no mixed crop in their fields. But I was at least able to retrieve my input cost because of sustainable agriculture practices.” Her farm is not irrigated but she was inspired to cultivate wheat with her experience in sustainable agriculture practices. So one of her samiti friends, Mrs. Shalini Khairkar, extended support to her by letting her cultivate wheat on one acre of land without charging any rent for her land. Now Sheela is cultivating wheat on 1 acre of land according to guidance provided by MSSRF. She is confident she will derive profit out of wheat cultivation.

Sheela is growing a kitchen garden after becoming member of samiti. She has very little space available in her front yard. In her small kitchen garden she grows amaranths species, spinach,

coriander, fenugreek, brinjal, tomato, chilli, wal beans, etc throughout eight months of a year. She is happy that now she has enough vegetables for whole family.

- Plan Ahead

On the basis of trainings received and experience of adopting sustainable agriculture practices Sheela wants to have farm bunds on her farm. She expressed that she missed the opportunity of forming farm bunds with MSSRF's facilitation as she had gone for a marriage of close relative. But she said that it would be of great use for enhancing farm productivity. She is interested in having mushroom production unit provided she manages to construct a well on her farm. Similarly she expressed that she is also interested in dairy business.