

Jayashree Lokhande – Promising Farmer of Amboda

- Profile of Mahila Kisan :

Name:	Jayashree Sudhakar Lokhande
Village:	Amboda
GP:	Dahegaon (Miskin).
Block:	Wardha
District:	Wardha
Livelihood Group Name:	Jagrit Mahila Kisan Samiti
Food Security Level:	9 to 12 months;

Jayashree retains 100 kg of pigeon pea, 10 kg of chick pea and 600 kg of wheat produced from her farm for household consumption. She grows vegetables in her farm for nearly 8 months and uses the same for household consumption. Even though she has to purchase other grains and pulses from market she is able to manage as her income has risen as a result of sustainable agriculture practices.

- Existing Resources:

Jayashree's family owns 4.5 acres of land. Soil type is light medium with poor productive potential. This year they constructed a well on their farm. This was possible as she benefited by a special scheme of the Panchayat Samiti that provided her with a contribution of Rs. 1 lakh towards well construction. In addition, the family mobilized Rs 1.5 lakhs for well construction¹. Depth of the well is 20 ft. As a result of this they can now cultivate *rabi* crops in their own land. In 2013 the family has leased in 8 acres of land of which 3 acres have irrigation facilities. They have one bullock cart. They have dairy business with eight cows. The agricultural implements they own are the following: plough, harrow, spray pump and sprinkler pipes.

- Area of Land Intervened

Jayashree practices sustainable agriculture on the 4.5 acres owned by them. She started practicing sustainable agriculture after she became a member of the samitis/MKSP, since 2011-12.

¹ For availing this scheme facilitation from MSSRF, in particular by Field Assistant Mr. Atul Naik, was extremely crucial.

- Pre-Intervention Scenario

Jayashree was cultivating cotton intercropped with pigeon pea in all 4.5 acres. She was following conventional method of cultivation practices. In 2010-11, total production in her 4.5 acres of farm land was to the tune of 12 quintals of cotton and 3 quintals of pigeon pea. This amounts to yield of 2.7q per acre of cotton and 0.7q per acre of pigeon pea.

- Description of Intervention Planned and Process Undertaken

1. Soil testing done in 2012
2. Farm bunding done in 2012
3. Preparation of compost as per guidance provided by MSSRF. This year she did not purchase any compost from outside.
4. Seed treatment done with admixture of anthill soil, cow dung and cow urine.
5. Sowing across the slope being practiced in 2013-14
6. Trap crops, marigold and castor, have been sown in 2013-14
7. Intercropping of vegetables, in addition to conventional practice of pigeon pea, undertaken in cotton cultivation
8. Use of yellow sticky traps and pheromone traps
9. Use of biopesticide –*Nimastra* and *Nimark* for controlling pest attack
10. Spraying of 2% urea to enhance production

She has a good kitchen garden in her house in which she grows all four types of vegetables i.e. tubers, green leafy vegetables, fruits vegetables and climbers.

- Trainings Attended

1. Soil sample collection
2. Preparation of farm yard manure
3. Vermicomposting
4. Seed treatment
5. Integrated pest management practices
6. Soil and water conservation practices
7. Integrated nutrient management practices
8. Horticulture
9. Floriculture
10. Cultivation in polyhouse
11. Mushroom cultivation
12. Kitchen gardening
13. Household food and nutrition security
14. Panchayat raj system, Importance of gram sabha, role & responsibility
15. Concept of federation its Importance and need
16. Minute register and accounts management and maintenance
17. Skills & quality to engage with local governance and role of local governance.

- 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 application, Spraying Urea Inter Cropping
Integrated Pest Management	Yellow Sticky Traps Phermone Traps <i>Nimastra</i> <i>Nimark</i> Trap Crops

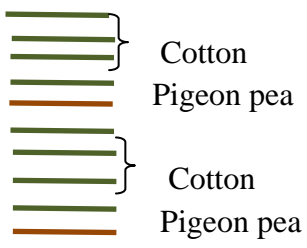
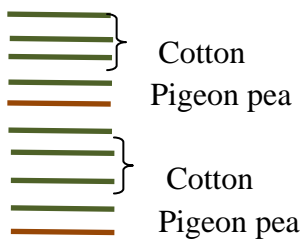
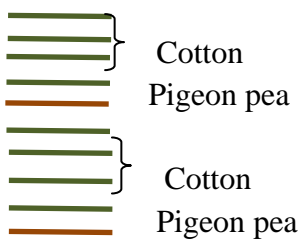
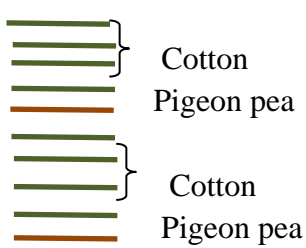
- Post Intervention Scenario

Following table shows their cropping pattern from a year before starting sustainable agriculture practices in 4.5 acres of land.

Area under cultivation for different crops of Jayashree Lokhande

2010- 2011 (year before starting SAP)	2011-2012	2012-2013	2013-2014
Cotton and pigeon pea in 4.5 acres	Cotton and pigeon pea in 4.5 acres	Cotton and pigeon pea in 4.5 acres	<ul style="list-style-type: none"> • Cotton and pigeon pea + intercrops (fenugreek & coriander) in 3 acres • Only soyabean in 1 acre • Vegetables in 0.5 acres (spinach, fenugreek, coriander and radish)

Cropping pattern in each year

2010- 2011	2011-2012	2012-2013	2013-2014
<p>Cotton and Pigeon pea</p>  <p>Spacing – 4 ft x 1.25 ft</p>	<p>Cotton and Pigeon pea</p>  <p>Spacing – 4 ft x 1.25 ft</p>	<p>Cotton and Pigeon pea</p>  <p>Spacing – 4 ft x 1.25 ft</p>	<p><i>Cotton and Pigeon pea in 3 acres</i></p>  <p>Spacing – 4 ft x 1.25 ft <i>Intercrop in cotton & pigeon pea – Fenugreek & coriander</i></p> <p><i>In 1 acre soyabean</i> Spacing between rows – 45 cm</p> <p><i>Vegetables in 0.5 acres</i></p> <p>Beds of breadth 3 ft were raised Inside the bed there were spinach, fenugreek and coriander. On the walls of bed radish was grown.</p>

Following table shows interventions undertaken and input cost required every year for cultivating 4.5 acres of land.

Agriculture Interventions	2010- 2011	2011-2012	2012-2013	2013-2014
Ploughing (tractor)	1700	2000	2000	3000
1 st Harrowing (tractor)	1000	1500	1800	2000
2 nd harrowing	1000	1500	1800	2000
Broad casting of organic manure (4 trolleys transportation)	2000	2000	2200	2500
Preparation of furrows	1200	1200	1400	1600
Purchasing of seeds				
Cotton	5200	5880	7740	6510
Pigeon pea	1100	1200	1350	1350
Soyabean				1800
Vegetable seeds				1000
Sowing cost				
Cotton	900	900	1100	1200
Pigeon pea	-	-	-	-
Soyabean				900
Vegetables				100
1 st Hoeing	1400	1400	1600	1600
1 st Wedding	960	1440	2600	3750
Cost of chemical fertilizer (1 bag DAP + 1 bag urea)-First Dose	1000	1200	1500	1500
Labour charges for application of chemical fertilizer	480	520	675	800
2 nd hoeing	1400	1400	1600	1600
2 nd Wedding	1100	1700	2400	-
Cost of chemical fertilizer (1 bag DAP + 1 bag urea)-Second Dose	1000	1200	1500	1500
Labour charges for application of chemical fertilizer	480	520	675	800
3 rd hoeing	1400	1400	1600	1600
Spraying (3 times)	3900	4350	5200	2850 (2 chemical & 1 Nimark)
Harvesting				
Cotton	4800	7200	12500	9000
Pigeon pea	1600	1700	2000	3000
Soyabean				1600
Vegetables				1200
Cultivation cost of wheat				3000
Total input cost	33620	40210	53240	57760

Details of Cotton Production and Yield			
Year	Area	Production	Yield/acre
	(in acres)	(in quintal)	(in quintal)
2010-11	4.5	12	2.67
2011-12	4.5	16	3.56
2012-13	4.5	25	5.56
2013-14	3.0	15	5.00

Details of Pigeonpea Production and Yield			
Year	Area	Production	Yield/acre
	(in acres)	(in quintal)	(in quintal)
2010-11	4.5	3	0.67
2011-12	4.5	4	0.89
2012-13	4.5	4	0.89
2013-14	3.0	4	1.33

Production and Sale details on Jayashri's land:

Crop	2010- 2011		2011-2012		2012-2013		2013-2014	
	Production (qt)	Sale (Rs.)	Production	Sale (Rs.)	Production	Sale (Rs.)	Production	Sale (Rs.)
Cotton	12	38400	16	56000	25	100000	15	67500
Pigeon pea	3	9000	4	14000	4	16000	4	14000
Soyabean							2	6600
Vegetables								20000
Wheat							6	9000
Gross Income		47400		70000		116000		117100

Cost benefit analysis

Financial turn over	2010- 2011	2011-2012	2012-2013	2013-2014
Total cost of cultivation	33620	40210	53240	57760
Gross income	47400	70000	116000	117100
Net Profit	13780	29790	62760	59340
Cost Benefit ratio	1 : 0.41	1 : 0.74	1 : 1.18	1:1.03

Table reveals very clearly that C-B ratio has slowly and steadily increased after adopting sustainable agriculture practices. Jayashree is happy and proud of her field as in spite of heavy rains in the district she is not in loss. She is happy with her experience with sustainable agriculture practices and in the year 2013-14 she had sown wheat as she created irrigation facilities in 1 acre. She harvested 6 qt of wheat which she utilized for household consumption and kept as a seed for next year use.

It is important to note that cost incurred on chemical pesticide has nearly halved in 2013-14 compared to 2012-13. This is an extremely important output of MKSP.

- Plan Ahead

Based on the trainings received Jayashree is planning to have floriculture on half acre of land in which she plans to grow rose, chrysanthemum and gaillardia flowers. She also wants to construct polyhouse and grow capsicum in it. Along with this she also want to initiate enterprise of vermicompost as she has 8 cows and 2 bullocks in her house.