SUITABILITY OF SUSTAINABLE ECO-FRIENDLY PADDY TECHNOLOGIES AS PERCEIVED BY FARMERS OF CUDDALORE DISTRICT

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Abstract

There is an urgent need to develop farming technique, which are sustainable from environment, production and socio-economic point of view. The means to guarantee sufficient food production in the next decades and beyond in critical because modern agricultural production thought the world does not appear to be sustainable in the long-term. The agricultural community is thus setting its hopes on sustainable agriculture, which will maintain the cycles of input-output and eco-system balance. It has now been realised that participation of all section of the farm women, can be brought into the mainstream by developing appropriate and suitable technologies for the farming community. Hence, this study was taken up in Cuddalore district of Tamilnadu. A sample size of 60 farmers was selected by using simple random sampling. The suitability of eco-friendly paddy technologies as perceived by farmers was measured with the help of well structured interview schedule. Besides that the group discussion and observations were also used for data collection for each technology, further they were classified into highly suitable, moderately suitable and less suitable for the purpose of categorisation of suitability of eco-friendly technologies.

Key words: Sustainable agriculture, farm women, environmental sustainability, etc.

1. Introduction

Eco-friendly technologies are simple, low cost, pollution free techniques and operations that are socially and economically accepted. They are not only evolved and tested over a period of time by the farming communities, but also verified by the scientists. Sustainable rural development is the management and conservation of the natural resources base and the orientation of technological and institutional change in such a manner as to assure the attainment and continued satisfaction of human needs for the present and future generations. Such sustainable development in the agriculture, forestry, fisheries sector, conserves land, water, plant and animal genetic resource is environmentally non-degrading, technically appropriate, economically viable and socially acceptable. Organic farming was perceived as an eco-friendly farming system approach which includes ecological soil management, ecological pest and disease management, reduction of higher external input, low cost technologies he practice of mixed cropping and crop rotations also. Eco-friendly agricultural technologies help in improvement of crop quality and reduce environment pollution. These technologies have demonstrated their ability not to produce safer commodities but also to produce bio-diversity at all levels. With this background and in the absence of empirical evidence, the present study is undertaken.

2. Methodology

The study was taken up in Cuddalore district of Tamilnadu. A sample size of 60 farmers was selected by using simple random sampling. The suitability of eco-friendly paddy technologies as perceived by farmers was measured with the help of well structured interview schedule. Besides that the group discussion and observations were also used for data collection for each technology, further they were classified into highly suitable (more than 66 per cent), moderately suitable (34 per cent to 65 per cent) and less suitable (less than 33 per cent) for the purpose of categorisation of suitability of eco-friendly technologies.

3. Findings and discussion

The findings on the suitability of various eco-friendly paddy technologies are discussed in Table1. The suitability of eco-friendly paddy technologies may vary from individual to individual and from region to region. Hence, an attempt was made to analyse the suitability of eco-friendly paddy technologies as perceived by farmers of Cuddalore district.

TABLE 1

Suitability of Sustainable Eco-friendly Paddy Technologies as Perceived by Farmers

S.No	Eco-friendly technologies	N	%
1	Ploughing the field 4-6 times	60	100.00
2	Trimming the field bunds	60	100.00
3	Crop rotation	45	75.00
4	Farm yard manure	57	95.00
5	Enriched FYM	50	83.33
6	Spraying of extracted FYM	42	70.00
7	Compost	49	81.66
8	Vermicompost	35	58.33
9	Application of presmud	20	33.33
10	Pig manure	30	50.00
11	Application of azospirillum with seeds	50	83.33
12	Soil application of azosprillium	48	80.00
13	Seedling with azosprillium	46	76.67
14	Blue Green Algae(BGA)	40	66.67
15	Application of azolla	37	61.67
16	Neem seed kernals	45	75.00
17	Neem cake	42	70.00
18	Neem oil	38	63.33

19	Pungam oil	35	65.00
20	Leaves of kattamanakku	54	90.00
21	Leaves of nochi	50	83.33
22	Leaves of erukku	56	93.33
23	Leaves of pungam	52	86.67
24	Leaves of pungam + sanguppo	50	83.33
25	Leaves of subabul	49	81.66
26	Leaves of poovarasu	48	80.00
27	Leaves of nuna	49	81.66
28	Leaves of neem	55	91.67
29	Green manures of sunhemp	45	75.00
30	Green manures of daincha	42	70.00
31	Green manures of wildindigo	47	78.3
32	Spraying tobacco leaf extract	30	50.00
33	Common ash	49	81.66
34	Integrated farming system (goat)	15	25.00
35	Integrated farming system (fish)	15	25.00
36	Integrated farming system (poultry)	15	25.00
37	Pheromone trap	39	65.00
38	Light traps	52	86.67
39	Yellow sticky traps	47	78.33
40	Parasites	39	65.00
41	Predators	42	70.00
42	Tanjore kitti	50	83.33
43	Panchakavyam	49	81.33
44	Spraying cow urine	58	96.67
45	Sheep penning	19	31.67
46	Hot water treatment of seeds	29	48.33
47	Clipping top portion of rice seedlings	60	100.00
48	Reducing plant population to the density	51	85.00

It could be seen from Table 1 that farmers were involved in forty-eight eco-friendly technologies in paddy farming. Out of forty four technologies, thirty four technologies were expressed as highly suitable and they were viz. ploughing the field 4-6 times (100 per cent), trimming the field bunds (100 per cent), clipping top portion of rice seedlings (100 per cent), spraying cow urine (96.67), farm yard manure (95 per cent), leaves of erukku (93.33 per cent), leaves of neem (91.67 per cent), leaves of kattamanakku (90 per cent), leaves of pungam (86.67 per cent), reducing plant population to the density

(85 per cent), tanjore kitti (83.33 per cent), enriched fym (83.33 per cent), application of azospirillum with seeds (83.33 per cent), leaves of nochi (83.33 per cent), leaves of pungam + sanguppo (83.33 per cent), leaves of subabul (81.66 per cent), leaves of nuna (81.66. per cent), common ash (81.66 per cent), panchakavyam (81.66 per cent), soil application of azosprillium (80 per cent), leaves of poovarasu (80 per cent), green manures of wildindigo (78.33 per cent), yellow sticky traps (78.33 per cent), seedling tip with azosprillium (76.67 per cent), crop rotation (75 per cent), neem seed kernals (75 per cent), green manures of sunhemp (75 per cent), spraying of extracted FYM solution (70 per cent), neem cake (70 per cent), green manures of daincha (70 per cent), predators (70 per cent) and blue green algae (66.67 per cent).

As reported by the respondents, the possible reasons for the expressed high level of the above technologies are that most of these technologies were done manually without the use of operating tools and machineries. Another possible reason is that these technologies were easily one and aware about the technologies this findings derives support from the findings of Vengatesan and Santha Govind (2018) who also reported that majority of these technologies were expressed as highly suitable of farm women. Nine technologies were indicated as moderately suitable by the farmer and they were viz. pungam oil (65 per cent), pheromone traps (65 per cent), parasites (65 per cent), neem oil (63.33 per cent), application of azolla (61.67 per cent), vermicompost (58.33 per cent), pig manure (50 per cent) and hot water treatment of seeds (48.33 per cent). The remaining technologies perceived to be less suitable by the respondents were viz. application of presmud (33.33 per cent), sheep penning (31.67 per cent), integrated farming system -goat (25 per cent), integrated farming system-fish (25 per cent), and integrated farming system-poultry (25 per cent). The technologies are not designed according to economical characteristics of the farmers, resulting with less perceived suitability among farmers and its features of high time consumption, high cost and less energy saving technologies. This finding is in line with the findings of Prasad and Wijeratne (2003) and Guna (2016).

4. Conclusion

From the findings, it was noticed that nearly less than half of the technologies were perceived as moderate to low level of suitable by respondents. Low cost farmer oriented eco-friendly technologies application in the rural farm setting. Further, they can develop technologies to enable the farming communities in an eco-region to meet the requirements of eco-friendly products. To mould appropriate extension strategies so as to generate awareness among farmers about the need for eco-friendly technologies.

5. Reference

Guna, B. (2016). Role of Farm Women in the Transfer of Eco-friendly Technologies. Unpublished Ph.D. Thesis, Annamalai University, Annamalainagar.

Prasad, W.D.N.R., & Wijeratne, M. (2003). Agricultural Extension and Farmer Need for Technology. *International Rice Research Notes*, 55-56.

Vengatesan, D., & Santha Govind (2018). Suitability of Paddy Technologies as Perceived by Small Farm Women. *Mysore Journal of Agricultural Sciences*, 3(2), 250-256.