Annals of Sri Lanka Department of Agriculture 2014. 16: 293-295

Short Communication

GAPS AND NEEDS OF IMPLEMENTING RICE IPM IN GALLE DISTRICT

S.H. KAHIANGALA [1], M.W. SENANI [1], M. WICKRAMASINGHE [1] AND W.R.W. WIMALASENA [2]

[1] *Southern Provincial Department of Agriculture, Labuduwa, Sri Lanka*
[2] *Agricultural Research Station, Girandurukotte, Sri Lanka*

INTRODUCTION

Paddy cultivation is the main economic activity in Sri Lankan agriculture. Considerable amounts of chemical fertilizers and agro chemicals are being used in paddy cultivation (Mahinda and Silva, 2001; MOA, 2009). Excessive use of their use has become necessary due to avoid any adverse effect on health and environment (Agstar 2012; SEPC, 1995-2010). The extension service of the Department of Agriculture has the responsibility of educating and encouraging farmers to use Integrated Pest Management (IPM) technologies (Mahinda and Silva, 2001). The objectives of this study were to assess the current knowledge of farmers on IPM technologies, its adoption, identify knowledge gaps and requirements for full adoption by paddy farmers in Galle District.

MATERIAL AND METHODS

The survey area consisted of eight Divisional Secretariat (DS) divisions in Galle district, namely Bentota, Gonapinuwala, Ambalangoda, Balapitiya, Hikkaduwa, Elpitiya, Weliwitiya-Divitura and Baddegama. All eight DS divisions have the similar numbers paddy farmers. Most of them were seed paddy producers. Simple random sampling method was used to identify 8 individual farmers from each DS division. Farmers involved in paddy cultivation for their main income source. The primary data collection methods used were interviews, questionnaire surveys, key informant discussions and field observations. Individual interviews were performed using a pre-tested questionnaire. The data were analyzed using Statistical Package for Social Science (SPSS) software for descriptive statistics.

RESULTS AND DISCUSSION

The study population consisted of 54 male and 4 female farmers. The age of the farmers ranged from 40 to 74 years with a mean age of 54 years. The farmers experience on paddy cultivation ranged from 12 to 56 years. On an average they obtain 70.15 bu/ac in *maha* season and 60 bu/ac in *yala*. Majority of them (53%) use their harvest for home consumption and the rest sell their harvest as seed paddy (47%). The average cost of

paddy cultivation per acre was around Rs. 30,592.00 in both *yala* and *maha* seasons. Average of 67% of farmers applied weedicide for weed control and the average cost for weedicide and the application was Rs. 2,083.00. The percentage of farmers using insecticides and fungicides were 4.83% and 46%, respectively. Approximately 51% of farmers were aware on the pre-harvest interval of agro chemicals.

Around 84% of farmers believed that reduction cost of production as the main advantage of IPM while 8.7% believed protection of natural enemies in the surrounding as the main advantage. However, 8.7% of farmers had no clear idea about the benefits of IPM. Average of 91.4% farmers practiced 1st and 2nd ploughing, an IPM practice for land preparation. The importance of using quality seed paddy as an IPM practices was known only to 91.4% of farmers. Around 50% of late cultivated farmers used insecticide for seed treatment. The use of organic matter application as an IPM technology before planting is shown in Table 1.

Table 1. The main sources of organic matter used by the farmers.

The source of organic matter	Farmers used (%)
Paddy straw (complete amount of previous season)	72.41
Compost	1.73
Half burned rice husk (*kuntan*)	3.44
Green Leaves	17.25
Other (cow dung, poultry litter, ash)	5.17

The IPM practices used for weed control were also investigated. Around 77.5% of farmers submerged weed seedlings in water within the 1st two weeks and 8.6% of them drag banana pseudo stem and 6.9% rout the weeds while 27.6% used weeders. Approximately 36 % of farmers used economic threshold level (ETL) to decide on pesticide application. The farmer's awareness on identification and the importance of natural enemies in the soil (earth worms, colombola, ground beetles), water (fish, water boatmen) and air (dragon fly, birds, wasps) were 58.6%, 75.0% and 100%, respectively.

Most (77.6%) fixed standing cajang petioles in the field to control rat damage and 6.9% used *Gliricidia* flowers to repel them. Study also showed that around 86% of farmers require frequent updating of their knowledge on IPM technologies and 82% of them suggested to increase the number of training classes during the cultivation period. Implementation of farmer training programs in participatory rural approach would minimize the knowledge gaps strengthen IPM adoption by the farmers minimizing agrochemical use.

CONCLUSIONS

The current knowledge level of farmers on IPM practices and the level of their adoption is satisfactory. However, there is a need to update the knowledge of the farmers.

ACKNOWLEDGEMENTS

Authors wish to express their sincere thanks to the Mr. M.U.P. Jayasundara, Assistant Director of Agriculture, Plant Protection Service, Peradeniya, Mrs. Chandra Dahanayake and Mr. Dilraj Siriwardane, Assistant Directors of Agriculture, Southern Provincial Department of Agriculture, for the assistance given in field activities.

REFERENCES

Agstar. (2012). Book of agricultural statistics. Socio Economic Planning Centre, Department of Agriculture, Peradeniya, SriLanka.

Mahinda, W. and N. Silva. (2001). Community based integrated pest management approach, Faculty of Agriculture, University of Ruhuna, Mapalana, Kamburupitiya, Sri Lanka.

MOA. (2009). "Apiwawamu-Ratanagamu Programme" Ministry of Agriculture, Govijanamandiraya, 80/5, Rajamalwatta Road, Battaramulla, Sri Lanka.

SEPC. (1995-2010). Cost of cultivation of agricultural crops. Department of Agriculture, Peradeniya.