International Journal of Chemical Studies

P-ISSN: 2349–8528
E-ISSN: 2321–4902
www.chemijournal.com
IJCS 2020; SP-8(6): 200-202

Received: 18-10-2020
Accepted: 27-11-2020

Zaheer Ahamed B
Scientists, Krishi Vigyan Kendra, Kalaburagi, Karnataka, India

Raju Teggelli
University of Agricultural sciences, Raichur, Karnataka, India

Corresponding Author:
Zaheer Ahamed B
Scientists, Krishi Vigyan Kendra, Kalaburagi, Karnataka, India

Safety kit awareness for Chemical pesticide use a study with Redgram farmers of Kalaburagi district Karnataka

Zaheer Ahamed B and Raju Teggelli

DOI: https://doi.org/10.22271/chemi.2020.v8.i6c.11116

Abstract
The present study was carried out during the year 2018-19 in Kalaburgi district of Northern East zone of Karnataka. The study showed that majority of respondents belonged to low level of knowledge regarding safe use of pesticides, plant protection schedule, time or schedule of use of insecticide/pesticide for field and storage pests whereas the Agriculture institute linked trained farmers, the maximum number of respondents were having medium to good level of knowledge about seed treatment, time of schedule of fungicide and other chemicals for diseases control and use of insecticide/ pesticide for field and storage pest. In case of adoption level maximum number of respondents belongs to low level of adoption about seed treatment and time or schedule of use of insecticide/ pesticide for storage pests. While after Agri institutes liked maximum numbers of respondents were having medium level of adoption were about use of insecticide/ pesticide for storage pests. Regarding use of quality seed of Redgram, majority of respondents belonged to low level of knowledge about source of availability of quality seed of Redgram. However, after trainings maximum respondents belonged to medium level of knowledge were about time of sowing.

Keywords: Pesticide, knowledge level, red gram, safety

Introduction
The famous pulse crop Pigeon pea, *Cajanus cajan* (L) Millsp is the second most important pulse crop in India after Bengalgram. It has multiple uses and occupies an important place in the revailing farming systems in the country and vegetarian diet. It also plays an important role in sustainable agriculture by enriching the soil through biological nitrogen fixation along with deep root system of this crop which makes it more suitable for its cultivation under rainfed conditions. District Kalaburgi of Karnataka occupies 3.75 lakh hectares of land with average productivity of 560 kg ha-1 of pigeon pea. Improper plant protection schedule leads to increased infestation of many insect pests as well as attack of diseases in unfavourable condition. Likewise local variety didn't perform better for higher yield. The present system such as seed/ soil treatment and recommended plant protection schedule, use of certified seed of suitable variety, sprays of recommended plant protection chemicals for control of major insect- pests and diseases were varying from farmer to farmer. In this context, field demonstrations on assessment of plant protection schedule and use of quality seed of Redgram conducted during the year 2018-19 at Kalaburgi District.

Materials and Methods
The study carried out in Kalaburgi district of Karnataka. The assessment of safe use of plant protection schedule and quality seed material use interviews' were conducted in the Redgram dominant villages of Kalaburgi district during the year 2018-19 For collecting information semi structured interview schedule designed on the basis of available literature. Data have been collected by personal interview or discussion with all respondents. The data analyzed by using appropriate statistical framework such as frequency, mean and percentage. The 50 farmers were interviewed in major redgram cultivating villages of the districts. Many of the farmers linked with KVK, ATMA, DATC sponsored trainings.

Results and Discussion

Plant protection schedule of Redgram

The safety kit knowledge training one of the lacking factor in pulse villages. The kit wearing and its uses knowedge given to training attended farmers at ICAR KVK Kalaburagi under UAS Raichur. The storage and keeping of pesticides in separate shed/room practiced by farmers, The disposal of continer carefully in safer points, mixing and dosage of chemical per one litre water or per one acre knowledge slowly learnt by the farmers through trainings and method demonstrations.

The label knowedge displayed in bottle and chemical pack seen and phtotoxicity causing various pesticide dosage knowedge needed for the farmers.

The Personal safety of spraying person is the much needed aspects of plant protection. Reading and following label directions knowedge found to be less. Avoiding splashing, spilling, leaks, spray drift, and contamination of clothing, eating work, smoke, drinkand chewing characters, problems and solutions while using pesticides information and alerts given to district farmers.

The data table revealed that before trainings, majority of respondents belonged to low level of knowledge regarding various aspects of use of plant protection schedule. After the training 53.4% gained knowedge on safety kit. The schedule of use of insecticide knowedge high after training and it reached 41.7%. The redgram plant protection adoption is high after trainings 31% specially on handgloves using for seed treatment. The time and schedule of use of fungicide or pesticide and other chemicals for disease control high 34.3% after trainings.

The data in Table 2 revealed that before trainings maximum number of respondents was having low level of adoption about seed treatment and time or schedule of use of insecticide/ pesticide for storage pests and both. In case of medium level of adoption maximum respondents were use of fungicide or other chemical for diseases control (34%) followed by use of insecticide / pesticide, time or schedule of use of fungicide or other chemical for diseases control, use of insecticide/ pesticide for storage pests while high level of adoption regarding plant protection schedule were 9.5 per cent regarding time or schedule of use of fungicide or other chemical for diseases control. After trainings maximum number of respondents were having medium level of adoption regarding use of insecticide/ pesticide for storage pests medium adoption (48.6%) followed by seed treatment, use of insecticide / pesticide, time or schedule for use of fungicide or other chemicals for disease control, respectively. While high level of adoption regarding plant protection schedule about seed treatment and safe use of pesticide with safety kit knowedge needs quick progress in villages in future days.

Fig 1: Safe use in seed treatment

Fig 2: Method demonstration on Redgram seed treatment with bioagent and chemicals

Fig 3: Spray time Safety kit wearing

Table 1: Safety use of pesticides knowledge level regarding plant protection schedule of Redgram.

Sr. No.	Particular	Safety Knowledge level before trainings			Safety Knowledge level after trainings		
		Low	Medium	High	Low	Medium	High
1	Safety on chemical/Bio agent Seed Treatment	61.3	22.6	0.0	21.0	53.4	31.6
2	Insecticide use, Labeling knowedge before flowering and pod stage	52.0	29.4	7.5	25.6	43.6	24.8
3	Time or schedule of use of Insecticide	62.5	23.5	12.5	29.6	44.7	27.9
4	Use of fungicide or other chemicals for diseases control	44.2	42.9	0.0	25.7	40.0	34.3
5	Time or schedule of use of fungicide or other chemical for diseases control	62.0	31.4	5.6	20.0	49.4	23.6
6	Use of insecticide for storage pests and safe disposal	67.6	25.6	2.8	25.9	52.4	21.5
7	Time or schedule of use of insecticide for field & storage pest	74.3	25.7	0.0	20.5	41.7	32.5

Table 2: Redgram plant protection chemical use per cent adoption level

Sr. No.	Particular	Knowledge level before trainings			Knowledge level after trainings		
		Low	Medium	High	Low	Medium	High
1	Seed Treatment	72.4	17.8	2.0	12.5	61.4	31.0
2	Use of insecticide	63.7	31.4	2.4	22.1	29.4	21.9
3	Time or schedule of use of insecticide	71.4	22.9	5.7	22.7	37.1	22.4
4	Use of fungicide or other chemicals for diseases control	57.59	31.4	0.0	20.0	42.9	37.1
5	Time or schedule of use of fungicide or other chemical for diseases control	54.0	32.6	9.5	14.3	51.4	34.3
6	Use of insecticide for storage pests	72.1	34.4	1.0	14.3	54.3	31.4
7	Time or schedule of use of insecticide for storage pest	58.4	21.7	0.0	17.1	48.6	34.3

Conclusion

The present study reveals that the intervention of trainings on safe use of plant protection pesticides and schedule KVK, ATMA, DATC, NGOs facilitated the acquisition of knowledge and enhances the adoption regarding plant protection safety schedule to tur farmers. Finding of this study will help to researcher to plan, conduct & guideline them to draw research programme or strategies of farmers benefit and farmers family health.

References

1. Anonymous. Area and production of pulses in India and Karnataka.Hindu Survey 2013, pp:102
2. Butler EJ. The wilt disease of pigeonpea and pepper. Agric. J India 1906;1:25-36.
3. Gade RM. Integrated disease management of pigeonpea wilt. Ph.D. Thesis, Marathwada Agricultural University, Parbhani, M.S.(INDIA) 2002.
4. Huque MM, Rashid MH, Rahman ML. Adoption of improved practices by potato farmers. Bangladesh J Agric Econs 1996;19(1-2):59-69.
5. Kannaiyan J, Nene YL, Reddy MV, Ryan JG, Raju TN. Prevalence of pigeonpea diseases associated with crop losses in Asia. Africa and America. Trop. Pest Manag 1984;30(1):62-71.
6. Patil PV, Patil BP, Karandikar VR. Studies on wilt disease of pigeiopea with reference to yield losses and varietal reaction. Proceed. Indian Phytopath. Soc 1990;34:17
7. Raj AD, Yadav V, Rathod JH. Impact of front line demonstration (FLD) on the yield of pulses International J Sci. and Res 2013;9(3):1-4.
8. Singh BK, Singh Dhiraj Kumar, Yadav VPS, Singh Lotan. Adoption behaviour of commercial potato growers in district Ghaziabad (up). Indian Res J Ext Edu 2010;10(3):5-9.