Control of Rice Leaf Folder (*Cnaphalocrosis medinalis* G.) with Carbaryl by Application to Paddy Field Water

V. R. Upadhyay, N. D. Desai and A. H. Shah

Dept. of Entomology, College of Agriculure, Navsari Campus, GAU, Navsari

Paddy leaf folder, *Cnaphalocrosis medinalis* G. is a serious pest in Gujarat and its control is difficult because of its concealed feeding habit. The behaviour of carbaryl in the rice plant was quite different from that of γ BHC. Carbaryl was taken up better than γ BHC by roots or the lower part of leaf sheath and was accumulated in leaf blade of the plant. Moreover, residual effect of carbaryl remains for about three or four weeks after application (Fukuda, 1968). With this view carbaryl was tried with wettable powder and granules, with different rates, i.e. 1·0, 1·5 and 2·0 kg a i/ha in the field trial in standing water. The water level was kept at about 7·5 cm at the time of application of powder or granules. All necessary care was taken not to drain out the water from field until four days after application i.e. until complete toxicant was used by the plants. Applications of the insecticide were done 15, 30 and 60 days after transplanting.

The trial was laid out in a randomised block design replicated for four times. An improved variety Jirasal 280 was used for the trial. The treatments are mentioned in the Table 1.

The observations were taken by (i) counting the total number of leaves as well as damaged leaves randomally

TABLE 1

Percentage incidence of leaf folder and live larvae.

	Details of treatment	*Total number of leaves*		*Percentage incidence*	*Number of live larvae recorded*
		Observed	*Infested by leaf folders*		
A	Carbaryl W/W 1 kg a i / ha	3306	682	20·67	21
B	Carbaryl W/W 1·5 kg a i / ha	3630	1239	34·03	28
C	Carbaryl W/W. 2·0 kg a i / ha	3660	1106	30·27	23
D	Carbaryl granules 1·0 kg a i / ha	3305	475	14·41	16
E	Carbaryl granules 1·5 kg a i / ha	3553	729	20·49	12
F	Carbaryl granules 2·0 kg a i / ha	3297	451	13·71	11
G	Untreated control	3157	1413	44·74	44
	S.E./plot			75·9	5·2
	C.D. at 5% plot			N.S.	15·34

(*Received on Dec. 30, 1974*)

on 45 hills from each treatment and (ii) by counting the number of live larvae at random on 45 plants. The observations were taken at an interval of 15 days throughout the life period of paddy crops.

In consideration of percentage incidence of leaf folder and number of five larvae (Table 1), it was clearly observed that carbaryl in form of granular application was quite better than in form of wettable powder application in water. Even though, number of live larvae was observed significantly less in all the treatments as compared to (untreated) control, no significant differences were observed within the application of different rates of granules or wettable poweder. The percentage incidence of damaged leaves due to attack of leaf folder was 13·71% and number of live larvae were 11, which was lowest in the treatment with carbaryl granules at the rate of 2·00 kg a i/ha as compared to all other treatments.

REFERENCES

Fukuda, H. 1968. Application of insecticides into the paddy soil or water for rice insect control. *Rev. Pl. Prot. Res.* 1:15-25.