X- Workshop

Venue : Kerala Agricultural University, Vellanikkara

Date : 20th – 23rd August, 1988

1. Varietal trials

Three years data (1985-86 to 1987-88) presented in the workshop compiled by the Project Directorate of Vegetable Research for varietal and hybrids trials were reviewed and the following recommendations were made.

	Crops	Varieties	Source	Zones
1.	Brinjal (Small Round)	Aruna	Akola	VII
2.	Garlic	G-41	AADF	IV and VII

Aruna

G-41 (Agrifound White)

2. Vegetable Agronomy

- The planting of onion variety Pusa Red at a spacing of 15 x 10 cm and application of nitrogen @ 150 kg/ha and P_2O_5 @ 60 kg/ha is recommended for Sabour region.
- Planting of stecklings at a spacing of 60 X 30 cm and application of nitrogen @ 120 kg/ha is recommended for seed crop of the radish variety Pusa Chetki under Pantnagar conditions. Similar spacing and dose of nitrogen are recommended for seed crop of Japanese White under Srinagar conditions.
- Planting of muskmelon variety Hara Madhu at spacing of 280 x 90 cm with N_2, P_2O_5 and K_2O @ 100:60:60 kg/ha is recommended for river bed areas of Faizabad.
- Application of Stomp (pendimethalin) @ 0.5 kg a.i./ha or Lasso (alachlor) @ 1.5 kg a.i./ha as pre-emergence incorporation in the field followed by one hand weeding 25 days after sowing is recommended for pea under Sabour conditions.

3. Vegetable Pathology

- Application of Carbofuran @ 1.25 kg a.i./ha in the seed bed at the time of transplanting followed by three sprays of Endosulfan @ 0.05% a.i. or two spray of Endosulfan and one spray of Monocrotophos @ 0.05% a.i. at 15 days interval after transplanting is recommended for reducing the incidence and intensity of spotted wilt virus of tomato variety Vaishali under Rahuri conditions. These treatments have given an yield of 311 to 317 q/ha which is an increase of 40% over control with a cost benefit ratio of 1:17 and giving a net additional profit of Rs. 33413/ha.

- Four sprays of Dithane M-45 (0.25%) at an interval of 15 days starting from the appearance of disease has been found to be the most effective at Pantnagar centre for the control of the late blight of tomato variety Pusa Ruby. Dithane M-45 can be substituted by Foltaf 80 w (0.2%). Foltaf 80W and Dithane M-45 were observed to be economical by giving maximum net profit of Rs. 7803.00 and Rs. 5723.00 per hectare respectively.
- Four sprays of Cuman L (0.3%) or Flotaf (Captafol) 80W (0.2%) at an interval of 15 days starting from the appearance of disease is recommended for the control of early blight of tomato under Pantnagar conditions in Pusa Ruby variety. These treatments have given an yield of 250 q/ha resulting in an increase of 38 to 40% over control and net profit of Rs. 5,470.00 to 6,690.00 per hectare.

Chilli

- Four sprays of Dithane M-45 (0.25%) +Karathane (0.05%) at 10 days interval is recommended to control the powdery mildew and fruit rot of chillies at Lam centre in Sindhur variety. This treatment gave an yield of 236 Kg/ha resulting in net profit of Rs. 5,530.00.
- Two sprays of any of the two fungicides viz. Topsin M(0.05%) and Bavistin (0.05%) at an interval of 15 days are recommended to control the powdery mildew of chilli variety Pusa Jwala at Hessaraghata yielding net returns of Rs.3950.00 and Rs. 3012.00 per hectare.

Onion

- Four sprays of Dithane M-45 (0.25%) or 4 sprays of Dithane M-45 (0.25%) + 0.05% Monocrotophos at an interval of 15 days effectively reduced the thrips and purple blotch on onion variety Pusa Red at Hessarghatta centre. At AADF, Karnal, 6 sprays of Dithane M-45 (0.25%) + Moncrotophos (0.05%) at 15 days interval controlled purple blotch, *stemphyllium* blight and thrips effectively in bulbs and seed crop of onion.

Cauliflower

- *Sclerotinia* rot in seed cauliflower variety Pusa Snowball-1 and Pusa Snowball K-1 at Katrain was effectively controlled by 4 to 5 sprays of 0.1% Bavistin at an interval of 15 to 21 days at covering curd, bloom and pod stage giving net additional income of Rs.1,02,120.00 per hectare. Spraying should be started soon after curd fromation as the disease is not a problem before pre-curd stage.

4. Physiology and Biochemistry

Effect of Mixtalol on brinjal and tomato

Trials were conducted for three years on brinjal and tomato. The results showed that spray of 4 ppm Mixtalol after 4 to 6 weeks of planting brinjal and four weeks after planting in tomato resulted in additional yields, i.e. 7.1% in brinjal and 4.86% in tomato with additional returns of Rs. 2294.00/ha and 2267.00/ha, respectively.

Recommendations by Pantnagar centre (on tomato)

The three years experiments with 2,4-D, Atonik and Mixtalol treatment showed that the highest average yield (315q/ha) when 5 ppm 2,4-D was sprayed 3 times (first spray in nursery one day before transplanting + second spray at first flower cluster appearance and third spray at forth flower cluster appearance). The net return (Rs.9,270.00/ha) was also higher in this treatment.