VIII –Workshop

Venue : Bihar Agricultural College, Rajendra Agricultural University, Sabour

Date : 6th June – 10th June, 1985

1. Varietal Improvement and Heterosis Breeding

The following varieties were identified based on the data complied upto 1982-83, which have been later confirmed after consideration of 1983-84 data.

Crops	Varieties	Source
Brinjal	ARU-1	ARU, Almora
Long	PBR-91-2	Pantnagar
Round	Sel-8	Katrain
Cabbage	(Resistant to black rot)	
	Line 6-1-2-1	IARI, New Delhi
Cauliflower	(Resistant to black rot)	
(December maturity)	K-2	Kovilpatti
Chillies	VL-Boni-1	VPKAS, Almora
French bean	(North India Hills)	
		NBPGR
Mushkmelon		
Onion	Sel-2	Rahuri
White	N-257-9-1	
Red	N-2-4-1	
Garden Pea		Pantnagar
Mid season	IP-3	Ludhiana
	P-88	
Tomato		Kalyanpur
Determinate	KS-2 (for U.P.)	Pantnagar
Indeterminate	AC-238	

ARU-1

PBR -91-2 (Pant Rituraj)

Sel-8 (Pusa Mukta)

Line 6-1-2-1(Pusa Shubhra)

K-2

VL Bauni Bean 1

Sel -2

N-257-9-1 (Phule Safed)

N-2-4-1

IP-3 (Pant Uphar)

P-88

KS-2(Azad T-2)

AC-238 (AC-238)

Vegetable Agronomy

Tomato

- The tomato cultivars Pusa Ruby, HS-101 and Sioux required 75 x 45cm spacing while 50 cm x 45 cm spacing proved most suitable for KS-2 and HS-101 varieties under agroclimate conditions of Faizabad and Kanpur.
- The application of NPK @ 150:60:60 kg/ha is recommended for Pusa Rubi, Sioux and KS-2 to get maximum return and highest cost/benefit ratio at Kanpur.
- For weed control in tomato, Goal @ 0.25 kg a.i./ha as pre-plant incorporation or Sencor @ 0.75 kg/ha pre-emergence application followed by post-emergence spray of Sencor @ 0.5 kg/ha were most effective and economical. The next best herbicide was Basalin @ 1 Kg a.i./ha as pre-plant incorporation is recommended for Sabour and Pantnagar regions. This treatment gave an excess income of Rs. 4418/ha over control.
- In summer crop of tomato mulching with sugarcane truss is recommended to economize the irrigation and maximize the yield and profit under agro-climate conditions of plains of Northern India. An additional income of Rs. 1000/ha by the application of mulch could be obtained when compared

with usual cultivation practices without mulching. The mulching should be done at about 35 days of transplanting after one manual weeding.

- Under tarai conditions at Pantnagar irrigation at 200 mm open pan evaporation is recommended to get the economic yields during summer seasons and reduce the number of irrigations.

Cauliflower

A spacing of 80 x 60 cm along with applications of 150 kg N_2 and 60 kg P_2O_5/ha are recommended for mid-season cauliflower cv. Pant Shubhra from Pantnagar to get the high yield and maximum returns. But in case of Snowball cauliflower 60 kg N_2/ha as basal dose + 30 kg N_2/ha three splits in foliar sprays was found to be the best.

Onion

- An application of 80 kg N_2 (in two split dose), 60 kg P_2O_5/ha and 60 kg K_2O/ha and planting of onion bulbs at a spacing of 45 x 30 cm are recommended for Pusa Red to obtain maximum seed yield and high economic returns under the agro-climatic conditions of Sabour.
- Pre-plant incorporation of Basalin @ 2 1itre/ha along with one hand weeding at 45 days after transplanting is recommended for weed control in variety Pusa Red to get highest profit under tarai conditions of Pantnagar.

Peas

- Either one of the three chemicals viz. Lasso @ 0.75 l/ha as pre-emergence spray or Tribunil @ 1.5 kg /ha pre-emergence or Basalin @ 2 kg a.i./ha pre-plant incorporation along with one hand weeding at 45 days after sowing was most effective control and highest returns in pea under Pantnagar conditions.

Watermelon

The fertilizer dose of 100 kg N_2 +60 kg P_2O_5/ha + 60 kg K_2O/ha and a planting distance of 320 cm x 120 cm are recommended for getting maximum net returns in watermelon variety Sugar Baby under river bed conditions of Faizabad.

Disease Control

The following recommendations were adopted on the basis of conclusive results for three years.

- At Sabour, the fruit rot and die-back of chillies could be effectively managed by treating the seeds with Bavistin @ 0.05% combined with one spray of 0.05% Bavistin and 3 sprays of Cuman L. @ 0.15% at 15 days interval.
- The powdery mildew of muskmelon at Rahuri was effectively checked by 3 sprays of Calixin @ 0.05% or Sulfex @ 0.25% at an interval of 15 days starting from 30-40 days after sowing.
- Seed treatment with Bavistin @ 18 kg/ha of seed, seedling dip in 0.05% Bavistin for 30 mintues before transplanting followed by two spraying of 0.05% Bavistin or 3 spraying of Fytolan (0.3%) at an interval of 10-15 days after one month of transplanting resulted in significant reduction in *Phomopsis* blight and fruit rot of brinjal at Sabour.
- Purple blotch of onion in bulb crop under North Indian conditions (AADF, Karnal) was effectively reduced by 4 sprays of 0.25% Dithane M-45 (mixed with 0.1% sticker Triton) at 15 days interval after transplanting. For seed crop, 6 sprays are enough for control of the disease.

4. Insect Control

- Against fruit borer in tomato, three spraying of Deltamethrin @ 20 g a.i./ha times, starting from flowering controlled the pest economically at Ludhiana.
- Against pod borer in chillies, spraying of Cypermethrin @ 0.1 kg a.i./ha was found to be most effective in controlling the pest at Lam (Guntur).
- Against diamondback moth and leaf webber in cabbage, 3 sprays of Fenvalerate @ 50 g a.i. /ha was found to give maximum cost benefit ratio at Hessarghatta.
- Against onion thrips, 4 sprays of Malathion (0.1%) at 15 days interval were found to be economical at AADF, Karnal.

IX-Workshop

Venue : Narendra Dev University of Agriculture and Technology, Faizabad

Date : 13th to 16th January, 1987

Breeding

Varietal trials: Sub-Committee for identification of varieties recommended following varieties for release.

Crops	Varieties	Source	Zones	Centres for which identified
Brinjal Long	ARU-2C	ARU, Almora	I	Almora
			IV	Kalyanpur
			VI	Hisar
			VIII	Coimbatore, Hessaraghatta
	KAT-4 (Hybrid)	Katrain	VIII	Coimbatore
Brinjal Round	K-202-9	Anand	VI	Anand
Chillies				
Irrigated trial	J-218	Jabalpur	I	Srinagar
			IV	Kalyanpur
			V	Bhubaneshwar
			VI	Hisar
			VII	Ambajogai, Rahuri, Akola
	X-235	Lam	IV	Sabour
			V	Bhubaneshwar
			VI	Hisar
			VII	Coimbatore, Kovilpatti
	Musalawadi	Rahuri	IV	Sabour, Kalyanpur
			V	Bhubaneshwar
			VII	Rahuri
			VIII	Coimbatore, Hessaraghatta
Rainfed	X-235	Lam	I	Almora
			V	Lam
	Musalawadi	Rahuri	V	Lam
French Bean	Arka Komal	IIHR	I	Almora, Katrain, Solan
			VII	Rahuri
			VIII	Hessaraghatta
	UPF-191	Pantnagar	IV	Pantnagar
			VII	Rahuri