

Hi-Tech Vegetables Farming

KVKs : Balaghat , Betul, Chhatarpur, Chhindwara, Dindori , Damoh, Harda, Jabalpur, Katni, Satna, Mandla, Narsinghpur, Panna, Rewa, Sagar, Seoni , Shahdol, Sidhi, Tikamgarh, Umaria, Badwani , Dhar , Jhabua, Shivpuri , Khandwa, Indore, Ratlam , Mandsaur, Bhind, Neemuch, Guna, Shajapur, Durg, Surajpur, Bilaspur, Mainpat, Bhatapara, Raigarh, Korea Mahasamund, Kawardha, Rajnandgaon & Raipur

Description of Technology adopted

High value row crops such as tomatoes, cucumber, bottle gourd etc. are suited to maximum production by using plastic mulches with following advantages-

- ▶ Season extension
- ▶ More moisture retention of soil
- ▶ Beneficial in weed & pest management
- ▶ Leaching reduction
- ▶ Good quality & yield of produce
- ▶ Increase water and fertilizer use efficiency
- ▶ Increase in number of picking

Protected (polyhouse) cultivation of Capsicum and cucumber

- ▶ Off season cultivation
- ▶ Increase rate due to high quality
- ▶ Increased yield

Promising Characteristics of Technology

S. No.	Characteristics	Observation (Unit)
1.	Yield enhancement	40% (upto 200% in
2.	Water Saving (%)	15-22 %
3.	Water and fertilizer use efficiency	70-80%
4.	Yield qt/ha	
	A. Tomato	600-650
	B. Cucurbitaceous Veg.	500-550
	C. Cowpea	200-225
	D. Capsicum	400-450
	Protected Nethouse	
	A. Tomato	700-750
	B. Cucurbitaceous Veg.	625-650
	C. Capsicum	500-575
	Polyhouse	
	A. Capsicum	750-800
	B. Cucumber	400-450



Horizontal Spread of Technology

University	No. of village covered	No. of farmers	Area in ha or No. of units
JNKVV/MP	1554	19985	2282
RVSKVV/MP	1153	74042	4852
IGKVV/CG	753	3927	5771
Total	3640	97954	77113

Name of schemes supported by Central/ State Govt. in large scale dissemination under convergence

S. No.	Scheme	State Govt./Central Govt.
1.	KVK, MIDH	District Horticulture Department
2.	Pradhan Mantri Krishi Sinchai Yojna	Drip irrigation scheme in Badi of maginal/ Small farmers
3.	National Horticulture Mission	State micro-irrigation Scheme
4.	Vegetable Growing Kit	Riverbed Vegetable Production Scheme



Vegetables Condition	Economics of adopted technology/ha (pooled data)			
	Cost (in Rs.)	Gross return (in Rs.)	Net return (in Rs.)	B:C ratio
Open	185000	721000	536000	3.80
Protected - Shade Net	265000 10 percent of the total cost of Drip and others accessories	1169000	904000	4.50
Protected- Polyhouse for 4000 sq. mt.	5600000 (Rs. 900/sq. m.)	30,00,000	18,00,000	4.8

Impact of adopted technology in economic and social terms

B:C ratio of 3.30 obtain through plastic mulches, drip irrigation and fertigation prove as a boon to enhance productivity of vegetable by creating a favorable soil water plant relation in soil surface. Many farmers have turned to drip irrigation and have enjoyed improved profitability by increasing crop yield and quality. Details of prominent varieties of crops: Tomato- Super Laxmi, F1 1057 and Himshikhar. Cucurbits- Hybrids –Dolly (Spong G.), F1 -1312 (Bittergourd), Tasty , (Cucumber). Cowpea -YB-7 , Godavari, Capsicum- Swarna , California wonder High value crops and offseason vegetables fetches more and it needs more technical knowledge and high resources



District wise horizontal spread of technology in JNKVV

District	No. of village covered	No. of farmers	Area in ha
Balaghat	148	540	300
Betul	8	13	15
Chhatarpur	15	15	26
Chhindwara	37	3650	10089
Dindori	532	8220	3119
Damoh	189	4324	6857
Harda	40	381	173
Jabalpur	09	68	110
Katni	123	861	353
Satna	23	36	36
Mandla	38	200	245
Narsinghpur	6	8	20
Panna	44	137	114.22
Rewa	16	22	15
Sagar	45	650	350
Seoni	138	582	768
Shahdol	108	134	99
Sidhi	4	5	2
Tikamgarh	15	22	10
Umaria	25	185	230
Total	1554	19985	22821

Technology adopted

- ▶ Raising of vegetable nursery under control condition
- ▶ Planting on raised bed with poly mulching
- ▶ Fertigation with automation system
- ▶ Staking

District wise horizontal spread of technology in RVSKVV

Name of KVKs	No. of villages covered	No. of farmers	Area in ha
Badwani	46	358	2382
Dhar	67	35500	25000
Jhabua	76	3100	2500
Shivpuri	12	150	2500
Khandwa	206	1870	1038
Indore	13	26	10.40
Ratlam	45	475	750
Mandsaur	614	31768	13387
Bhind	10	20	50
Nimach	16	300	60
Guna	08	175	210
Shajapur	40	300	624
Total	1153	74042	48521.40

District wise horizontal spread of technology in IGKVV

Name of KVVs	No of village covered	No of farmers	Area in ha
Surajpur	145	454	980
Durg I	06	20	8.5
Bilaspur	20	400	500
Bhatapara	37	42	465
Dantewara	05	10	10
Rajnangoan	36	288	720
Korea	21	150	150
Narayanpur	06	06	1.6
Raigarh	75	250	110
Raipur	54	751	1890
Mahasamund	358	1556	936
Total	753	3927	5771

75% of phosphorus is given as basal dose at land preparation 469 kg SSP / acre
Economics of adopted technology:

Sr. No.	Season	Crop	Avg. cost	Avg. gross return	Avg. net return	B:C ratio
1	Kharif	Brijal	85000	300000	215000	3.52
2	Rabi	Tomato	95000	350000	245000	3.68
3	Summer	Cucurbits	115000	380000	265000	3.30

Farmers profit 35-40% less than hi-tech vegetable production



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