

Experiment No. :1							
1.	Title of experiment	:	OKRA (YVMV & ELCV) HYBRID RESISTANT IET				
2.	Location	:	Regional Horticultural Research Station, A.C.H., N.A.U., Navsari				
3.	Agro-ecological situation	:	South Gujarat Heavy Rainfall Zone, AES-III				
4.	Name of Investigator	:	PI: Dr. J.M. Vashi Co-PI: Dr. A.I .Patel & Dr.D.R.Bhanderi Asso. PI: Dr.H.R.Rathod				
5.	Year and Season	:	<i>Kharif-2024</i>				
6.	Experimental detail	:					
	(a) Design	:	RBD				
	(b) No. of Entries	:	12				
			1	2024/ OKYVELHYBRES-1	7	2024/ OKYVELHYBRES-7	
			2	2024/ OKYVELHYBRES-2	8	2024/ OKYVELHYBRES-8	
			3	2024/ OKYVELHYBRES-3	9	2024/ OKYVELHYBRES-9	
			4	2024/ OKYVELHYBRES-4	10	2024/ OKYVELHYBRES-10	
			5	2024/ OKYVELHYBRES-5	11	2024/ OKYVELHYBRES-11	
			6	2024/ OKYVELHYBRES-6	12	2024/ OKYVELHYBRES-12	
	(c) Replication	:	3				
	(d) Plot Size	:	3.0 m X 2.7 m				
	(e) Spacing	:	60 cm X 30 cm				
	(f) Fertilizer NPK kg/ha	:	150-100-100				
	(g) Date of sowing	:	28/07/2024				
	(h) Date of first picking	:	11/09/2024				
	(i) Date of last picking	:	25/11/2024				
7.	Methodology	:	Observations were recorded as per the guideline provided by PC cell, IIVR, Varanasi.				
8.	Research results	:	Table -1 to Table – 16				

Table 7.YVMV Count at end of trial at Navsari centre (Okra YVMV & ELCV Hybrid Resistant IET)

YVMV Count at end of trial										
Sr. No.	Entries/Genotype	Number				PDI Range				Reaction
		RI	RII	RIII	Me an	RI	RII	RII I	Mea n	
1	2024/ OKYVELHYBRES-1	5	4	3	4	2.2 2	1.7 7	1.3 3	1.77	Resistance
2	2024/ OKYVELHYBRES-2	0	0	0	0	0	0	0	0	Imuune
3	2024/ OKYVELHYBRES-3	0	0	0	0	0	0	0	0	Imuune
4	2024/ OKYVELHYBRES-4	0	0	0	0	0	0	0	0	Imuune
5	2024/ OKYVELHYBRES-5	0	0	0	0	0	0	0	0	Imuune
6	2024/ OKYVELHYBRES-6	4	3	4	3.6 6	1.7 7	1.3 3	1.7 7	1.62	Resistanse
7	2024/ OKYVELHYBRES-7	0	0	0	0	0	0	0	0	Imuune
8	2024/ OKYVELHYBRES-8	0	0	0	0	0	0	0	0	Imuune
9	2024/ OKYVELHYBRES-9	0	0	0	0	0	0	0	0	Imuune
10	2024/ OKYVELHYBRES-10	0	0	0	0	0	0	0	0	Imuune
11	2024/ OKYVELHYBRES-11	0	0	0	0	0	0	0	0	Imuune
12	2024/ OKYVELHYBRES-12	0	0	0	0	0	0	0	0	Imuune

Table 8. ELCV Infection (%) at Navsari centre (Okra YVMV & ELCV Hybrid Resistant IET)

Sr. No.	Entries/Genotype	ELCV Infection (%)
1	2024/ OKYVELHYBRES-1	3.66
2	2024/ OKYVELHYBRES-2	0.00
3	2024/ OKYVELHYBRES-3	0.00
4	2024/ OKYVELHYBRES-4	0.00
5	2024/ OKYVELHYBRES-5	0.00
6	2024/ OKYVELHYBRES-6	0.00
7	2024/ OKYVELHYBRES-7	0.66
8	2024/ OKYVELHYBRES-8	0.00
9	2024/ OKYVELHYBRES-9	0.00
10	2024/ OKYVELHYBRES-10	0.66
11	2024/ OKYVELHYBRES-11	0.00
12	2024/ OKYVELHYBRES-12	0.66

Table 9. Marketable fruit yield (kg/plot) at Navsari centre (Okra YVMV & ELCV Hybrid Resistant IET)

Fruit yield (kg/plot)					
Sr. No.	Entries/Genotype	RI	RII	RIII	Mean
1	2024/ OKYVELHYBRES-1	6.62	6.46	7.89	6.99
2	2024/ OKYVELHYBRES-2	7.43	8.05	9.72	8.40
3	2024/ OKYVELHYBRES-3	12.05	9.30	11.30	10.88
4	2024/ OKYVELHYBRES-4	8.80	6.40	7.52	7.57
5	2024/ OKYVELHYBRES-5	8.84	7.61	9.42	8.62
6	2024/ OKYVELHYBRES-6	8.88	9.58	5.62	8.03
7	2024/ OKYVELHYBRES-7	7.72	6.83	7.85	7.47
8	2024/ OKYVELHYBRES-8	6.69	6.76	8.23	7.23
9	2024/ OKYVELHYBRES-9	7.75	5.83	7.52	7.03
10	2024/ OKYVELHYBRES-10	10.75	9.72	9.90	10.12
11	2024/ OKYVELHYBRES-11	8.99	7.65	6.85	7.83
12	2024/ OKYVELHYBRES-12	8.20	8.30	7.47	7.99
S. Em ±		0.61			
CD at 5%		1.80			
CV%		12.97			

Table 10. Marketable fruit yield (q/ha) at Navsari centre (Okra YVMV & ELCV Hybrid Resistant IET)

Fruit yield (q/ha)					
Sr. No.	Entries/Genotype	RI	RII	RIII	Mean
1	2024/ OKYVELHYBRES-1	81.73	79.75	97.41	86.30
2	2024/ OKYVELHYBRES-2	91.73	99.38	120.00	103.70
3	2024/ OKYVELHYBRES-3	148.77	114.81	139.51	134.36
4	2024/ OKYVELHYBRES-4	108.64	79.01	92.84	93.50
5	2024/ OKYVELHYBRES-5	109.14	93.95	116.30	106.46
6	2024/ OKYVELHYBRES-6	109.63	118.27	69.38	99.09
7	2024/ OKYVELHYBRES-7	95.31	84.32	96.91	92.18
8	2024/ OKYVELHYBRES-8	82.59	83.46	101.60	89.22
9	2024/ OKYVELHYBRES-9	95.68	71.98	92.84	86.83
10	2024/ OKYVELHYBRES-10	132.72	120.00	122.22	124.98
11	2024/ OKYVELHYBRES-11	110.99	94.44	84.57	96.67
12	2024/ OKYVELHYBRES-12	101.23	102.47	92.22	98.64
S. Em ±		7.56			
CD at 5%		22.18			
CV%		12.97			

Table 11. Average weight of single fruit (g) at Navsari centre (Okra YVMV & ELCV Hybrid Resistant IET)

Average Single fruit weight (g)					
Sr. No.	Entries/Genotype	RI	RII	RIII	Mean
1	2024/ OKYVELHYBRES-1	9.50	10.80	11.50	10.60
2	2024/ OKYVELHYBRES-2	11.58	11.34	11.80	11.57
3	2024/ OKYVELHYBRES-3	14.66	13.50	14.70	14.29
4	2024/ OKYVELHYBRES-4	11.08	11.68	11.70	11.49
5	2024/ OKYVELHYBRES-5	11.33	11.59	11.20	11.37
6	2024/ OKYVELHYBRES-6	12.40	11.30	10.33	11.34
7	2024/ OKYVELHYBRES-7	9.36	11.39	10.44	10.40
8	2024/ OKYVELHYBRES-8	12.30	10.60	10.98	11.29
9	2024/ OKYVELHYBRES-9	10.78	12.33	11.36	11.49
10	2024/ OKYVELHYBRES-10	13.50	10.70	12.32	12.17
11	2024/ OKYVELHYBRES-11	11.38	11.69	11.66	11.58
12	2024/ OKYVELHYBRES-12	10.30	11.45	12.66	11.47
S. Em ±		0.51			
CD at 5%		1.49			
CV%		7.57			

Table 12. Fruit Length (cm) at Navsari centre (Okra YVMV & ELCV Hybrid Resistant IET)

Fruit Length (cm)					
Sr. No.	Entries/Genotype	RI	RII	RIII	Mean
1	2024/ OKYVELHYBRES-1	10.80	10.50	10.66	10.65
2	2024/ OKYVELHYBRES-2	11.30	11.14	9.95	10.80
3	2024/ OKYVELHYBRES-3	10.80	12.89	11.90	11.86
4	2024/ OKYVELHYBRES-4	10.80	10.99	10.55	10.78
5	2024/ OKYVELHYBRES-5	10.15	10.88	10.90	10.64
6	2024/ OKYVELHYBRES-6	10.50	10.85	10.75	10.70
7	2024/ OKYVELHYBRES-7	10.66	9.90	10.15	10.24
8	2024/ OKYVELHYBRES-8	10.30	9.70	9.25	9.75
9	2024/ OKYVELHYBRES-9	10.10	11.07	10.02	10.40
10	2024/ OKYVELHYBRES-10	12.77	10.95	11.99	11.90
11	2024/ OKYVELHYBRES-11	10.11	10.75	10.78	10.55
12	2024/ OKYVELHYBRES-12	11.30	9.66	10.85	10.60
S. Em ±		0.36			
CD at 5%		1.06			
CV%		5.83			

Table 13. Fruit Girth (cm) at Navsari centre (Okra YVMV & ELCV Hybrid Resistant IET)

Fruit Girth (cm)					
Sr. No.	Entries/Genotype	RI	RII	RIII	Mean
1	2024/ OKYVELHYBRES-1	4.96	5.20	4.80	4.99
2	2024/ OKYVELHYBRES-2	5.10	5.39	5.02	5.17
3	2024/ OKYVELHYBRES-3	5.91	6.23	5.71	5.95
4	2024/ OKYVELHYBRES-4	5.43	5.05	5.65	5.38
5	2024/ OKYVELHYBRES-5	5.20	5.40	5.85	5.48
6	2024/ OKYVELHYBRES-6	4.91	5.55	5.13	5.20
7	2024/ OKYVELHYBRES-7	5.65	5.02	5.17	5.28
8	2024/ OKYVELHYBRES-8	5.69	5.10	5.27	5.35
9	2024/ OKYVELHYBRES-9	5.03	5.64	5.20	5.29
10	2024/ OKYVELHYBRES-10	6.20	5.65	6.37	6.07
11	2024/ OKYVELHYBRES-11	5.35	5.58	4.91	5.28
12	2024/ OKYVELHYBRES-12	5.30	4.78	4.66	4.91
S. Em ±		0.18			
CD at 5%		0.54			
CV%		5.91			

Table 14. Plant height at harvest (cm) at Navsari centre (Okra YVMV & ELCV Hybrid Resistant IET)

Plant height at harvest (cm)					
Sr. No.	Entries/Genotype	RI	RII	RIII	Mean
1	2024/ OKYVELHYBRES-1	131.69	133.69	130.99	132.12
2	2024/ OKYVELHYBRES-2	132.29	129.09	116.09	125.82
3	2024/ OKYVELHYBRES-3	155.99	161.89	146.29	154.72
4	2024/ OKYVELHYBRES-4	136.69	146.49	121.99	135.06
5	2024/ OKYVELHYBRES-5	141.79	139.49	117.89	133.06
6	2024/ OKYVELHYBRES-6	121.89	135.89	133.49	130.42
7	2024/ OKYVELHYBRES-7	137.49	148.49	148.29	144.76
8	2024/ OKYVELHYBRES-8	137.04	146.09	152.19	145.11
9	2024/ OKYVELHYBRES-9	135.99	125.89	128.29	130.06
10	2024/ OKYVELHYBRES-10	167.04	149.09	156.09	157.41
11	2024/ OKYVELHYBRES-11	132.05	130.20	117.89	126.71
12	2024/ OKYVELHYBRES-12	118.90	105.60	115.72	113.41
S. Em ±		4.66			
CD at 5%		13.66			
CV%		5.95			

Table 15. Number of fruits per plant at Navsari centre(Okra YVMV & ELCV Hybrid Resistant IET)

Number of fruits per plant					
Sr. No.	Entries/Genotype	RI	RII	RIII	Mean
1	2024/ OKYVELHYBRES-1	12.60	13.40	14.60	13.53
2	2024/ OKYVELHYBRES-2	13.80	14.00	13.40	13.73
3	2024/ OKYVELHYBRES-3	18.80	17.40	20.80	19.00
4	2024/ OKYVELHYBRES-4	14.80	13.80	13.80	14.13
5	2024/ OKYVELHYBRES-5	13.60	14.60	13.80	14.00
6	2024/ OKYVELHYBRES-6	15.00	13.80	14.40	14.40
7	2024/ OKYVELHYBRES-7	13.00	13.80	14.40	13.73
8	2024/ OKYVELHYBRES-8	12.80	14.40	13.60	13.60
9	2024/ OKYVELHYBRES-9	12.40	13.40	15.40	13.73
10	2024/ OKYVELHYBRES-10	18.80	17.40	16.20	17.47
11	2024/ OKYVELHYBRES-11	13.80	14.60	13.40	13.93
12	2024/ OKYVELHYBRES-12	12.00	11.20	11.80	11.67
S. Em ±		0.56			
CD at 5%		1.64			
CV%		6.70			

Table 16. Ancillary Observations at Navsari centre (Okra YVMV & ELCV Hybrid Resistant IET)

Sr. No.	Entries/Genotype	Number of ridges/fruit	Fruit colour	Fruit texture
1	2024/ OKYVELHYBRES-1	5.00	Green	Smooth
2	2024/ OKYVELHYBRES-2	5.00	Green	Smooth
3	2024/ OKYVELHYBRES-3	5.00	Green	Smooth
4	2024/ OKYVELHYBRES-4	5.00	Green	Smooth
5	2024/ OKYVELHYBRES-5	5.00	Green	Smooth
6	2024/ OKYVELHYBRES-6	5.00	Green	Smooth
7	2024/ OKYVELHYBRES-7	5.00	Green	Smooth
8	2024/ OKYVELHYBRES-8	5.00	Green	Smooth
9	2024/ OKYVELHYBRES-9	5.00	Green	Smooth
10	2024/ OKYVELHYBRES-10	5.00	Green	Smooth
11	2024/ OKYVELHYBRES-11	5.00	Green	Smooth
12	2024/ OKYVELHYBRES-12	5.00	Green	Smooth

Conclusion: In IET of Okra Yellow Vein Mosaic & ELCV Resistant Trail total twelve hybrids were tested. Marketable fruit yield difference was significant among hybrids evaluated. With 134.36 q/ha marketable fruit yield, 2024/ OKYVELHYBRES-3 was found highly significant.