

Table (8). Heterosis as percentage of mid-parent (MP) and better-parent (BP) for some morphological traits in 7 inbred lines and their F₁ crosses.

Crosses	Plant height (cm)		Ear height (cm)		Stem diameter (cm)		Number of leaves/plant		Flag leaf area (cm ²)	
	M.P	B.P	M.P	B.P	M.P	B.P	M.P	B.P	M.P	B.P
P1 x P2	38.61**	36.539**	35.34**	33.303**	31.54**	20.769**	38.22**	37.173**	45.02**	44.262**
P1 x P3	26.45**	17.412**	20.45**	15.152**	32.19**	21.524**	27.00**	18.000**	47.30**	39.103**
P1 x P4	36.65**	30.121**	25.00**	16.216**	16.49	-5.155	17.78**	6.667**	48.54**	44.951**
P1 x P5	13.89**	9.218**	31.95**	21.887**	17.56*	1.778	15.56**	2.222	22.54**	18.830**
P1 x P6	11.27**	-7.042**	0.76	-18.764**	19.55*	-6.364**	26.11**	18.889**	15.57**	-2.623
P1 x P7	28.13**	18.750**	27.70**	21.622**	25.45**	5.455	30.75**	29.688**	44.30**	43.360**
P2 x P3	18.46**	11.172**	41.04**	35.259**	0.01	0.02	18.26**	6.818**	50.01**	42.911**
P2 x P4	31.56**	26.794**	37.92**	28.725**	11.35	1.923	11.06**	-2.439	47.33**	42.939**
P2 x P5	23.08**	21.493**	9.68**	-6.452**	11.04	7.917**	21.94**	8.333**	39.49**	35.767**
P2 x P6	27.65**	15.077**	38.02**	23.958**	36.50**	25.478**	28.71**	20.544**	47.20**	35.136**
P2 x P7	19.72**	11.924**	17.44**	7.917**	3.92	-7.216*	28.96**	26.667**	32.26**	30.185**
P3 x P4	25.30**	23.810**	30.59**	27.059**	-11.89	-23.786**	18.52**	17.539**	37.90**	24.056**
P3 x P5	41.90**	31.915**	43.00**	32.818**	11.04	7.917*	18.55**	4.348**	49.39**	46.271**
P3 x P6	5.08**	-3.052**	-4.03*	-17.742**	9.36	-6.364*	14.84**	17.045**	42.39**	21.717**
P3 x P7	30.11**	29.572**	23.22**	21.875**	26.84**	18.367**	27.36**	35.209**	45.96**	36.663**
P4 x P5	30.42**	27.002**	20.00**	17.500**	0.83	-6.250*	20.37**	18.519**	27.98**	26.396**
P4 x P6	18.69**	10.112**	18.18**	11.514**	6.41	0.001	13.78**	10.511**	22.47**	11.007**
P4 x P7	27.92**	25.925**	31.02**	28.725**	31.33**	30.667**	16.67**	6.667**	45.92**	43.057**
P5 X P6	13.33**	0.03	15.24**	10.976**	1.25	-12.500**	13.61**	8.333**	29.87**	17.999**
P5 X P7	36.45**	31.579**	24.83**	29.680**	19.83**	13.333**	14.44**	2.222	55.41**	54.022**
P6 x P7	15.37**	8.764**	5.07**	-5.797**	-6.25	-12.500**	28.07**	22.133**	37.37**	24.893**

*and ** = Significant at 0.05 and 0.01 levels of probability, respectively

Table (9). Heterosis as percentage of mid-parent (MP) and better-parent (BP) for some ear traits in 7 inbred lines and their F₁ crosses.

Crosses	Ear weight (g)		Number of ears /plant		Ear length/cm		Ear diameter/cm		Cub weight/g	
	M.P	B.P	M.P	B.P	M.P	B.P	M.P	B.P	M.P	B.P
P1 x P2	34.42**	22.118**	57.14**	57.14**	22.64**	16.98**	-47.50**	-57.50**	-12.61**	-36.94**
P1 x P3	42.95**	39.498**	40.00**	40.00**	32.00**	24.00**	6.64	-11.50**	21.95**	7.32**
P1 x P4	43.98**	35.854**	3.23	3.23	10.84**	7.45**	-32.45**	-34.04**	-19.82**	-49.90**
P1 x P5	50.25**	43.577**	33.33*	33.33**	19.32**	13.64**	-3.27	-17.76**	0.83	-26.67**
P1 x P6	54.47**	50.242**	40.91**	36.36**	24.00**	24.00**	-4.00	-26.00**	-20.02**	-44.21**
P1 x P7	59.85**	57.112**	-16.67	-33.33**	15.58**	13.42**	-7.48	-17.76**	-22.31**	-27.69**
P2 x P3	43.35**	36.061**	45.45**	45.45**	11.90**	-4.76**	-45.52**	-64.18**	7.34*	4.59**
P2 x P4	53.50**	51.456**	50.00**	50.00**	5.56	2.22	10.38*	5.38*	45.50**	43.48**
P2 x P5	31.30**	27.536**	25.00	25.00**	21.43**	10.20**	-29.75**	-59.49**	47.13**	43.68**
P2 x P6	53.23**	48.718**	62.21**	59.30**	12.77**	6.38**	-10.34*	-26.44**	11.16**	9.82**
P2 x P7	50.88**	44.934**	50.00**	42.86**	14.29**	10.20**	1.83	-0.92	3.65	-21.17**
P3 x P4	46.51**	41.952**	40.00**	40.00**	13.41**	0.001	16.80**	1.60	4.41	-1.96
P3 x P5	30.09**	33.923**	42.31**	42.31**	18.09**	29.79**	-16.48**	-7.95*	35.46**	29.35**
P3 x P6	35.65**	33.548**	-8.33	-16.67	22.73**	13.64**	8.24	6.59*	-49.42**	-51.60**
P3 x P7	54.66**	54.312**	30.00*	20.00**	32.43**	22.78**	5.50	-4.00	14.56**	-5.06**
P4 x P5	53.87**	53.360**	6.25	6.25	21.28**	12.77**	-55.71	-75.71**	58.80**	57.64**
P4 x P6	41.22**	38.108**	45.83**	41.67**	30.70**	28.07**	6.82	-11.82**	47.25**	44.51**
P4 x P7	47.79**	43.735**	-6.06	-21.21**	12.90**	11.83**	-3.18	-11.82**	30.16**	9.78**
P5 X P6	49.24**	47.120**	18.75	12.50	24.47**	19.15**	26.25**	20.83**	19.40**	12.93**
P5 X P7	64.47**	62.098**	-16.67	-33.33**	34.82**	28.57**	0.50	-4.00	47.06**	30.25**
P6 x P7	42.41**	40.974**	-25.00	-33.33**	0.26	-2.30	19.13**	9.57**	11.17**	-10.46**

*and ** = Significant at 0.05 and 0.01 levels of probability, respectively.

Table (10). Heterosis as percentage of mid-parent (MP) and better-parent (BP) for kernel yield and its components traits in 7 inbred lines and their F₁ crosses.

Crosses	Number of rows/ear		Number of kernels/row		100-kernel weight (g)		Kernel weight/ear		Kernel yield/plant	
	M.P	B.P	M.P	B.P	M.P	B.P	M.P	B.P	M.P	B.P
P1 x P2	22.22**	11.11**	45.83**	44.79**	2.51	-7.66**	44.26**	24.29**	76.13**	67.58**
P1 x P3	23.68**	15.79**	38.00**	32.00**	31.76**	25.56**	50.21**	40.51**	70.05**	64.21**
P1 x P4	26.32**	15.79**	49.48**	46.88**	-7.48*	-20.16**	54.54**	40.09**	54.54**	40.09**
P1 x P5	23.81**	23.81**	38.19**	29.17**	20.15**	6.05**	59.41**	46.76**	72.86**	64.41**
P1 x P6	22.73**	18.18**	13.04**	0.29	-6.75*	-13.69**	65.33**	56.96**	79.03**	72.42**
P1 x P7	22.50**	20.00**	32.58**	22.47**	12.12**	0.20	74.62**	73.47**	69.90**	64.03**
P2 x P3	43.18**	40.91**	53.43**	48.04**	20.56**	19.48**	49.18**	40.27**	72.24**	67.37**
P2 x P4	47.83**	47.83**	34.00**	29.33**	30.77**	29.81**	55.11**	53.07**	77.56**	76.54**
P2 x P5	33.33**	23.81**	47.70**	39.08**	38.74**	34.23**	25.97**	22.09**	43.49*	40.53**
P2 x P6	6.25	-12.50**	36.46**	28.13**	28.91**	26.10**	58.06**	52.71**	84.24**	83.48**
P2 x P7	28.95**	21.05**	36.46**	28.13**	8.59**	5.68**	60.44**	47.86**	80.96**	77.62**
P3 x P4	47.92**	45.83**	33.33**	30.30**	8.75**	6.25**	52.77**	46.58**	71.71**	68.00**
P3 x P5	30.00**	20.00**	60.78**	58.82**	41.10**	35.97**	39.34**	31.80**	64.91**	60.55**
P3 x P6	22.50**	10.00**	22.92**	4.17	-3.49	-6.18**	46.21**	43.58**	41.31*	33.78**
P3 x P7	36.36**	31.82**	22.92**	4.17	35.88**	32.98**	65.00**	59.71**	75.79**	75.79**
P4 x P5	33.33**	23.81**	40.85**	35.21**	34.51**	30.60**	52.46**	52.14**	52.46**	52.14**
P4 x P6	25.00**	10.00**	49.12**	38.94**	6.60*	1.62	39.25**	34.23**	67.20**	67.11**
P4 x P7	50.00**	44.44**	52.08**	42.50**	34.81**	33.64**	54.37**	41.75**	53.13**	47.00**
P5 x P6	10.53	5.26*	48.06**	33.01**	23.82**	15.24**	53.98**	50.49**	62.80**	62.65**
P5 x P7	42.59**	40.74**	52.65**	38.94**	40.23**	37.73**	69.35**	61.08**	65.38**	61.08**
P6 x P7	21.43**	14.29**	13.75**	13.75**	18.96**	13.19**	52.61**	43.21**	40.92*	33.35**