Table 1. Means of five characters taken on two dwarf mutants, their motherlines and certain intercrosses among them.

Mutant or Cross		Plant height in centimeters	Number of seeds	Total kernel weight in grams	Kernel row number	Ear length in millimeters
Id_2	(inbred)	92.30	426.90	81.40	15.20	174.90
IId_2	(")	83.70	138.30	3030	10.60	107.00
ID_1	(")	188.58	701.65	168.23	15.43	214.06
IID_2	(")	179.05	530.98	116.27	13.70	190.79
$ID_1 \times IID_2$	(single cross)	254.91	903.59	292.53	16.59	259.48
$ID_1 \times IId_2$	(")	240.19	840.52	261.62	18.25	254.34
$Id_1 \times IID_2$	(")	224.24	848.12	275.46	16.64	267.83
$Id_1 \times IId_2$	(")	211.29	822.96	258.60	17.13	255.32

Table 2. Variance ratios for 5 attributes taken on four F_1 hybrids.

Genotypic contrast	Plant height Difference is	F-value	Number of seeds Difference is	F-value	Total kernel weight Difference is	F-value	Kernel row number Difference is	F-value	Ear length Difference is	F-value
ID_1IID_2 vs ID_1IId_2 vs Id_1IID_2 vs Id_1IId_2		129.88**		1.77		12.60**		32.79**		7.28*
$ID_1IID_2 + ID_1IId_2$ vs $Id_1IID_2 + Id_1IId_2$	+	320.31**	+	1.94	+	29.93**	+	15.83**	−	4.19*
$ID_1IID_2 + Id_1IId_2$ vs $ID_1IId_2 + Id_1IID_2$	+	.27	+	.52	+	5.29*	−	18.76**	−	2.63
$ID_1IID_2 + Id_1IID_2$ vs $ID_1IId_2 + Id_1IId_2$	+	69.08**	+	2.83	−	2.59	−	63.76**	+	15.02*

*Exceeds 5 percent level of significance.
**Exceeds 1 percent level of significance.

Table 3. Comparison of crosses and lines.

Character	Difference represents	Result	Percent increase of cross over parent 1 + parent 2	Comparison represents	Result	Percent increase of cross over mean of parents
Plant height	$ID_1 \times IID_2 - (ID_1 + IID_2)$	-112.72	no	$ID_1 + IID_2 - \dfrac{ID_1 \times IID_2}{2}$	71.10	39
	$ID_1 \times IID_2 - (Id_1 + IId_2)$	78.91	45	$ID_1 \times IID_2 - \dfrac{Id_1 + IId_2}{2}$	166.91	190
	$Id_1 \times IId_2 - (Id_1 + IId_2)$	35.29	20	$Id_1 \times IId_2 - \dfrac{Id_1 + IId_2}{2}$	123.29	140
Number of seeds	$ID_1 \times IID_2 - (ID_1 + IID_2)$	-329.04	no	$ID_1 \times IID_2 - \dfrac{ID_1 + IID_2}{2}$	287.28	47
	$ID_1 \times IID_2 - (Id_1 + IId_2)$	338.59	60	$ID_1 \times IID_2 - \dfrac{Id_1 + IId_2}{2}$	620.99	220
	$Id_1 \times IId_2 - (Id_1 + IId_2)$	257.76	46	$Id_1 \times IId_2 - \dfrac{Id_1 + IId_2}{2}$	540.36	191
Total kernel weight	$ID_1 \times IID_2 - (ID_1 + IID_2)$	8.03	3	$ID_1 \times IID_2 - \dfrac{ID_1 + IID_2}{2}$	150.28	106
	$ID_1 \times IID_2 - (Id_1 + IId_2)$	180.83	162	$ID_1 \times IID_2 - \dfrac{Id_1 + IId_2}{2}$	236.68	424
	$Id_1 \times IId_2 - (Id_1 + IId_2)$	146.90	131	$Id_1 \times IId_2 - \dfrac{Id_1 + IId_2}{2}$	202.75	363
Kernel row number	$ID_1 \times IID_2 - (ID_1 + IID_2)$	-12.54	no	$ID_1 \times IId_2 - \dfrac{ID_1 + IID_2}{2}$	2.03	34
	$ID_1 \times IID_2 - (Id_1 + IId_2)$	- 9.21	no	$ID_1 \times IID_2 - \dfrac{Id_1 + IId_2}{2}$	3.69	29

	Id_1 x IId_2 - $(Id_1 + IId_2)$	- 7.95	no	Id_1 x IId_2 - $\dfrac{Id_1 + IId_2}{2}$	4.23	33
Ear length	ID_1 x IID_2 - $(Id_1 + IID_2)$	-145-37	no	ID_1 x IID_2 - $\dfrac{ID_1 + IID_2}{2}$	57.06	28
	ID_1 x IID_2 - $(Id_1 + IId_2)$	-22.42	no	ID_1 x IID_2 - $\dfrac{Id_1 + IId_2}{2}$	118.53	84
	Id_1 x IID_2 - $(Id_1 + IId_2)$	-26.58	no	Id_1 x IId_2 - $\dfrac{Id_1 + IId_2}{2}$	114.37	81