

VI. GENETIC STOCKS AVAILABLE

Table 1
Recent additions to the Soybean Genetic Type Collection List[†]

Strain	Genes or description	Source	Maturity	Code
T263	dwarf	Found in Harosoy 63 X PI 257.435 in 1968 in the Iowa State University nursery in Hawaii. A74-2	II	PGNBr DYY
T264	dense pubescence	Found in neutron-irradiated 'Blackhawk' in the N ₂ generation at Urbana in 1956. L58-2749	I	WGNBr SYBF
T265H	chlorophyll deficient	Found in Williams ⁶ XT259 in the F ₂ generation in 1974-75 in the greenhouse at Urbana. L75-0324	III	WTNTn SYB1
T266H	<u>ms</u> ₁ -Urbana	Found in an F ₃ row of L67-533 (Clark-S) X SRF300 at Urbana in 1971. See Soybean Genet. News1. 2: 49-51. 1975. [higher female fertility than T260]	IV	TTNBr -YB1
T267H	<u>ms</u> ₁ -Tonica	Semi-sterile plant found in a field of Harosoy by F. M. Burgess, Tonica, IL, in 1955. L56-292	II	PGNBr DYY
T268H	<u>ms</u> ₁ -Ames, <u>St</u> ₄	Semi-sterile plant found in T258 at Ames, IA, in 1970. A73g-21	II	PGNBr DYY

[†]For additional information see Soybean Genetics Newsletter 3: 62-67. 1976.

Table 2
Genetic linkage groups in soybeans

Linkage group	Linkage intensity map [†]
Linkage Group 1	
dwarf (T263)	$y_{12} \underline{20.2(1.1)} \quad e_1 \underline{3.9(0.4)} \quad t$
e_1 early maturity	$\quad \quad \quad \text{dwarf} \underline{15.4(1.0)} \quad t$
fg_3 flavonol glycoside	$\quad \quad \quad fg_3 \underline{13.7(6.6)} \quad t$
fg_4 flavonol glycoside	$\quad \quad \quad fg_4 \underline{0} \quad t$
t gray pubescence	$\quad \quad \quad fg_4 \underline{12.0(1.8)} \quad fg_3$
y_{12} chlorophyll deficient	
Linkage Group 2	
p_1 nonglabrous plant	$p_1 \underline{20.9(2.4)} \quad r$
r brown seed	
Linkage Group 3	
d_1 green seed embryo	$g \underline{4.2(0.6)} \quad d_1$
g yellow seed coat	
Linkage Group 4	
ln narrow leaf	$v_1 \underline{35.6(0.9)} \quad ln \underline{26.4(1.4)} \quad p_2$
p_2 puberulent plant	
v_1 variegated leaf	
Linkage Group 5	
dt_1 determinate stem	$dt_1 \underline{39.4(1.8)} \quad l_1$
fg_1 flavonol glycoside	$dt_1 \underline{39.8(3.0)} \quad fg_1$
l_1 tan or brown pod	
Linkage Group 6	
df_2 dwarf plant	$df_2 \underline{12.1(0.7)} \quad y_{11}$
y_{11} chlorophyll deficient	
Linkage Group 7	
i self dark seed coat	$y_{13} \underline{31.3(1.9)} \quad o \underline{17.8(0.7)} \quad i$
o red brown seed coat	$\quad \quad \quad rhg_4 \underline{?} \quad i$
rhg_4 susceptible to cyst nematode	
y_{13} chlorophyll deficient	
Linkage Group 8	
ms_1 male sterile	$w_1 \underline{29.7(1.6)} \quad ms_1$
w_1 white flower	$w_1 \underline{2.2(0.5)} \quad wm$
wm magenta flower	

[†]Linkage intensity map values given as percentage recombination, standard errors enclosed in parentheses: % R (SE).

Table 3
F₂ linkage data for new linkage information in soybeans[†]

Genes		Phenotypic classes				Sum	% R	SE	Phase	Cross No. ^{††}	Reference No. ^{††}
a	b	AB	Ab	aB	ab						
T263 (dwarf)	t	1158	130	112	300	1700	15.4	1.0	C	2	5
dt ₁	fg ₁	135	33	31	16	215	39.8	3.0	C	1	4
fg ₁	dt ₁	135	31	33	16	215	39.8	3.0	C	1	4
fg ₃	fg ₄	247	19	20	71	357	12.0	1.8	C	3	1
fg ₃	t	111	48	59	1	219	13.7	6.6	R	4	4
fg ₄	fg ₃	247	20	19	71	357	12	1.8	C	3	1
fg ₄	t	111	47	63	0	221	0	0.0	R	5	1
ms ₁	w ₁	1268	583	557	60	2468	30.4	1.8	R	6	5
ms ₁	w ₁	451	87	91	100	729	27.9	2.0	C	7	5
t	T263 (dwarf)	1158	112	130	300	1700	15.4	1.0	C	2	5
t	fg ₃	111	59	48	1	219	13.7	6.6	R	4	4
t	fg ₄	111	63	47	0	221	0	0.0	R	5	1
w ₁	ms ₁	1268	557	583	60	2468	30.4	1.8	R	6	5
w ₁	ms ₁	451	91	87	100	729	27.9	2.0	C	7	5
w ₁	w _m	333	6	4	107	450	2.2	0.5	C	8	3
w ₁	w _m	778	379	387	0	1544	0		R	9	2+++
w _m	w ₁	333	4	6	107	450	2.2	0.5	C	8	3
w _m	w ₁	778	387	379	0	1544	0		R	9	2+++

[†]Data for Linkage Groups 1-7 not included; see references for Linkage Groups 1-7.

^{††}See Tables 4 and 5 for crosses and references, respectively.

^{†††}See also Buzzell, R. I., R. L. Bernard and B. R. Buttery. 1974. Soybean Genet. News1. 1: 14-15.

Table 4

Cross No.	Crosses	Reference
1	OX250 (fg ₁ dt ₁) X OX922 (Fg ₁ Dt ₁)	4
2	T263 (dwarf t) X disomics and trisomics A and B (tall T)	5
3	T31 (Fg ₃ Fg ₄) X OX936 (fg ₃ fg ₄)	1
4	Blackhawk (Fg ₃ t) X Kingwa (fg ₃ T)	4
5	AK-FC 30.761 (fg ₄ T ₁) X Beeson (Fg ₄ t ₁)	1
6	T266 (ms ₁ W ₁) X disomics and trisomics A and B (Ms ₁ w ₁)	5
7	T260 (ms ₁ w ₁) X disomic and trisomic C (Ms ₁ W ₁)	5
8	OX281 (w ₁ wm) X Beeson (W ₁ Wm)	3
9	L62-904 (w ₁ Wm) X T235 (W ₁ wm)	2

Table 5

Reference	References for new linkage information
1	Buzzell, R. I. 1974. Soybean Genet. News1. 1: 11-14.
2	Buzzell, R. I. 1975. Soybean Genet. News1. 2: 10-11.
3	Buzzell, R. I. 1976. Soybean Genet. News1. 3: 11-14.
4	Buzzell, R. I. 1977. Soybean Genet. News1. 4: 12-13.
5	Palmer, R. G. 1977. Soybean Genet. News1. 4: 40-42.

Linkage group	References for Linkage Groups 1-7
1	Weiss, M. G. 1970. Crop Sci. 10: 69-72.
2&3	Weiss, M. G. 1970. Crop Sci. 10: 300-303.
4	Weiss, M. G. 1970. Crop Sci. 10: 368-370.
5&6	Weiss, M. G. 1970. Crop Sci. 10: 469-470.
7	Weiss, M. G. 1970. Crop Sci. 10: 627-629.

Data and information Tables 2-5 compiled by David M. Stelly and Reid G. Palmer.