

Through the efforts of Dr. M. D. Thorne, Head, and Dr. C. M. Brown, Associate Head, of the Department of Agronomy, the Maize Cooperative has received nonrecurring funds from the University of Illinois for a cold storage unit. A total \$25,000 has been allotted for the cold storage unit and 1,000 self contained steel storage drawers. This cold storage facility should be adequate to house the collection for many years.

During the summer of 1969 certain chromosome tester stocks were increased. Also, a considerable number of stocks were grown out to confirm the pedigree of certain mature plant traits. In addition, 832 rows were grown out and pollen readings taken to determine if certain reciprocal translocation stocks in the collection were homozygous for the translocation. Certain chromosome tester stocks were grown out in 10 row blocks in order to isolate new chromosome tester combinations.

The attached catalogue of stocks represents a listing of currently available genetic stocks. Certain traits and new chromosome combinations have been added to the list. This list of traits should replace the one published in 1967, when requesting seed. A complete listing of all translocation stocks in the collection has been published in Volume 43 of the Maize Newsletter.

Requests for seed and correspondence relative to the stock program should be addressed to:

Dr. R. J. Lambert
S-116 Turner Hall
Department of Agronomy
University of Illinois, Urbana - Champaign
Urbana, Illinois 61801

R. J. Lambert
D. E. Yates

Catalogue of Stocks

Chromosome 1ad₁ an₁ bm₂ad₁ bm₂an₁ bm₂

as

br₁ vgbr₂bz^m₂; Mbz^m₂; m

Kn

Kn Ts₆lw₁P^{CR}P^{CW}P^{MO}P^{RR}P^{RW}P^{VV}P^{RR} ad₁ an₁P^{RR} ad₁ bm₂P^{RR} an₁ gs₁ bm₂P^{RR} br₁ f₁ an₁ gs₁ bm₂P^{WR} bm₂P^{WR} an₁ bm₂P^{WR} an₁ Kn bm₂Chromosome 1 (Continued)P^{WR} gs₁ bm₂P^{WW} br₁ f₁ bm₂P^{WW} br₁ f₁ ad₁ bm₂P^{WW} br₁ f₁ an₁ gs₁ bm₂P^{WW} hm br₁ f₁rs₂sr₁sr₁ P^{WR} an₁ bm₂sr₁ P^{WR} bm₂sr₁ P^{WR} an₁ gs₁ bm₂sr₁ zb₄ P^{WW}ts₂ts₂ P^{WW} br₁ bm₂Ts₆

vg

vg an₁ bm₂vp₅vp₈zb₄ ms₁₇ P^{WW}zb₄ P^{WW} bm₂zb₄ P^{WW} br₁zb₄ P^{WW} br₁ f₁ bm₂zb₄ ts₂ P^{WW}zb₄ ts₂ P^{WW} bm₂

Chromosome 1 (Continued)

an₆₉₂₃-bz₂ (apparent deficiency including an₁ and bz₂)

bm₂

bm₂ br₂

necrotic 8147-31

tb

id

ms₉

ms₁₄

rd

Chromosome 2

al lg₁

al lg₁ gl₂ B sk

al lg₁ gl₂ b sk v₄

ba₂

d₅

fl₁

ts₁

gl₁₁

Ht

lg₁

lg₁ gl₂ wt

lg₁ gl₂ B

lg₁ gl₂ b

lg₁ gl₂ b Ch

lg₁ gl₂ b fl₁ v₄

Chromosome 2 (Continued)

lg₁ gl₂ b fl₁ v₄ Ch

lg₁ gl₂ B gs₂

lg₁ gl₂ b gs₂

lg₁ gl₂ b gs₂ sk

lg₁ gl₂ B gs₂ v₄

lg₁ gl₂ b gs₂ v₄

lg₁ gl₂ b gs₂ v₄ Ch

lg₁ gl₂ B sk v₄

lg₁ gl₂ b sk v₄

lg₁ gl₂ b sk fl₁ v₄

lg₁ gl₂ B v₄

lg₁ gl₂ b v₄

lg₁ gl₂ b v₄ Ch

lg₁ gs₂ b v₄

w₃

w₃ Ch

lg₁ gl₂ w₃ Ch

ws₃ lg₁ gl₂ B

ws₃ lg₁ gl₂ b

ws₃ lg₁ gl₂ b v₄

ws₃ lg₁ gl₂ b fl₁ v₄

ws₃ lg₁ gl₂ B sk

ws₃ lg₁ gl₂ b sk

wt

mn

Chromosome 3

$A_1 \text{ ga}_7$; $A_2 \text{ C R}$
 $A_1 \text{ sh}_2$; $A_2 \text{ C R}$
 A^d_{-31} ; $A_2 \text{ C R}$
 A^d_{-31} ; $A_2 \text{ C R Dt}_1$
 $A^d_{-31} \text{ sh}_2$; $A_2 \text{ C R}$
 $a^P_1 \text{ et}$; $A_2 \text{ C R Dt}_1$
 $a^P_1 \text{ et}$; $A_2 \text{ C R dt}_1$
 a_1 ; $A_2 \text{ C R B Pl dt}_1$
 $a_1 \text{ et}$; $A_2 \text{ C R Dt}_1$
 $a^m_1 \text{ et}$; $A_2 \text{ C R dt}_1$
 $a_1 \text{ sh}_2$; $A_2 \text{ C R Dt}_1$
 $a_1 \text{ sh}_2$; $A_2 \text{ C R Dt}_1 \text{ B Pl}$
 $a_1 \text{ sh}_2$; $A_2 \text{ C R dt}_1$
 $a_1^{st} \text{ Sh}_2$; $A_2 \text{ C R Dt}_1$
 $a_1^{st} \text{ sh}_2$; $A_2 \text{ C R Dt}_1$
 $a_1^{st} \text{ sh}_2 \text{ et}$; $A_2 \text{ C R Dt}_1$
 $a_1^{st} \text{ et}$; $A_2 \text{ C R Dt}_1$
 ba_1
 Cg
 cl_1
 cr_1
 $cr_1 d_1 Lg_3$
 d_1
 $d_1 pm_1$
 $d_1 Lg_3$

Chromosome 3 (Continued)

$d_1 \text{ Rg lg}_2$
 $d_1 ts_4 lg_2$
 $d_1 \text{ Rg ts}_4 \text{ lg}_2$
 $d_1 Rf_1 ts_4 lg_2$
 $d_1 ts_4 lg_2 a_1$; $A_2 \text{ C R Dt}_1$
 $gl_6 lg_2 A^b \text{ et}$; $A_2 \text{ C R Dt}_1$
 $gl_6 lg_2 a_1 \text{ et}$; $A_2 \text{ C R Dt}_1$
 gl_7
 $lg_2 A^b \text{ Sh et}$; $A_2 \text{ C R Dt}_1$
 $lg_2 a_1 \text{ et}$; $A_2 \text{ C R Dt}_1$
 $lg_2 a_1 \text{ et}$; $A_2 \text{ C R dt}_1$
 $lg_2 a_1 \text{ sh}_2 \text{ et}$; $A_2 \text{ C R Dt}_1$
 $lg_2 a_1^{st} \text{ et}$; $A_2 \text{ C R Dt}_1$
 $lg_2 a_1^{st} \text{ sh}_2$; $A_2 \text{ C R Dt}_1$
 $lg_2 pm$
 Lg_3
 $Lg_3 \text{ Rg}$
 na_1
 $na_1 lg_2$
 pm
 ra_2
 $ra_2 lg_2$
 $ra_2 lg_2 pm$
 $ra_2 \text{ Rg}$
 $ra_2 \text{ Rg lg}_2$

Chromosome 3 (Continued)

Rg

ra₂ Rg ts₄ pm₁ lg₂

rt

ts₄ts₄ na₁ys₃pg₂vp₁

Primary trisomic 3

Chromosome 4bm₃bt₂bt₂ gl₄c₂; A₁ A₂ C₁ Rfl₂Ga₁ Su₁Ga₁^s Su₁gl₃gl₃ dpla su₁ gl₃la su₁ Tu gl₃lw₄; lw₃o₁

st

su₁Chromosome 4 (Continued)su₁^{am}su₁ bm₃su₁ gl₃su₁ gl₃ ra₃su₁ gl₄su₁ ra₃su₁ Tusu₁ Tu gl₃su₁ zb₆su₁ zb₆ Tu gl₃su₁ zb₆ Tusu₁ o₁Ts₅Ts₅ su₁Ts₅ su₁ zb₆Ts₅ stTs₅ st su₁Tu gl₃zb₆v₈

dp

j₂

Primary trisomic 4

Chromosome 5

$a_2; A_1 C R$
 $a_2 b_{m1} b_{t1} b_{v1} pr; A_1 C R$
 $a_2 b_{m1} b_{t1} pr; A_1 C R$
 $a_2 b_{m1} pr v_2; A_1 C R$
 $a_2 b_{m1} pr y_{s1}; A_1 C R$
 $a_2 b_{t1} b_3 Pr; A_1 C R$
 $a_2 b_{t1} pr; A_1 C R$
 $a_2 b_{t1} pr y_{s1}; A_1 C R$
 $a_2 v_3 pr; A_1 C R$
 $a_2 pr; A_1 C R$
ae
ae td
 $b_{m1} pr; A_1 A_2 C R$
 $b_{m1} pr v_2 A_1 A_2 C R$
 $b_{m1} pr y_{s1}; A_1 A_2 C R$
 $b_{m1} pr y_{s1} v_2; A_1 A_2 C R$
 $b_{t1} pr; A_1 A_2 C R$
 $b_{t1} pr y_{s1}; in A_1 A_2 C R$
 g^l_5
 g^l_8
 g^l_{17}
 $g^l_{17} b_{t1}$
 $g^l_{17} v_2$
 l_w_2
 $l_w_3; l_w_4$

Chromosome 5 (Continued)

na_2
 $na_2 pr$
 $pr; A_1 A_2 C R$
 $pr y_{s1}; A_1 A_2 C R$
 y_{s1}
 $v_3 pr; A_1 A_2 C R$
 v_{12}
 $v_{p2} g^l_8$
 $v_{p2} pr; A_1 A_2 C R$
 v_{p7}
 $ps = \text{allele of } v_{p7}$
 $v_{p7} pr; A_1 A_2 C R$
eg
 lu_1
 $sh_4 lu_1$
 sh_4
 y_{g1}
Primary trisomic 5
Chromosome 6
 $Y_1 rgd$
 $at = \text{allele of } si_1$
Bh
 $po Y_1 pl$
 $po y_1 pl$
Pt
 si_1

Chromosome 6 (Continued)

wi

y₁w^m = allele of y₁pb₁ = allele of y₁y₁ l₁₀y₁ l₄₁₂₀y₁ l₄₉₂₀y₁ pb₄ ply₁ pb₄ PlY₁ pg₁₁; w_x pg₁₂Y₁ pg₁₁; wx pg₁₂y₁ pg₁₁; wx pg₁₂y₁ Pl Bhy₁ pl BhY₁ Pl smY₁ Pl sm py; A₁ A₂ b P^{RR}Y₁ pl su₂y₁ pl su₂y₁ Ply₁ Pl w₁Dt₂; a₁ A₂ C Rw₁

ms-si = allele of si

orobanche

w₈₆₅₇

Primary trisomic 6

Chromosome 7

Bn

bd

g₂gl₁gl₁^mgl₁ o₅gl₁ g₂gl₁ ij bdgl₁ slgl₁ Tp₁gl₁ g₂ Tp₁

Hs

ij

ij bd

in; pr A₁ A₂ C Rin gl₁; pr A₁ A₂ C Ro₂o₂ bdo₂ gl₁ slo₂ ra₁ gl₁o₂ ra₁ gl₁ ijo₂ ra₁ gl₁ Tpo₂ v₅ ra₁ gl₁o₂ v₅ ra₁ gl₁ Hso₂ v₅ ra₁ gl₁ Tp₁ra₁ gl₁ ij bd

Chromosome 7 (Continued)

T_p₁
v_P₉ g_l₁
D_t₃; A₁ A₂ C R

Primary trisomic 7

Chromosome 8

g_l_g
v₁₆ j₁
v₁₆ ms₈ j₁
necrotic 6697
sienna 7748
Primary trisomic 8

Chromosome 9

B_f₁
B_f₁ bm₄
bm₄
bp Wx; P^{RR}
C Ds Wx
C sh₁ Wx; A₁ A₂ R
C sh₁ wx; A₁ A₂ R
c sh₁ wx; A₁ A₂ R
c sh₁ ms₂; A₁ A₂ R
C wx; A₁ A₂ R
C Wx bz₁; A₁ A₂ R
C wx ar; A₁ A₂ R
c sh₁ wx g_l₁₅

Chromosome 9 (Continued)

c sh₁ wx g_l₁₅ B_f₁
c sh₁ wx bk₂
c Wx; A₁ A₂ R
c wx; A₁ A₂ R
c wx v₁
c wx B_f₁; A₁ A₂ R
D_t₁; a₁^m A₂ C R
g_l₁₅
g_l₁₅ B_f₁
g_l₁₅ bm₄
C₁^I Ds Wx
C₁^I wx; A₁ A₂ R B
K₉^L C sh₁ wx; A₁ A₂ R
l₆
l₇
ms₂ sh₁; A₁ A₂ C R
sh₁ bp wx; P^{RR}
sh₁ wx g_l₁₅
sh₁ wx l₇
sh₁ wx v₁
wx B_f₁
wx B_f₁ bm₄
wx bk₂
wx bk₂ bm₄
wx bk₂ bm₄

Chromosome 9 (Continued)

wx d₃
wx l₆
wc
wx pg₁₂; y₁ pg₁₁
wx pg₁₂; Y₁ pg₁₁ pl
wx pg₁₂; y₁ pg₁₁
wx^a

yg₂ c sh₁ wx; A₁ A₂ R
yg₂ c sh₁ bz₁ wx; A₁ A₂ R
yg₂ c sh₁ wx gl₁₅; A₁ A₂ R
yg₂ C sh₁ bz₁ wx; A₁ A₂ R
wd

lo
Primary trisomic 9

Chromosome 10

bf₂
du₁
g₁
g₁ Tp₂
g₁ r^g; A₁ A₂ C
g₁ r^{ch}
g₁ r; A₁ A₂ C wx
g₁ R^r sr₂; A₁ A₂ C
g₁ R^g sr₂; A₁ A₂ C
g₁ r sr₂; A₁ A₂ C

Chromosome 10 (Continued)

l₁
l₁; w₁
li g₁ R; A₁ A₂ C
li g₁ r; A₁ A₂ C
nl₁ g₁ R; A₁ A₂ C
og R; A₁ A₂ C B Pl
oy

r^g; A₁ A₂ C
r^r; A₁ A₂ C
r^r E^j; A₁ A₂ C
r K¹⁰; A₁ A₂ C
R^r K¹⁰ g₁; A₁ A₂ C
R^g sr₂; A₁ A₂ C
r^r sr₂; A₁ A₂ C

r^g wx; A₁ A₂ C

R^r Boone; A₁ A₂ C

R^{mb}; A₁ A₂ C

R^{nj}; A₁ A₂ C

Rst; A₁ A₂ C

R^r Lc; A₁ A₂ C

v₁₈

w₂

w₂ l₁

zn

Primary trisomic 10

Unplaced Genes

dv
dy
el
 g^1_{12}
 g^1_{14}
 g^1_{16}
h
 l_3
 l_4
 ms_6
 ms_{12}
 ms_{13}
 Rs_1
 v_{13}
 w_{11}
 $ws_1 ws_2$
ub
 zb_1
 zb_2
 zb_3
 zn_2
 l_{4923}
"necrotic 8376" (seedling)

Multiple Gene Stocks

$A_1 A_2 C R^r Pr B Pl$
 $A_1 A_2 C R^G Pr B Pl$
 $A_1 A_2 C R Pr$
 $A_1 A_2 C R Pr wx$
 $A_1 A_2 C R Pr wx g^1_1$
 $A_1 A_2 C R Pr wx y_1$
 $A_1 A_2 C R pr$
 $A_1 A_2 C R pr y_1 g^1_1$
 $A_1 A_2 C R pr y_1 wx$
 $A_1 A_2 C R pr y_1 wx g^1_1$
 $A_1 A_2 c R Pr y_1 wx$
 $A_1 A_2 C r Pr y_1 wx$
 $bm_2 lg_1 a_1 su_1 pr y_1 g^1_1 j_1 wx g_1$
 colored scutellum
 $lg_1 su_1 bm_2 y_1 g^1_1 j_1$
 $su_1 y_1 wx a_1 A_2 C R^G pr$
 $y_1 wx g^1_1$
 $hm_1 hm_2$
Popcorns
 Amber Pearl
 Argentine
 Black Beauty
 Hulless
 Ladyfinger
 Ohio Yellow

Popcorns (Continued)

Red
 South American
 Strawberry
 Supergold
 Tom Thumb
 White Rice

Exotics and Varieties

Black Mexican Sweet Corn
 (with B-chromosomes)
 Black Mexican Sweet Corn
 (without B-chromosomes)
 Knobless Tama Flint
 Knobless Wilbur's Flint
 Gourdseed
 Maiz chapolote
 Papago Flour Corn
 Parker's Flint
 Tama Flint
 Zapaluta chica

Tetraploid Stocks

P^{RR}
 P^{VV}
 Ch
 B
 $a_1\ A_2\ C\ R\ Dt_1$
 su_1

Tetraploid Stocks (Continued)

pr; $A_1\ A_2\ C\ R$
 y_1
 gl_1
 ij
 $Y_1\ sh_1\ wx$
 $sh_1\ bz_1\ wx$
 wx

$A_1\ A_2\ C\ R$
 $A_1\ A_2\ C\ R\ B\ Pl$

Cytoplasmic Steriles and Restorers

WF9 - (T)	$rf_1\ rf_2$
N6 (S)	
WF9	$rf_1\ rf_2$
N6	$rf_1\ Rf_2$
R213	$Rf_1\ rf_2$
Ky21	$Rf_1\ Rf_2$

These combinations are also available
 in other inbred backgrounds.

Chromosome rearrangements

The following rearrangements are being maintained primarily for use in determining the chromosome locations of new traits. All are marked with closely-linked endosperm or seedling traits.

The cytological positions of Inv 2a were determined by Dr. Morgan; those of Inv 9a were determined by Dr. Li. The indicated interchange points of the reciprocal translocations are taken from published work of Dr. Longley.

Inversions

- *gl₂ Inv 2a (also available with Ch) 2S.7; 2L.8
- *wx Inv 9a 9S.7; 9L.9

Reciprocal translocations

*wx 1-9c	1S.48; 9L.22
*wx 1-9 4995	1L.19; 9S.20
*wx 1-9 8389	1L.74; 9L.13
*wx 2-9b	2S.18; 9L.22
*wx 3-9c	3L.09; 9L.12
wx 3-9 5775	3L.09; 9S.24
*wx 4-9b	4L.90; 9L.29
*wx 4-9 5657	4L.33; 9S.25
*wx 4-9g	4S.27; 9L.27
*wx 5-9a	5L.69; 9S.17
*wx 5-9c	5S.07; 9L.10
*wx 5-9d	5L.14; 9L.10
wx 5-9 4817	5L.06; 9S.07
*wx 6-9a	6S.79; 9L.40
*wx, y 6-9b	6L.10; 9S.37
wx 6-9 4505	6L.13; 9 cent
wx 6-9 4778	6S.80; 9L.30
*wx 7-9a	7L.63; 9S.07
*wx or gl ₁ 7-9 4363	7 cent; 9 cent
*wx 8-9d	8L.09; 9S.16
*wx 8-9 6673	8L.35; 9S.31
*wx 9-10b	9S.13; 10S.40

*These constitute a basic series of twenty rearrangements for use in locating unplaced genes.

Stocks of A-B chromosome translocations

B-1a	1L.2	Proximal to <u>Hm</u>
B-1b	1S.05	
B-3a	3L.1	
B-4a	4S.25	Proximal to <u>su</u> ₁
B-6a	6S.5	
B-7b	7L.3	Proximal to <u>ra</u> ₁
B-8a	8L.7	Proximal to <u>v</u> ₁₆
B-9a	9L.5	Proximal to <u>Bf</u> ₁
B-9b	9S.4	Between <u>C</u> and <u>wx</u> ; close to <u>wx</u>
B-10a	10L.35	Proximal to <u>gl</u> ₁