as (argostripe) is allelomorphic with if (iojap).

be (branched ear) proved from tests made this summer to be alie-

dy (dwarf plant) is in chromosome 10. Singh.

Dag (dominant aleurone diluter). In chromosome 9, 6 units from C. Order is Dag-c-wx. Eyster.

dl (dull brown endosperm blotch). Singleton and Jones,

dm (dead leaf margins). Kempton 88.

1, (floury endosperm), Mumm.

1,0 (glossy seedling). In chromosome 1. Emerson.

es (green striped). In chromosome 2. Sprague.

of (hermaphroditic flowers). Hadiinov.

(taponica). In chromosome 4. Emerson.

Le (lemon endosperm). In chromosome 5. Eyster.

io (lethal ovule) may be allelomorphic with sp. In chromosome 4. Singleton '32.

me (mealy endosperm). Mangelsdorf 'EE.

obs (plebald). Apparently non existent.

pe (pubescens-hairy sheath). Tavear 132.

rel (reduced endosperm). Chromosome 5. Eyster 'El.

reg (reduced endosperm) chromosome 5. Eyster '31.

rea (reduced endosperm). Chromosome 4.

Rs, (rough sheath - dominant). Hadjinov.

rs, (rough sheath - recessive). Hadjinov.

Rw₁, etc. (row number genes). Tavcar.

si2 (silky) (si2 and si3 are duplicate genes). Fraser.

sig (silky). Fraser.

su^{am} (an allelomorph of su). Mangelsdorf.

W₁₂ (white seedling). Chromosome 4. Lindstrom.

ws (white sheath). Rhoades.

yf (yellow flecked leaves). Chromosome 9. Eyster.

zg (siz zag stalk). Chromosome 6. Singh.

Please add these to the list in the maize letter of January 23, 1933. We would appreciate it if you would notify us of any mistakes, oversights, etc. Notify this office of any new symbols you may wish to use before publishing so that we can help avoid duplication of symbols.

Linkage data including a few tests with unlinked genes - 2 point

: New com: Total: bination	algub v x	lndivi x Y	or of	duuN :	Linkage	Genes x y
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860 : 276 : 32. 1 331 : 70 : 21. 1		308 33 :	: 78	155:	RB:	on ys1 *
egals	0	178:	465 :	: 088		Jd Lud Y Jd
686 : 299 :	115 : 130 :	198 :	101:	118	CB:	av L ^M
387 : 204 : 587 : 200 : 589 : 278 : 47.5	84 : 148 :	106: 97:	98 : 103 :	104 : 115 : 165 :	C B :	s + do La
187 : 84 :		46:	: 48 :	57 :	: : 80	g ch ,
: : : : : : : : : : : : : : : : : : : :	47 :	: 18	57 :	: ea	; 8 b	no g
0.88: 03: 88	1.47	; ; d	15 :	: 387	1 8 0	- T4-5a
242:19:7.9		: 30	1831	5 8	: В.Я.	- T5-7a * : Those include

. Linkage data from a 3 point Fg tost:-

						-	-	() tol		1 2 3 4 4 4
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	BH	April 100 Per			- Common					
	1%	003	14	84:	14	58		451	(8)	gqv + 1q + Jd 1q
						0	9			*

5. Linkage data from 3 point back crosses :-

Genetic constitution	Regions Total	NOT 61
+ + + * pr ys v ₂	: 79 - 70:20 - 15:42 - 33: 6 - 1: : 149 : 35 : 75 : 7 : 266 : 15.8%: 30.8%:	the
bm ₁ + + + + pr ys	: 81 - 87:13 - 21: 6 - 5: 1 - 1: : 167 : 34 : 11 : 2 : 214 : 16.8%: 6.1%: :	
	:118 - 79 :21 - 21:11 - 10: 0 - 5: : 197 : 42 : 21 : 5 : 265 : 17.8%: 9.8%:	
pml Agl cu	: 61 - 45 : 39 - 52 : 59 - 54 : 43 - 44 : : 106 : 91 : 103 : 87 : 387 : 46% : 49% :	
+ T5-7a bn Bn	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	3%)
T5-7a + + + gl ₁ v ₅	: 142 - 72:30 - 51:12 - 31: 5 - 2: 214 : 81 : 43 : 7 : 345 25.5%: 14.5%: 2.0%:	
	107 - 74: 4 - 3:39 - 42: 3 - 1: 181 : 7 : 81 : 4 : 273 4.0%: 31.0%:	
1 27	292 - 201: 6 - 7:20 - 25: 1 - 0: 493 : 13 : 45 : 1 : 552 : 2.6%: 8.3%: :	

* v2 classification was not entirely satisfactory.

Burnham.

6. Notes on the above data:The linkage of T4-5a with ygl is the first found for ygl. If it is in chromosome 5 it must be out in region where very is or even nearer the end. Of course it may be in chromosome 4. The break in each chromosome was near the subter-minal knob. The data on chromosome 7 are mostly from interchanges. In T5-7a both breaks were near the subterminal knobs, while in T1-7 the break in 7 was on the long arm not far from the spindle fiber insertion. The data indicate that Bn is out toward the end of the long arm, with ra near the break in 1-7 and gl₁ in between. Vp₂ apparently is on the bm side of pr. Burnham.

Line 211, "excellent", A. A. Bryan, Ames. Under Aritacton Farm conditions, I don't think there is any question but that 205 is by far the Clines 205 and 210 were good except for lodging The starred lines (205, 208, 211, 8147 I consider good enough for use in crosses with genetic lows, starting with the best; 214, 206, 210, 213, 211, 208, 212. E. G. Anderson. Line 206, very nice strain, vigorous, Lines 842, 826, 206, 210, 211, 212, 214, desirable types, 086, 34 fair, 209 and 213 undesirable, R. K. Hayes.

From all these comments, it would seem that lines 206, 10, 211, 214 have rather wide adaptability and that, where rust and smit are not troublesome, line 208 may prove satisfactory. rague, however, reports that at Columbia, Mo., none of the

8. Some cooperators have indicated a willingness to test To you and to smos ebulont of bas reatrul sentl esem to conduct a test in 1936, will be furnished seed in so far to the available or one be obtained. If any of you have other bred etrains, thought to be highly resistant to diseases and oitemile to egast obiw ylevitslet a of betyabs ed tagim do ditions, I shall be giad to arrange for tests, We shall probbe unable, however, to hendle any large number of strains,

L. Manuscripts for inclusion in the proposed collective atton of papers on Linkage in Maize must reach me not later and it (See I, above). Some of the data included in this areged trods to stand ent mrol liew regions as were at the carly date --ltfrm riedt tot ebem ed nee amelq tedt de - I vell vo vla -lesoq to enterts berdat instalast easelb entrad agodT. to adaptability which they dealer to have tested this year Indicate the fact at once and send seed by April I. Those otspinumnoo easelq lilw stast ent anidam ni etsrequoo ot a . soono is on

To Maize Geneticists:-

The information in this letter was contributed by a number of individuals, and has been organized into the following divisions:

I. General news items.

II. Collective publication of linkages.

III. Seed stocks grown in 1936.

IV. Seed stocks received for propagation in 1937.

V. List of genes not in Co-op.

VI. Tests of inbred strains for disease resistance. Most of these reports are given almost verbatim but are not put in quotation marks because in numerous instances they have been some-

what condensed.

I. General News Items

Maize Genetics Cooperation, Ithaca, N. Y. -1. Backcross data show that Hadjinov's barren stalk (bax) is

allelomorphic to bap.

2. Seed received from L. C. Raymond, Quebec, labelled "Sweet Brittle", produced plants with brittle stalks and leaves. These plants differed from brittle stalk (bk1. Wiggans, unpub.) in that they were normal size, and greenhouse tests show that "Sweet Brittle" and bk, are not alleles.

3. Backcross data show that Hadjinov's branched silkless (bdx)

is allelomorphic to Kempton's bd1 (chrom. 7).

D. G. Langham

Cornell University, Ithaca, N. Y. -1. Data sent by Anderson, with supplementary data of mine, show that sr (chrom. 1) is to the left of P, rather than between P and br as previously announced, and suggest that ts2 is to the right of P. The following table includes the available data from three-point backcrosses:

F ₁ genotype	0	1	2	1,2	Total	Author
P + br + T1-5b +	242	71 15.8%	108	28 6.2%	449	Anderson
P + br + T1-5c +	195	60 18.1%	58 17.5%	19 5.7%	332	Anderson
t + T1-5b +	178	89 23.7%	88 23.5%	20 5.3%	375	Anderson

Pedigree Co 206 Co 210 ** TO 211 ** Dr 276 A ** TO 214 ** Co 214 ** Co 214 ** S 283 Kvakan 6991 ** ** ** ** ** ** ** ** **
Date of Pollin- ation 8/15 8/15 8/15 8/20 8/20 8/21 8/20 8/21 8/20 8/21 8/20 8/20 8/20 8/20
of Erect-ness ness very good
No. plants 13 15 10 19 16 17 17 10 10 10 10 10 10 10 10
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24 17 17 17 17 17 17 17 17 17
Rust 1-10 0 all dead 2
Row No. 14-16 12-14 12 12 12 12 12-16 12-16
Motes fairly good slender, poorly filled irregular rows, poorly filled sl. irr. rows, poorly filled sl. irr. rows, smooth dent good dent, vig., uniform, late very good roots, 2 ears to stalk, sl. irregular rows, irregular rows, poorly filled poorly filled poorly filled reg. rows, well- filled, slender, green, good fair, early

W. R. Singleton

sear are considered the best lines.

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Sinhage map of the ten chromosomes of zea mays showing the loci of those genes whose position can be determined with with reasonable certainty.

		2	3	4	5	6	7	8	9	10
0	are	0 mez 11 (23 al	0 4	o de	0 a2 50 cm 6 cm 10 st 10 st 10 st 10 st	0 por	7 Ha 0 in 02 4 v5 7 da	0 N16	O Horoby	O Rye
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53	as	45 942 49 B	39 ba, 47 lg2 56 cm	43 wl 55, ot 56-Te	40 401 42 101 101	41 Pl 49 su 51 sm	32 36 38 41		39 8pe 41 N ₁₅ 47 d ₃ 50 W ₁₁ 54 WX	36 4p2 39 43 9
3.		68 fl, 12 faz	63 Rg Pg 2	56 Ta. 59 la. 66 sp. 69 lo 71 su. 74 de	72 V ₂	61 py 61 w, 25	48 fr, 56 Bn. 56 pg3		63 aug ar 66 v,	51 ER 1
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129	941 1342 Kn		de meg na nt yt	SI NP3					mez 03 pk	de f f g m z V 18
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Ta	2									

linkage map of the ten chromosomes of zea mays showing the approximate loci of many genes. (Working map. more 3- point teste needed to establish exact loci of genes).