

important reaction transforming ammonia into amino acids is a reductive amination that, under the catalytic influence of glutamic dehydrogenase, reduces d-ketoglutarate to L- glutamic acid.

Further experiments will elucidate the amino acid requirement of the excised roots as well as of the entire plant.

References:

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G. Gavazzi  
C. Piccardo

UNIVERSITY OF MISSOURI  
and  
U.S. DEPARTMENT OF AGRICULTURE  
Columbia, Missouri

1. New mutants located with A-B translocations.

Continuing previous years' work (MNL 45:144, 46:131 and 47:148), we have located an additional 100 mutants. They are listed below by chromosome arm and can be added to those previously reported.

<u>1S</u>	<u>1L</u>	<u>2S</u>	<u>2L</u>	<u>3S</u>	<u>3L</u>	<u>4S</u>	<u>4L</u>
1 wl	1 wl	1 v	1 Yg	2 pg	1 wl	1 gl	1 v
1 yg	1 yg	1 wt	1 spotted	1 v	1 pg		2 nec
6 pg	1 pg sr	1 pg	1 pg	1 zb	1 sr		1 et
1 nec	1 ad	3 d	1 d	1 d	1 gl		1 mn
1 leth	1 rgd	1 nl	1 nl		1 d		
1 bleached	2 d	1 nec			1 bz		
1 et	1 bt	1 sr					
1 mn	1 wrinkled	1 ys					
		1 et					

<u>5L</u>	<u>6L</u>	<u>7L</u>	<u>8L</u>	<u>9S</u>	<u>9L</u>	<u>10S</u>	<u>10L</u>
1 spl lvs	2 w	1 wl	1 wl	4 w	1 v	1 wl	1 l
	3 wl	1 g	3 v	1 sh	1 d	2 zb	1 v
	1 v	1 gl	1 nec	1 zb	1 ad	1 sr	3 pg
	1 nec	1 nl	1 de			2 ad	1 ad
		1 et					1 nec
		2 de					
		2 mn					

We welcome interest by fellow workers willing to determine linkage and allelism of mutants already placed to chromosome arm and would be pleased to send seed of all the mutants of a particular arm to those interested. Mutants on the following arms have already been taken: 3L, 7L, 8L, 9S, 9L and 10L.

Since we are routinely crossing large numbers of mutants by the full set of A-B translocations, we are willing to include in our plantings a limited number of mutants from fellow workers who have something that they feel is urgent. We prefer  $F_1$  seed. Send  $20^+$  kernels for each by May 1.

M. G. Neuffer  
J. B. Beckett

## 2. Absence of auxotrophic mutants in corn and other eukaryotes.

The failure to obtain obligate auxotrophic mutants in corn and other eukaryotes has been a puzzle, especially in view of the remarkable success with fungi and bacteria. Numerous attempts by the author and others to grow various types of lethal and sub-lethal mutants on supplemental media have been mostly unsuccessful. Only a few mutants have been found in higher plants (Gavazzi, *et al.*, MNL 47:114-121; Nelson and Burr, 1973, Annual Review of Plant Physiology 24:493-518; Li and Redei, 1969, Biochemical Genetics 3:163-170).

One possible explanation may lie in intercellular transfer of gene products. It is possible that the mutants that are commonly observed and studied are for genes whose product is not transferable (nondiffusible or cell limited or unstable). Failure of transfer is suggested by the fact that chimeras for most of the known recessive mutants in corn have distinct borders. Distinct borders are generally found for chimeras resulting from chromosome loss, from reversions