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A WHITE GREAT NORTHERN BEAN RESISTANT TO CURLY TOP AND COMMON BEAN MOSAIC VIRUSES

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A WHITE GREAT NORTHERN BEAN RESISTANT TO CURLY TOP AND COMMON BEAN MOSAIC VIRUSES

Great Northern beans are one of the oldest dry bean types grown in the Western United States. They were cultured by Indians before the settlement of whites. Many varieties including UI-123 and UI-59 were direct selections from the old Indian or common Montana Great Northerns. Others including UI-31 and US-1140 were improved varieties that resulted from crosses of various dry bean types in state Experiment station breeding programs.

UI-61 is an improved variety developed to provide curly top resistance in a type similar to UI-59, a susceptible variety that is still widely grown in southern Idaho. This resistance makes possible the production of Great Northern beans in desert areas where curly top is frequently a major problem.

PEDIGREE

Great Northern UI-61 was selected from the progeny of a Great Northern UI-59 and common Red Mexican cross. Great Northern UI-59, a selection from the old common Great Northern type, provided resistance to the mosaic viruses and gave the Great Northern characteristics to the new line. Common Red Mexican was the source of curly top resistance.

Great Northern UI-61 variety is completely resistant to the type and A strains of bean mosaic virus and to curly top virus.

DESCRIPTION

Great Northern UI-61 is similar in plant type and general appearance to the older UI-59 variety. It has a semi-vining plant habit with the tendril (runner) evident at node eight or nine.* The foliage is medium green.

Tables 1 and 2 show comparative yields and maturities of UI-61 and other varieties at Kimberly, Idaho, and in Cooperative Dry Bean Nurseries at locations throughout the United States. The average yield of UI-61 is higher than other Great Northerns but slightly less than Pinto UI-111. Maturity of UI-61 is approximately the same as the other varieties.

The seed of UI-61 is acceptable to the package and cannery trade. Size and shape of the seed are very much like the other Great Northern varieties.

ADAPTATION

Great Northern UI-61 is adapted throughout the United States where other Great Northern and Pinto bean varieties are grown. It is especially suited to areas where curly top is a problem.

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*LeBaron, Marshall J. A Description — Developmental States of the Common Bean Plant. CIS 228, April 1974.

Table 1. Average yield and maturity of bean varieties grown at the University of Idaho Research and Extension Center, Kimberly, during four selected years.

VARIETY	1960	1961	1962	1972	MEAN
			Yield (lb. per acre)		
UI-59	2450	2455	2030	3030	2491
US-1140	2840	2550	2310	3291	2748
UI-61	2660	3030	2340	3252	2824
PINTO UI-111	2280	2980	2960	3339	2890
			Maturity (days)		
UI-59	104	89	94	92	95
US-1140	98	83	90	89	90
UI-61	99	83	92	89	91
PINTO UI-111	99	83	90	87	90

Table 2. Average yield and maturity of bean varieties grown at Cooperative Dry Bean Nurseries during four selected years.*

VARIETY	1960	1962	1968	1970	MEAN
			Yield (lb. per acre)		
UI-59	2336	2160	2185	2330	2253
US-1140	2329	2402	2300	2473	2376
UI-61	2442	2415	2130	2552	2385
PINTO UI-111	2376	2546	----	2633	2518
			Maturity (days)		
UI-59	87	94	95	88	91
US-1140	85	89	95	84	88
UI-61	86	92	95	84	89
PINTO UI-111	86	89	----	84	86

*Yield data from nine sites; maturity data from five. Nursery sites were located in Colorado, Idaho, Kansas, Minnesota, Montana, Nebraska, New Mexico, Washington and Wyoming.

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