

**Memorandum to American Snap Bean Breeders  
Regarding Snap Beans for Observational Trial in 1962**

J. C. Hoffman

The 29 members of the Southern Cooperative Snap Bean Trials located in 13 southern states are now making plans for snap bean trials in 1962. It will be necessary to get seed to several of the cooperators in Florida early in February. So, February 15 is set as the latest date for receiving entries.

We would like to have your entries of recently introduced varieties and advanced breeding lines that are approaching introduction. Such varieties and lines will be placed in the observational trials the first year, and later in the replicated trials if requested by the cooperators. Both types will be considered for the replicated trials the following year.

Since several of the cooperating experiment stations plant two crops of snap beans each year, the total amount of seed of the bush types needed for observational trials is estimated at 18 pounds. Since a small number of cooperators wish to plant pole beans, 12 pounds of this type will be sufficient.

Please give a brief description of your entries; for instance, with respect to pod and bush type. This information will be of value in selecting the proper checks.

It is the understanding of the cooperators that no seed from any of the entries will be released or used for propagation, unless authorized by the individual making the entry.

Ship your entries at the earliest possible date to: James C. Hoffman, U.S. Vegetable Breeding Laboratory, Box 3348, St. Andrews Branch P.O., Charleston, S.C.

(Editors note: This report will reach BIC members too late for the deadline in the south, but it is included to indicate nature and extent of the SCSB Trials.)

**Susceptibility of Snap Bean Varieties and Lines  
to the Maryland Strain of Rust**

J. G. Kantzes, W. L. Hollis

A new race of rust was found in Maryland during the fall of 1958. It continues to be present, mostly in the fall, with such virulence that fields planted with non-resistant varieties are a total loss. Protective measures using manzate or sulphur have been inadequate for control of the disease.

The following varieties and lines, planted in August 1961 at the Vegetable Research Farm, Salisbury, Maryland, were scored for degree of rust infection.

The Relative Susceptibility of Snap Bean Varieties  
and Breeding Lines to the Maryland Strain of Rust (1)

Variety	Score (2)	Possible Use (3)	Seed Source
Extender	1	FM	Corneli
Wade	1	P, FM	Corneli
Tenderwhite	1	P	Rogers Bros.
Harvester	1	FM, P	Asgrow
2910-3	1	P	USDA, Beltsville, Md.
XP 250	1	FM	Asgrow
NK 107-20	1	P	Northrup-King
Code 33	1	P	Charter
White Seeded Tendergreen	1 +	P	Asgrow
Res. Asgrow Bk. Val.	1 +	FM	Asgrow
Harris Shipper	1 +	FM	Harris
B 3489	1 +	FM	USDA, Charlestown, S.C.
B 3509	1 +	FM	USDA, " "
B 3490	1 +	FM	USDA, " "
Higrade Improved	1 +	P	Rogers Bros.
5330-1	2	P	USDA, Beltsville, Md.
E 3370	2	FM, P	USDA, Charlestown, S.C.
E 3482	2	FM	USDA, " "
Tendergreen Loag M.R.	2	FM	Charter
Harvester C	2	P	Asgrow
1435 (TF-60)	2	P	USDA, Beltsville, Md.
GV-50	2	P	Gallatin Valley
Md. 60-68 (Bush Blue Lake)	2	P	Univ. of Maryland
Md. 60-153-1 (Bush Blue Lake)	2	P	Univ. of Maryland
Earliwax	2 +	P	Rogers Bros.
Code 19	2 +	P	Charter
Corneli 14	2 +	P	Corneli
Tendercrop	2 +	P	Charter
Valentine Type 950	2 +	FM	USDA, Beltsville, Md.
Bountiful	3	P	Asgrow
GB-13 (W.S. Tendercrop)	3	P	Geneva Exp. Sta., N.Y.
XP 240 (Bush Blue Lake)	3	P	Asgrow
B 3496	3	FM	USDA, Charlestown, S.C.
B 3494	3	FM	USDA, " "
Slenderwhite	3	P	Rogers Bros.
Topcrop	3	P	Asgrow
Slingreen	3	P	Rogers Bros.
Abunda	3	P	Northrup-King
NK 108	3	FM, P	Northrup-King
5494-2	3	P	USDA, Beltsville, Md.

- (1) Material evaluated in fall planting at Vegetable Research Farm, Salisbury, Maryland.
- (2) Score 1 - Trace or slight infection  
 Score 2 - Moderate infection  
 Score 3 - Severe infection

Varieties not included in 1961 but scored in previous years are: Seminole (1), 187-C (1) a bush blue lake type from Ferry Morse was dropped, Processor (1 +), Tenderlong 15 (2), Slendergreen (2), and Improved Tendergreen (2).

Material scoring 1 have adequate resistance for growing and producing normally in the presence of the disease. Those scoring 1 + are a good risk but may be somewhat affected under conditions highly favorable to the disease. Material with higher scores (2, 2 +, 3) should not be grown in the fall.

- (3) FM - Fresh Market  
 P - Processing

#### Effect of Seed Size on Emergence, Yield and Quality of Snap Beans

N. H. Peck, E. E. Clark and J. D. Atkin

During 1961 there were 2 trials on snap bean seed size at Geneva. One trial was with hand-threshed seed and seed not susceptible to injury, and another trial was with samples of seed from 10 commercial lots.

In the trial with hand-shelled seed and seed not susceptible to injury, the seeds from 3 varieties were graded into 5 sizes by 64ths of an inch from 10/64th of an inch to 14/64th and over of an inch. The smallest seed weighed 18 gms/100 seeds which was  $\frac{1}{2}$  of the weight of the largest seeds. One hundred seeds from each size and each variety were planted in 10 feet of row in 4 replications at 3 planting dates.

Stand counts showed that seedlings from the small seeds emerged earlier than those from the large seeds. Nine days after planting 41% of the small seed had produced seedlings while only 21% of the large seed had emerged. The final stand, however, averaged 93% for all seed sizes.

Early in the season the plants from the large seeds were obviously larger than those from the small seeds. This difference in plant size gradually disappeared until there was no observable difference at harvest time.

The average yield of pods from the large seeds was 12,320 pounds per acre compared with 10,340 pounds per acre from the small seeds. The average percentage of small pods (sieve size 4 and under) from the large seeds was 72% compared with 79% from the small seeds. The average percentage of seed in the sieve size 5 pods