

NEW YORK SEED IMPROVEMENT COOPERATIVE ASSOCIATION, INC.

cooperating with

NEW YORK STATE COLLEGE OF AGRICULTURE

NEW YORK STATE DEPT. OF AGRICULTURE & MARKETS

STANDARD FOR CERTIFIED SEED OF SMALL GRAINS
SOYBEANS, FIELD CORN AND SWEET CORN

1940

A. General suggestions for growing cereal crops for seed:

1. Crops for seed purposes should be grown on fertile, clean, well-drained soil so as to insure uniformity of ripening, plumpness and other desirable qualities.
2. A well planned system of crop rotation should be followed so as to maintain soil fertility and to aid in the reduction or control of diseases, weeds and injurious insects.
3. The variety should be adapted to the locality where grown so as to insure maturity at time of harvest.
4. It is recommended that a few members of the Association undertake the growing of "registered-certified" seed of each grain by conducting special seed plots under the supervision of the College of Agriculture. These special sources will enable all seed growers to have access to pure seed as their own stocks approach the lower limits allowed in the Standard for varietal mixture.
5. In the case of corn, it is desirable to harvest seed early, sort carefully and dry thoroughly in suitable storage before freezing weather.
6. It is recommended that the grower of open pollinated seed corn practice careful field selection of seed ears for his own planting. For this purpose, only mature ears from healthy, vigorous plants should be saved.
7. Persons desiring information regarding suitable seed stocks for the growing of certified seed should write the Department of Plant Breeding, Cornell University, Ithaca, N.Y., for recommendations.

B. General requirements for field and sample inspection:

The term "field" as used herein applies to the area occupied by one variety of grain which is covered by one inspection report and is undivided by fences, ditches, highways, other crops or natural barriers. Fields will be eligible to inspection for seed purposes in accordance with the following rules:

1. Certification shall be confined to varieties of well established names and characters as recommended by a committee of three members from departments of the College of Agriculture having charge of inspection.
2. In growing crops for seed purposes, not more than one variety of each kind of small grain, e.g., not more than one variety of oats, should be grown on any given farm. Neither should more than one kind of spring grain as oats, barley, and spring wheat, nor winter wheat and rye, be grown on the same farm, unless the grower has separate mow and bin storage, and special equipment, and will take all necessary precautions to prevent mixture in storage, threshing and cleaning.
3. A portion of a field will not be addepted for inspection except that allowance may be made for part of a crop that has been destroyed by any natural cause, or for part of a crop that has been used for other than seed purposes prior to field inspection.
4. A field sown to more than one variety of one grain shall not be accepted for inspection.
5. The growing crop should be free, or practically free depending on varietal susceptibility, from smut, in small grains, and other diseases which are considered serious. Oats must be treated for loose smut before planting. Growers of wheat and barley seed should secure seed as free from smuts as possible. The approximate amount of loose smut, or covered smut, or both, present will be determined at the field inspection.
6. Each grower will be required to give information as to the source of his seed stock and a reasonable guaranty as to its identity.
7. Each grower must own or have access to machinery suitable for properly cleaning all seed offered for sale.
8. Off-types, mixtures of other crops and varieties, together with noxious or otherwise troublesome weeds, should be rogued from the field prior to inspection so far as possible. The inspector will report on all such plants noticed and general conditions of the crop and field.
9. All corn, both open pollinated varieties and hybrids, shall be grown at a distance not less than forty rods from fields of other varieties of corn, except where barriers sufficient to prevent cross-pollination intervene.
10. Hybrid corn:-
 - a. Detasseling - The tassels of the female parent must be removed before any pollen has shed. The maximum tolerance for female stalks shedding pollen shall not exceed one (1) per cent.

- b. Roguing - Off-type plants should be rogued out as soon as recognized. The maximum tolerance for off-type plants shall be 0.1% of the seed plants and 0.05% of pollinator plants.
 - c. Number of inspections - During the pollinating period the plot or field shall be inspected by a representative of the official inspecting agency on two or more different days, said inspections to be made without giving previous notice to the grower. Another inspection shall be made at or about the time of harvest.
 - d. Notification - The grower shall notify the Association office at least one day prior to the beginning of detasseling.
11. Sweet corn fields shall be approximately free from root, stalk and ear rots, and Stewart's disease (bacterial wilt). The tolerance for any one, or the total of any combination of these diseases shall be 0.5 per cent.
12. As soon as possible after threshing and cleaning, the grower shall send, prepaid, to the Department of Plant Breeding, College of Agriculture, Ithaca, N.Y., a cleaned and graded sample from each field that passed field inspection, or a thoroughly representative composite sample if the crops from two or more fields have been threshed together or stored together.

The size of the samples and the final date prior to which samples should be submitted are indicated in the following table:-

Kind of seed	Size of sample	Sample should be sent
Wheat or rye	1/2 peck	Prior to Sept. 1st
Barley, oats or buckwheat	1 peck	Prior to Feb. 1st
Soybeans	1/2 peck	Prior to Feb. 1st
Corn (field or sweet)	2-1/2 quarts	Prior to Feb. 1st

Before corn is shelled, it is recommended that growers submit a sample of at least 400 kernels taken 2 kernels from each of 200 ears for germination test.

Growers are urged to submit samples as far as possible in advance of the dates indicated.

The grower shall guarantee in the case of each sample that it is representative of and not better than the entire lot of seed to be offered for sale. The Association reserves the right to make supplementary inspections, at any time, of seed in bins or cribs or wherever stored.

*For explanation of reference numbers see notes on page 5.

C. Standard for Certified and Registered-Certified Seed Grains

1. Certified Seed

Purity (1*)	Oats	Barley	Wheat	Rye	Buckwheat
Weed seeds allowed (2*)	98.00%	98.00%	98.00%	97.00%	95.00%
Noxious weeds allowed (3*)	.05	.05	.05	.05	.10
Inert matter allowed:	None in threshed sample				
a. Dirt, stones, chaff and other material not seeds	.15	.15	.15	.15	.15
b. Sprouted kernels and broken kernels 1/2 size or less (4*)	.20	3.00	1.00	1.00	1.00
c. Total of a. and b.	.30	2.00	1.00	1.00	1.00
Seeds of other cultivated plants	.20	.20	.20	.20	.20
Mixture of other varieties allowed (5*)	1.50	1.00	1.00	2.00	5.00
Germination minimum	90.00	90.00	90.00	90.00	90.00
Weight per bushel minimum (7*)	32 lbs.	48 lbs.	60 lbs.	56 lbs.	45 lbs.
Maximum % loose smut, or covered smut, or both, allowed	1.00	1.00(6*)	1.00(6*)	1.00(6*)	
Maximum % ergot				3.00	

2. Registered-Certified Seed

Purity	99.50%	99.50%	99.50%	99.50%	98.50%
Weed seeds allowed (2*)	.01	.01	.01	.01	.01
Noxious weed seeds (3*)	None in threshed grain				
Seeds of other cultivated plants	.05	.05	.05	.05	.10
Total weed seeds and seeds of other cultivated plants	.05	.05	.05	.05	.10
Inert matter allowed:					
a. Dirt, stones, chaff and other material not seeds	.05	.05	.05	.05	.05
b. Sprouted kernels and broken kernels 1/2 size or less (4*)	.05	.50	.25	.25	.25
c. Total of a. and b.	.05	.50	.25	.25	.25
Mixtures of other varieties allowed	.05	.05	.05(9*)	.50	1.50
Maximum % of loose smut, or covered smut, or both, allowed in field	.10	.10	.10	--	--
Weight per bushel minimum (7*)	32 lbs.	48 lbs.	60 lbs.	56 lbs.	46 lbs.
Germination minimum	95.00	95.00	95.00	95.00	95.00

C. Standard for Certified and Registered-Certified Seed Grains

1. Certified Seed

	Corn (8*)	Sweet Corn	Soybeans
Purity	98.50%	99.50%	98.00%
Weed seeds allowed	None	None	.02
Noxious weeds seeds allowed	None	None	None
Inert matter allowed:			
a. Dirt, stones, chaff and other material not seeds	.15	.15	.15
b. Broken, sprouted or shrunken kernels	.50	.50	2.00
c. Total of a. and b.	.50	.50	2.00
Seeds of other cultivated plants	.05	.05	.20
Mixture of other varieties allowed	1.00	.10	1.00
Maximum moisture allowed	14.00	14.00	--
Germination minimum	90.00	90.00	90.00
Weight per bushel minimum	56 lbs.	48 lbs.	58 lbs.

2. Registered-Certified seed must conform to the foregoing table except as follows: (10*)

Purity	99.50%	99.25%
Weed seeds allowed	None	None
Inert matter allowed:		
a. Dirt, stones, chaff and other material not seeds	.05	.05
b. Broken, sprouted or shrunken kernels	.15	.50
c. Total of a. and b.	.15	.50
Seeds of other cultivated plants	None	.05
Total weed seeds and seeds of other cultivated plants	None	.05
Noxious weed seeds	None	None
Mixture of other varieties allowed	.50	.50
Germination minimum	95.00	95.00

*For explanation of reference numbers see notes on page 5.

- (1) Terms used same as in New York State Seed Law. Purity is the freedom, expressed in percent by weight, from inert matter, from other crop seeds, and from seeds of other varieties of the same crop as determined by either field or sample inspection.
- (2) The allowance of all weed seeds in certified seed shall not exceed ten (10) seeds per pound of grain or three (3) seeds per pound in registered-certified seed.
- (3) Weeds considered as noxious are quack grass, wild mustard and other related Brassica species, Canada thistle, corn cockle, crab grass, docks and dodder. While no seeds of noxious weeds are allowed in the threshed sample submitted for inspection, a tolerance of not more than one noxious weed seed per peck of grain is permitted in certified seed offered for sale. This tolerance is not applicable to registered-certified seed.
- (4) The percentage tolerance on broken kernels one-half size or less may be increased at the discretion of the inspecting agency in seasons when such necessity may arise.
- (5) The percent of varietal mixture will be based on counts of detectable mixture of other varieties and strains both in the field and in the threshed sample. The limit of tolerance specified applies to either inspection.
- (6) A total tolerance of 2% smut is allowed in Alpha barley and Honor wheat, provided that not more than one-half of this tolerance, or 1%, be allowed for covered smut.
- (7) When seasonal conditions warrant, a tolerance of two (2) pounds in weight per bushel in the case of certified seed will be allowed at the discretion of the inspecting agency. In the case of smooth awned varieties of barley, the tolerance may be increased to four (4) pounds per bushel. No tolerance will be allowed in registered-certified seed except in smooth awned varieties of barley in which a tolerance of two (2) pounds per bushel may be allowed.
- (8) Seed corn must be free from European corn borer and from serious seed-borne diseases. Unless field corn seed be graded into at least two grades, i.e., flats and rounds, it shall be designated as ungraded on the certification tags.
- (9) Mixtures of other varieties in registered-certified Honor wheat, 0.75%; in other varieties of wheat, 0.05%
- (10) Standards for registered-certified seed corn apply to open pollinated varieties only. There shall be no registered-certified class for hybrid corn.

D. Rules governing sale of inspected seed:

Certified and Registered-Certified seed to be sold as such must conform to the rules of the Association. The certification tag which shall be furnished by the Association shall be attached to all packages containing such seed, and shall have

written, stamped or printed on it all items required by the New York State Seed Law and the Association.

1. The New York State Seed Law requires the following information on the tag:
 - a. Commonly accepted name of the seed.
 - b. Approximate percentage of purity by weight.
 - c. Approximate total percentage of weed seeds by weight.
 - d. Name and number per pound of each kind of seed of noxious weeds, if present singly or collectively, in excess of one seed per 100 grams of grain.
 - e. Approximate percentage of germination, together with month and year germination test was conducted.
 - f. Name and address of vendor.
2. In addition to the items required by the State Seed Law, the Association requires the following to appear on the tag:
 - a. Name of the variety of the seed.
 - b. Total percentage of inert matter. If any of the inert matter is composed of broken kernels (one-half size or less) and sprouted kernels, the percentage of these may be stated.
 - c. Percentage of smuts:
 - Barley - when smuts are in excess of 0.5 percent.
 - Oats - when in excess of 0.5%, together with a recommendation that the seed be treated, if not already treated by the seller.
 - Wheat - (1) when loose smut is in excess of 0.5%
(2) when covered smut is in excess of 0.1% together with a recommendation that the seed be treated, if not already treated by the seller.
 - d. Name or registration number of the grower who, by attaching the certification tag, guarantees to the first buyer that the seed contained in the package actually is the seed which was inspected by the College and found to conform to the foregoing standard, and who further guarantees that any statement appearing on the certification tag properly refers to the particular seed so tagged.

Every effort is made by the College and the Association to examine carefully and report accurately the inspection findings on all fields and samples of seed, and to inspect only for reliable growers. However, neither the College nor the Association makes any guarantee, express or implied, regarding any lot of seed, and assumes no responsibility in connection therewith.