

BAHIAGRASS SEED CERTIFICATION STANDARDS

I. APPLICATION OF GENERAL CERTIFICATION STANDARDS:

The General Seed Certification Standards are basic and together with the following specific standards constitute the Standards for the Certification of Bahiagrass.

II. CLASSES OF BAHIAGRASS SEED:

A. FOUNDATION SEED (WHITE TAG): 1st and 2nd year's production from fields planted with Breeder seed.

B. REGISTERED SEED (PURPLE TAG): 1st and 2nd year's production from fields planted with Foundation seed.

C. CERTIFIED SEED (BLUE TAG): 1st and 2nd year's production from fields planted with Registered seed. The production from fields planted with Certified Blue Tag seed will not be eligible for Certification.

III. VARIETIES PER FARM:

Only the variety offered for Certification may be grown for seed production on a farm except on approval of the Certifying agency prior to planting.

IV. LAND REQUIREMENTS:

A field to be eligible for production of Foundation, Registered, or Certified Blue Tag seed must not have grown or been seeded to the same species during the previous five years. This requirement is waived if the previous crop was of the same variety and of a Certified class.

V. FIELD INSPECTION:

A field inspection is to be made after heading but before harvesting.

VI. APPLICATION FOR FIELD INSPECTION:

An official application for field inspection must be filed with MCIA on or before July 15.

VII. FIELD STANDARDS:

Factor	Tolerance and Requirements		
	Foundation	Registered	Cert. Blue
Other varieties	None	None	10 Plants Per Acre
Dallisgrass	None	None	5 Plants Per Acre
Noxious Weeds:			
Dodder	None	None	None
Onions and/or Garlic	None	None	None
Other Paspalum Species	None	None	5 Plants Per Acre
Johnsongrass Dock Cheat Darnel	If a field is too heavily infested with noxious weeds, the inspector may refuse inspection. These noxious weeds will be permitted in the field but NOT IN THE LABORATORY SEED ANALYSIS.		
Other Crops*	Other crops with seed which can be separated from Bahiagrass seed will be permitted in the field.		
Isolation	1300 Feet	660 Feet	330 Feet

*Other crops shall include crops or plants which can be differentiated from the crops being inspected - small grain, clovers, etc.

VIII. SEED SAMPLES FOR LABORATORY ANALYSIS:

An official sample for laboratory analysis will be drawn from EACH LOT OF CLEANED SEED to be Certified. A representative of MCIA will draw this official sample UPON REQUEST FROM THE GROWER. Seed must be cleaned and bagged before requesting that the official samples be drawn. (For sampling of bulk seed, refer to General Standards, Page 17 of this Handbook.)

IX. SEED STANDARDS:

Tolerance and Requirements			
Factor	Foundation	Registered	Cert. Blue
Pure Seed	95%	95%	95%
Other Crops	.25%	.25%	.25%
Other Varieties	None	None	.02%
Other Kinds	None	None	.05%
Dallisgrass	None	None	.03%
Inert	5%	5%	5%

Weed Seed	.50%	.50%	.50%
Noxious Weed Seed	None	None	None
Germination (including firm un-germinating)	85%	85%	85%

COTTONSEED CERTIFICATION STANDARDS

I. APPLICATION OF GENERAL CERTIFICATION STANDARDS:

The General Seed Certification Standards are basic and together with the following specific standards constitute the Standards for Certification of Cottonseed.

II. CLASSES OF COTTONSEED:

- A. FOUNDATION SEED (WHITE TAG): First year's production from Breeder seed.
- B. REGISTERED SEED (PURPLE TAG): First year's production from Foundation seed.
- C. CERTIFIED SEED (BLUE TAG): First year's production from Registered seed.

III. LAND REQUIREMENTS:

Land to be used for the production of Certified seed must be free from volunteer cotton plants.

IV. APPLICATION FOR FIELD INSPECTION:

An official application for field inspection must be filed with MCIA on or before July 1.

V. FIELD INSPECTION:

At least one field inspection shall be made before the crop is harvested at such time as, in the judgement of the Certifying agency, is most appropriate.

VI. FIELD STANDARDS:

Factor	Tolerance and Requirements		
	Foundation	Registered	Cert. Blue
Other Varieties and Off-Type Plants	None	1 Plant Per Acre	5 Plants Per Acre
Other Species	None	None	None

Cocklebur tolerance - 3 plants per acre of the size that are easily visible and that are the height or taller than the average height of the cotton plants.

VII. ISOLATION:

Certified cotton must be isolated 15 feet or have a barrier that will prevent mechanical mixture, unless the variety adjacent is the same variety and being offered for Certification. Certified cotton fields must be isolated at least 1/2 mile from other species of cotton. If a field of cotton adjacent to a Certified field contains one to five plants per acre of the same species, but which differs from the variety to be Certified by easily observed morphological characteristics, the isolation must be 100 feet from the Certified field to the nearest contaminant; 100 foot isolation for each additional increment of 5 plants per acre of the contaminant up to a maximum of 1/4 mile isolation.

Fields not in compliance on isolation - In the event the field is not isolated 15 feet, the cotton within this 15 foot area must be destroyed by disking or shredding.

If a grower fails to comply with isolation requirements within 10 days from the date of inspection, all fields not isolated will not be recommended for Certification and must not be ginned on the one-variety gin. Gin receipts must be kept as proof that the field deficit in isolation was ginned on a public gin.

VIII. ONE-VARIETY FARMS AND ONE-VARIETY GINS:

A. ONE-VARIETY FARMS:

Cotton offered for Certification must be grown on a one-variety farm or as per specifications of the originating breeder and/or institution and approved by MCIA.

B. ONE-VARIETY GINS:

Cotton offered for Certification must be ginned on a one-variety gin or as per specifications of the originating breeder and/or institution and approved by MCIA.

C. HARVESTING EQUIPMENT INSPECTION:

Before any harvesting equipment is used to harvest Certified cotton, it must be thoroughly cleaned and then inspected and approved by the MCIA. Equipment used to harvest Certified cotton of the same variety the previous year shall be exempt from said inspection. In the event an inspection becomes necessary, there will be a \$25.00 charge for each inspection.

IX. GIN AND STORAGE INSPECTIONS AND CHARGES:

A. GIN INSPECTION:

Before ginning Certified cotton, the gin must be thoroughly cleaned, inspected, and approved by the MCIA inspector. If a gin was in the Certified seed program the previous year and the variety is not changed, the inspection is not necessary. In the event the variety or strain is changed from one ginning season to the next, a gin inspection is necessary before ginning the new variety or strain. Gin records must show that only the approved variety was ginned at the gin and such records must be made available for inspection at any time by the MCIA inspectors. In the event all Certified seed intended to be saved has been saved, ginning for the public will be permitted for the remainder of the season. The seed house must be inspected by MCIA to determine that the conveying equipment is disconnected between the gin and seed house before ginning for the public. In this event, the gin must be thoroughly cleaned, inspected, and approved before the next ginning season.

B. STORAGE INSPECTION:

Storage facilities which handle bulk Certified seed for the first time must first be inspected and approved by the MCIA before Certified seed is stored.

If seed are stored in bulk, they must be stored in dry, weatherproof buildings. They must be separated from any other cottonseed of another quality or variety in such a manner that there will be absolutely no chance of mixture.

Identity of individual lots of seed must be maintained at all times.

Producers must notify MCIA when storage inspection is needed. MCIA reserves the right to make storage inspections whenever it deems necessary.

C. INSPECTION CHARGES:

Gin and/or seed house inspections shall be \$25.00 per inspection.

X. SEED SAMPLES FOR LABORATORY ANALYSIS:

An official sample for laboratory analysis will be drawn from EACH LOT OF CLEANED SEED to be Certified. A representative of MCIA will draw this official sample UPON REQUEST FROM THE GROWER. Seed must be cleaned and bagged before requesting that the official samples be drawn. (For sampling of bulk seed, refer to General Standards, Page 17 of this Handbook.)

XI. SEED STANDARDS:

Factor	Tolerance and Requirements		
	Foundation	Registered	Cert. Blue
Pure Seed	98%	98%	98%
Other Crops	None	.01%	.10%
Other Varieties and Off-type Plants	None	.01%	.10%
Other Kinds	None	None	None
Inert	2%	2%	2%
Weed Seed	None	.01%	.02%
Objectionable Weed Seed: Sandbur (Cenchrus spp.)	None	None	None
Noxious Weed Seed	None	None	None
Cocklebur	None	1 per lb.	1 per lb.
Germination	70%	70%	70%

CERTIFICATION STANDARDS FOR EASTERN GAMAGRASS SEED

I. APPLICATION OF GENERAL CERTIFICATION STANDARDS:

The General Seed Certification Standards are basic and together with the following specific standards constitute the Standards for Certification of Eastern Gamagrass.

II. CLASSES OF SEED CERTIFIED:

Eastern Gamagrass seed production shall be on the limited generation system. The Foundation class produce the Registered class, the Registered class will produce the Certified class. The Certified class is not eligible for re-certification, with the following exception: Unlimited re-certification of the Certified class may be permitted for older varieties where foundation seed is not being maintained.

Fields sown with the appropriate class of certified seed will be eligible to produce certified seed in accordance with the following table.

Class of Seed Sown	Limited Generation
Foundation Seed	5 Years as Registered Class Plus 10 Years Certified Class
Registered Seed	10 Years Certified Class
Certified Seed	0 Years

III. VARIETIES PER FARM AND EQUIPMENT INSPECTIONS:

- A. If more than one variety is grown per farm, inspection between varieties in the current season is necessary on equipment used in harvesting, hauling and storage except when the previous crop harvested was a different crop and can be separated by a conventional conditioning procedure.
- B. No equipment inspection is required for the Certified Blue Tag class if the farm functions as a one-variety farm operating 100% as to equipment.
- C. Before harvesting Registered class of gamagrass, the harvesting, handling, hauling equipment, and storage must be cleaned and then inspected and approved by MCIA. Certified Blue Tag gamagrass of the same variety may be harvested between the equipment inspection and the harvesting of the Registered class without additional equipment inspections for harvesting the Registered class. After the initial equipment inspection for a given variety, no

additional inspections are required unless the equipment is used for another variety or Non-Certified seed of the same variety.

D. Conditioning plants must be inspected before receiving and/or conditioning Registered seed.

E. When inspection is necessary and/or requested, there will be a \$25.00 charge. If equipment is not approved on the first inspection, there will be a \$25.00 charge for each trip required.

IV. LAND REQUIREMENTS:

A crop of the same kind must not have been grown or planted on the land for Foundation seed, 5 years: Registered seed, 3 years: Certified seed, 2 years prior to stand establishment.

V. APPLICATION FOR FIELD INSPECTION:

An official application for field inspection must be filed with MCIA on or before July 15.

VI. FIELD INSPECTION:

Fields must be inspected each year that a Foundation, Registered or Certified seed crop is to be harvested. A field inspection must be made after heading but before harvest, the crop automatically becomes ineligible for certification if harvested before the field inspection is made.

VII. FIELD STANDARDS:

Factor	Tolerance and Requirements		
	Foundation	Registered	Cert. Blue
Other Varieties and Off-Type Plants*	0 plants	1 in 500	1 in 100
Other Crop Plants: Southernpeas, Okra, Sorghum, Soybeans	None	5 plants per acre	15 plants per acre
Weeds (non-noxious) Sicklepod & Sesbania	None	None	None
Noxious Weeds	None	None	None
Isolation	60 Feet	30 Feet	15 Feet

*Variants to the level as described by the Breeder will be considered part of the variety.

VIII. SEED SAMPLES FOR LABORATORY ANALYSIS:

An official sample for laboratory analysis will be drawn from EACH LOT OF CLEANED SEED to be Certified. A representative of MCIA will draw this official sample UPON REQUEST FROM THE GROWER. Seed must be cleaned and bagged before requesting that the official samples be drawn.

IX. SEED STANDARDS:

Factor	Tolerance and Requirements		
	Foundation	Registered	Cert. Blue
Pure Seed	97%	97%	97%
Other Crops	0 per lb.	5 per lb.	10 per lb.
Inert	3%	3%	3%
Weed Seed	0 per lb.	5 per lb.	10 per lb.
Noxious Weed Seed	None	None	None
Germination*	70%	70%	70%

* Germination based on % germination plus % dormant.

CERTIFICATION STANDARDS FOR RE-SEEDING SOYBEAN SEED

I. APPLICATION OF GENERAL CERTIFICATION STANDARDS:

The General Seed Certification Standards are basic and together with the following specific standards constitute the Standards for Certification of Re-seeding Soybeans.

II. CLASSES OF SEED CERTIFIED:

- A. **FOUNDATION SEED (WHITE TAG):** First year's production from Breeder seed.
- B. **REGISTERED SEED (PURPLE TAG):** First year's production from Foundation seed.
- C. **CERTIFIED SEED (BLUE TAG):** First year's production from Registered seed.

All seed crops harvested from volunteering stands established with Foundation, Registered, or Certified Blue Tag seed shall be classed as Certified Blue Tag.

III. VARIETIES PER FARM AND EQUIPMENT INSPECTIONS:

- A. If more than one variety is grown per farm, inspection between varieties in the current season is necessary on equipment used in harvesting, hauling and storage except when the previous crop harvested was a different crop and can be separated by a conventional conditioning procedure.
- B. No equipment inspection is required for the Certified Blue Tag class if the farm functions as a one-variety farm operating 100% as to equipment.
- C. Before harvesting Registered class of soybeans, the harvesting, handling, hauling equipment, and storage must be cleaned and then inspected and approved by MCIA. Certified Blue Tag soybeans of the same variety may be harvested between the equipment inspection and the harvesting of the Registered class without additional equipment inspections for harvesting the Registered class. After the initial equipment inspection for a given variety, no additional inspections are required unless the equipment is used for another variety or Non-Certified seed of the same variety.
- D. Conditioning plants must be inspected before receiving and/or conditioning Registered seed.
- E. When inspection is necessary and/or requested, there will be a \$25.00 charge. If equipment is not approved on the first inspection, there will be a \$25.00

charge for each trip required.

IV. LAND REQUIREMENTS:

A crop of the same kind must not have been grown or planted on the land for 5 years prior to stand establishment.

V. APPLICATION FOR FIELD INSPECTION:

An official application for field inspection must be filed with MCIA on or before July 15.

VI. FIELD INSPECTION:

Fields shall be inspected after the beans are mature but before harvesting operations begin and at a time when pod, pubescence color, and other plant characteristics can be detected.

VII. FIELD STANDARDS:

Factor	Tolerance and Requirements		
	Foundation	Registered	Cert. Blue
Other Varieties and Off-Type Plants*	5 plants per acre	15 plants per acre	45 plants per acre
Other Crop Plants: Southernpeas, Okra, Sorghum, Soybeans	None	5 plants per acre	15 plants per acre
Weeds (non-noxious) Sicklepod & Sesbania	None	None	None
Common Morningglory	2 plants per acre	5 plants per acre	10 plants per acre
Noxious Weeds Balloonvine & Crotonaria	None	2 plants per acre	5 plants per acre
Purple Moonflower	None	1 plant/acre	3 plants/acre
Isolation	15 feet from other varieties when rows are parallel and 30 feet otherwise		

*Variants to the level as described by the Breeder will be considered part of the variety.

VIII. SEED SAMPLES FOR LABORATORY ANALYSIS:

An official sample for laboratory analysis will be drawn from EACH LOT OF CLEANED SEED to be Certified. A representative of MCIA will draw this official sample UPON REQUEST FROM THE GROWER. Seed must be cleaned and bagged before requesting that the official samples be drawn. (For sampling of

bulk seed, refer to General Standards, Page 17 of this Handbook.)

IX. SEED STANDARDS:

Factor	Tolerance and Requirements		
	Foundation	Registered	Cert. Blue
Pure Seed	95%	95%	95%
Other Crops	7 per lb.	17 per lb.	41 per lb.
Soybeans (Glycine Max.)	5 per lb.	10 per lb.	20 per lb.
Other Varieties*	2 per lb.	5 per lb.	15 per lb.
Other Kinds	None	2 per lb.	6 per lb.
Inert	5%	5%	5%
Weed Seed	5 per lb.	10 per lb.	15 per lb.
Common Morningglory	2 per lb.	8 per lb.	15 per lb.
Sicklepod & Sesbania	None	1 per lb.	5 per lb.
Noxious Weed Seed	None	None	None
Germination	80%	80%	80%

*In the application of this standard, off-color soybeans due to environmental factors shall not be considered other varieties.

RICE SEED CERTIFICATION STANDARDS

I. APPLICATION OF GENERAL SEED CERTIFICATION STANDARDS:

The General Seed Certification Standards are basic and together with the following specific standards constitute the Standards for Certification of Rice seed.

II. CLASSES OF RICE SEED:

A. **FOUNDATION SEED (WHITE TAG):** First year's production from Breeder seed.

B. **REGISTERED SEED (PURPLE TAG):** First year's production from Foundation seed.

C. **CERTIFIED SEED (BLUE TAG):** First year's production from Registered seed.

III. VARIETIES PER FARM:

If more than one variety is grown per farm, inspection by MCI A between varieties is necessary on equipment used in harvesting, hauling, and storage.

IV. LAND REQUIREMENTS:

Fields offered for Certification must have the following rotation of crops:

Foundation - 1 year rice; 2 years another crop, or summer fallow.

Registered - 1 year rice; 1 year another crop, or summer fallow.

Certified Blue Tag - 1 year rice; 1 year another crop, or summer fallow.

All Classes of Certified Seed - 5 years after Hybrid Rice.

V. APPLICATION FOR FIELD INSPECTION:

An official application for field inspection must be filed with MCI A on or before July 1.

VI. ISOLATION:

Certified fields shall be isolated from adjacent fields of other varieties or Non-Certified fields by at least 15 feet if the adjacent fields are ground drilled, 50 feet if ground broadcast, and 100 feet if aerial seeded.

Certified fields shall be isolated from Hybrid rice fields by at least 440 yards. If Hybrid rice is closer than 440 yards a 30 foot boarder (in line to Hybrid rice field) must be clipped, disked or removed prior to field inspection

VII. FIELD INSPECTION:

- A. Fields will be inspected after heading and before harvest.
- B. Grower is required to supply the inspector with transportation for use in inspecting the fields.
- C. Diseases: Fields heavily infested with a disease that cannot be easily controlled with a seed treatment will be cause for rejection for Certification.
- D. When a Foundation or Registered field is rejected for Red Rice contamination, the field cannot be rogued and reinspected for Red Rice.

VIII. FIELD STANDARDS:

Factor	Tolerance and Requirements		
	Foundation	Registered	Cert. Blue
Noxious Weeds:			
Bindweed (Convolvulus arvensis)	None	None	None
Northern Jointvetch (Aeschynomene virginica)	None	None	None
Morningglory Cheat Darnel Dock	A small percentage of these plants will be permitted		
Johnsongrass			
Wild Onions Wild Garlic			
Vetch Wild Winter Peas Sesbania species			
Red Rice	None	None	None
Other Varieties*	None	5 plants per acre	10 plants per acre
Diseases that can be controlled with	Diseases affecting the quality of the seed or that are transmittable through the planting seed		

seed treatments must be treated with an effective treatment.

Isolation See Section VI for these standards

*Variants to the level as described by the breeders will be considered part of the variety.

IX. SAMPLING:

A. NUMBER OF BAGS PER LOT:

Not over 1000 fifty pound bags, or the equivalent thereof, shall be stacked in a given lot for the purpose of drawing official samples unless permission is granted.

B. TESTING FOR RED RICE:

A two-pound sample from each lot of cleaned seed and a two-pound sample from rejects from the cleaning process that may remove medium and short grain seed shall be hulled and tested for Red Rice for the Foundation class. A one-pound sample from each lot of cleaned seed shall be hulled and tested for Red Rice for all other classes. These samples shall be drawn by an MCIA inspector.

X. SEED SAMPLES FOR LABORATORY ANALYSIS:

An official sample for laboratory analysis will be drawn from EACH LOT OF CLEANED SEED to be Certified. A representative of MCIA will draw this official sample UPON REQUEST FROM THE GROWER. Seed must be cleaned and bagged before requesting that the official samples be drawn. (For sampling of bulk seed, refer to General Standards, Page 17 of this Handbook.)

XI. SEED STANDARDS:

Factor	Tolerance and Requirements		
	Foundation	Registered	Cert. Blue
Pure Seed	98%	98%	98%
Other Crops	None	2 per lb.	4 per lb.
Other Varieties	None	1 per lb.	2 per lb.
Other Kinds	None	1 per lb.	2 per lb.
Inert	2%	2%	2%
Weed Seed	None	None	.02%
Morningglory	None	None	5 per lb.
Northern Jointvetch (<i>Aeschynomene virginica</i>)	None	None	None
Sesbania species	None	None	None
Noxious Weeds	None	None	None
Red Rice	None	None	None

Johnsongrass	None	None	1 per lb.
Germination	80%	80%	80%

**SMALL GRAIN CERTIFICATION STANDARDS
(OATS, WHEAT, BARLEY, RYE)**

I. APPLICATION OF GENERAL CERTIFICATION STANDARDS:

The General Seed Certification Standards are basic and together with the following specific standards constitute the Standards for Certification of Small Grains.

II. CLASSES OF SMALL GRAIN SEED:

A. FOUNDATION SEED (WHITE TAG): First year's production from Breeder seed.

B. REGISTERED SEED (PURPLE TAG): First year's production from Foundation seed.

C. CERTIFIED SEED (BLUE TAG): First year's production from Registered seed.

III. VARIETIES PER FARM:

If more than one variety is grown per farm, inspection by MCIA between varieties is necessary on equipment used in harvesting, hauling, and storage.

IV. LAND REQUIREMENTS:

Small grains offered for Certification shall not be planted on land which grew small grains of the same kind the previous year unless the crop was grown from Certified seed of the same variety.

V. APPLICATION FOR FIELD INSPECTION:

An official application for field inspection must be filed with MCIA on or before April 15.

VI. HANDLING THE CROP PRIOR TO FIELD INSPECTION:

A. Fields must be sufficiently rogued prior to inspection to remove off-type plants, other crops, and noxious weeds which can be rogued successfully.

B. Temporary boundaries between weedy and clean portions of a field **MUST BE ESTABLISHED BEFORE INSPECTION**. Portions of fields which are too heavily infested for rogueing should be clipped or isolated before inspection.

C. All field boundaries must be clipped or disked prior to field inspection.

VII. FIELD STANDARDS:

Tolerance and Requirements

Factor	Foundation	Registered	Cert. Blue
Other Crops*	None	10 plants per acre	30 plants per acre
Vetch, Wild Winter Peas, Austrian Winter Peas	None	10 plants per acre**	30 plants per acre**
Varietal Mixture	.01% (1:10,000 plants)	.02% (1:5,000 plants)	.04% (1:2,500 plants)
Noxious Weeds:	None	None	5 plants per acre
Cheat and/or Darnel			per acre
Dock	None	None	5 plants per acre
Wild Radish	None	3 plants per acre	5 plants per acre
Wild Onions and Garlic	None	None	None
Johnsongrass (headed)***	None	None	None
Loose Smut (except Oats)	1%	1%	1%
Isolation	12 feet from any other small grain	12 feet from any other small grain	12 feet from any other small grain

Note: For Wheat, Rye, and Barley - Cheat, Dock, Wild Radish, and Darnel will be permitted in the field; however, if the field is too heavily infested with these weeds, the inspector may reject the field. Wild Radish, Cheat, Darnel, and Dock will not be permitted in the laboratory seed analysis.

*Other crops shall include any other small grains and other crop plants, the seed of which cannot be thoroughly removed by cleaning.

**Not to exceed the maximum allowed per acre of any one or a combination of the three.

***Headed Johnsongrass will be permitted in wheat fields but Johnsongrass seed will not be permitted in the laboratory analysis.

NOTE: The isolation requirements between different varieties or strains of rye must be as follows:

Foundation Seed: 2,500 feet
Registered Seed: 1,300 feet
Certified Blue Tag Seed: 1,300 feet

VIII. REJECTING DISEASE INFESTED FIELDS:

If a small grain field is heavily infested with a disease which cannot be easily

controlled by seed treatment, the inspectors may reject such fields for Certification.

IX. SEED SAMPLES FOR LABORATORY ANALYSIS:

An official sample for laboratory analysis will be drawn from EACH LOT OF CLEANED SEED to be Certified. A representative of MCIA will draw this official sample UPON REQUEST FROM THE GROWER. Seed must be cleaned and bagged before requesting that the official samples be drawn. (For sampling of bulk seed, refer to General Standards, Page 17 of this Handbook.)

X. SEED STANDARDS:

Factor	Tolerance and Requirements		
	Foundation	Registered	Cert. Blue
Pure Seed	98%	98%	98%
Other Crops	1 per lb.	6 per lb.	18 per lb.
Other Varieties	1 per lb.	3 per lb.	9 per lb.
Other Kinds	None	1 per lb.	5 per lb.
Wild Winter Peas, Vetch	None	1 per lb.	2 per lb.
Austrian Winter Peas	None	1 per lb.	2 per lb.
Inert	2%	2%	2%
Weed Seed	None	None	5 per lb.
Noxious Weed Seed	None	None	None
Germination (Other than Rye)	85%	85%	85%
Rye	70%	70%	70%

SORGHUM CERTIFICATION STANDARDS

I. APPLICATION OF GENERAL CERTIFICATION STANDARDS:

The General Seed Certification Standards are basic and together with the following specific standards constitute the Standards for Certification of Sorghum.

II. CLASSES OF SORGHUM SEED:

A. **FOUNDATION SEED (WHITE TAG):** First year's production from Breeder seed.

B. **REGISTERED SEED (PURPLE TAG):** First year's production from Foundation seed.

C. **CERTIFIED SEED (BLUE TAG):** First year's production from Registered seed.

III. VARIETIES PER FARM:

Only the variety offered for Certification may be grown for seed production on a farm except on approval of the Certifying agency prior to planting.

IV. LAND REQUIREMENTS:

Sorghum offered for Certification shall not be planted on land which grew sudangrass, broomcorn, sorghum of another variety the previous year, or sorghum of the same variety unless of a Certified class.

V. APPLICATION FOR FIELD INSPECTION:

An official application for field inspection must be filed with MCIA on or before July 15.

VI. FIELD INSPECTION:

A. Foundation and Registered seed fields shall be given two field inspections as follows:

One field inspection shall be made during bloom, preferably in full bloom.

One field inspection shall be made before harvest, but after the seed begins to assume mature color.

B. Certified Blue Tag seed fields shall be inspected before harvest but after the

seed begins to assume mature color.

VII. SEED TREATMENT:

Seed must be treated with an effective fungicide to control seed borne diseases.

VIII. FIELD STANDARDS:

Factor	Tolerance and Requirements		
	Foundation	Registered	Cert. Blue
Other Varieties (Definite)	None	1 plant in 5 acres	1 plant in 2 acres
Other Varieties (Doubtful)	None	1 plant per acre	10 plants per acre
Head Smut*	None	None	1 plant per acre
Covered and Loose Kernel Smut	None	None	1 plant in 2500 plants
Isolation	1300 feet from other varieties	1300 feet from other varieties	1300 feet from other varieties

*A greater tolerance will be allowed on smut types that can be controlled by seed treatment.

IX. SEED SAMPLES FOR LABORATORY ANALYSIS:

An official sample for laboratory analysis will be drawn from EACH LOT OF CLEANED SEED to be Certified. A representative of MCIA will draw this official sample UPON REQUEST FROM THE GROWER. Seed must be cleaned and bagged before requesting that the official samples be drawn.

X. SEED STANDARDS:

Factor	Tolerance and Requirements		
	Foundation	Registered	Cert. Blue
Pure Seed	98%	98%	98%
Other Crops	None	None	3 per lb.
Other Varieties	None	None	2 per lb.
Other Kinds	None	None	1 per lb.
Inert	2%	2%	2%
Weed Seed	None	None	3 per lb.
Noxious Weed Seed	None	None	None
Germination	80%	80%	80%

SOUTHERNPEA SEED CERTIFICATION STANDARDS

I. APPLICATION OF GENERAL CERTIFICATION STANDARDS:

The General Seed Certification Standards are basic and together with the following specific standards constitute the Standards for Certification of Southernpea seed.

II. CLASSES OF SOUTHERNPEA SEED:

A. FOUNDATION SEED (WHITE TAG): First year's production from Breeder seed.

B. REGISTERED SEED (PURPLE TAG): First year's production from Foundation seed.

C. CERTIFIED SEED (BLUE TAG): First year's production from Registered seed.

III. VARIETIES PER FARM:

Only the variety offered for Certification may be grown for seed production on a farm except on approval of the Certifying agency prior to planting.

IV. LAND REQUIREMENTS:

A crop will not be eligible for Certification if planted on land where Southernpeas were grown the previous year unless the previous crop was the same variety and of a Certified class.

It is strongly recommended that at least a five year rotation be practiced where Certified Southernpeas are being grown. For example, if a plot of land grows Southernpeas this year, Southernpeas offered for Certification should not be grown on this same plot of land for the next five years.

V. APPLICATION FOR FIELD INSPECTION:

An official application for field inspection must be filed with MCIA on or before June 15. Official applications for late plantings will be accepted after June 15.

VI. FIELD INSPECTION:

Field inspection shall be made when the pods begin to mature.

VII. FIELD STANDARDS:

Factor	Tolerance and Requirements		
	Foundation	Registered	Cert. Blue
Other Varieties and Off -Type Plants	None	2 per acre	5 per acre
Other Crops	None	None	1 per acre
Isolation	15 feet	15 feet	15 feet

VIII. SEED SAMPLES FOR LABORATORY ANALYSIS:

An official sample for laboratory analysis will be drawn from EACH LOT OF CLEANED SEED to be Certified. A representative of MCIA will draw this official sample UPON REQUEST FROM THE GROWER. Seed must be cleaned and bagged before requesting that the official samples be drawn.

IX. SEED STANDARDS:

Factor	Tolerance and Requirements		
	Foundation	Registered	Cert. Blue
Pure Seed	98%	98%	98%
Other Crops	None	1 per lb.	4 per lb.
Other Varieties	None	1 per lb.	3 per lb.
Other Kinds	None	None	1 per lb.
Inert	2%	2%	2%
Weed Seed	None	None	.03%
Noxious Weed Seed	None	None	None
Germination	80%	80%	80%

X. RECOMMENDED SEED TREATMENT:

All seed should be treated with an insecticide and a fungicide according to recommendations of the Mississippi Agricultural and Forestry Experiment Station.

SOYBEAN SEED CERTIFICATION STANDARDS

I. APPLICATION OF GENERAL CERTIFICATION STANDARDS:

The General Seed Certification Standards are basic and together with the following specific standards constitute the Standards for Certification of Soybeans.

II. CLASSES OF SOYBEAN SEED:

- A. **FOUNDATION SEED (WHITE TAG):** First year's production from Breeder seed.
- B. **REGISTERED SEED (PURPLE TAG):** First year's production from Foundation seed.
- C. **CERTIFIED SEED (BLUE TAG):** First year's production from Registered seed.

III. VARIETIES PER FARM AND EQUIPMENT INSPECTIONS:

- A. If more than one variety is grown per farm, inspection between varieties in the current season is necessary on equipment used in harvesting, hauling and storage, except when the previous crop harvested was a different crop and can be separated by a conventional conditioning procedure (i.e., rice or small grain).
- B. No equipment inspection is required for the Certified Blue Tag class if the farm functions as a one-variety farm operating 100% as to equipment.
- C. Before harvesting Registered class soybean, the harvesting, handling, hauling equipment, and storage must be cleaned and then inspected and approved by MCIA.

Certified Blue Tag soybean of the same variety may be harvested between the equipment inspection and the harvesting of Registered class without additional equipment inspections for harvesting the Registered class. After the initial equipment inspection for a given variety, no additional inspections are required unless the equipment is used for another variety or Non-Certified seed of the same variety.

- D. Conditioning plants must be inspected before receiving and/or conditioning Registered seed.
- E. When inspection is necessary and/or requested, there will be a \$25.00 charge.

If equipment is not approved on the first inspection, there will be a \$25.00 charge for each trip required.

IV. LAND REQUIREMENTS:

Soybeans shall be grown on land on which the previous crop was another kind or planted with a class of Certified seed of the same variety or with a variety having an easily identifiable character difference.

V. APPLICATION FOR FIELD INSPECTION:

An official application for field inspection must be filed with MCIA on or before July 15.

VI. FIELD INSPECTION:

Fields shall be inspected after the beans are mature but before harvesting operations begin and at a time when pod, pubescence color, and other plant characteristics can be detected.

VII. FIELD STANDARDS:

Factor	Tolerance and Requirements		
	Foundation	Registered	Cert. Blue
Other Varieties and Off-type Plants*	1:20,000 plants	1:8,000 plants	1:3,000 plants
Other Crop Plants (Inseparable)	None	None	2 plants per acre
Balloon Vine	None	None	None
Purple Moonflower**	3 plants per acre	3 plants per acre	3 plants per acre
Noxious Weeds and Grasses	The seeds which can be separated from the soybean seed will be permitted in the field.		
Isolation	15 feet from other varieties when rows are parallel and 30 feet otherwise.		

*Variants to the level as described by the Breeders will be considered part of the variety.

**If Purple Moonflower is present in the field, seed from this field must be processed on a spiral separator.

VIII. SEED SAMPLES FOR LABORATORY ANALYSIS:

An official sample for laboratory analysis will be drawn from EACH LOT OF CLEANED SEED to be Certified. A representative of MCIA will draw this official sample UPON REQUEST FROM THE GROWER. Seed must be cleaned and bagged before requesting that the official samples be drawn. (For sampling of bulk seed, refer to General Standards, Page 17 of this Handbook.)

IX. SEED STANDARDS:

Factor	Tolerance and Requirements		
	Foundation	Registered	Cert. Blue
Pure Seed	98%	98%	98%
Other Crops	.09%	.15%	.39%
Other Varieties*	.09%	.15%	.36%
Other Kinds	None	None	1 per lb.
Inert	2%	2%	2%
Weed Seed	None	None	1 per lb.
Noxious Weed Seed	None	None	None
Germination	80%	80%	80%

*In the application of this standard, off-color Soybeans due to environmental factors shall not be considered other varieties.

SWEETPOTATO CERTIFICATION STANDARDS

I. APPLICATION OF GENERAL CERTIFICATION STANDARDS:

The General Seed Certification Standards are basic and together with the following specific standards constitute the Standards for Certification of Sweetpotatoes.

Certification of Sweetpotatoes by MCIA is limited to the seed stock and will cover varietal purity and trueness to type only.

IT IS AGREED AND UNDERSTOOD THAT SWEETPOTATOES MEETING THE GENERAL CERTIFICATION STANDARDS MUST ALSO MEET THE GRADE A REQUIREMENTS OF THE BUREAU OF PLANT INDUSTRY INsofar AS INSECTS AND DISEASES ARE CONCERNED.

II. APPLICATION FOR CERTIFICATION:

An official application for Certification must be submitted to MCIA on or before July 15.

III. CLASSES OF SWEETPOTATO SEED STOCK:

Sweetpotato seed stock will be Certified as Foundation, Registered, and Certified Blue Tag.

- A. Foundation Sweetpotato seed stock is seed stock produced from approved plantings recognized by MAFES and/or the Mississippi Crop Improvement Association.
- B. Registered Sweetpotato seed stock is the first year's increase from Foundation seed stock.
- C. Certified Blue Tag Sweetpotato seed stock is the first year's increase from Registered seed stock.

IV. LAND REQUIREMENTS:

Sweetpotato seed stock eligible for Certification must be produced:

- A. On land which did not produce Sweetpotatoes during the past two years.
- B. On land that did not receive manure or Sweetpotato residue during the past two years.
- C. On land not subject to drainage water from fields that are now growing or have grown sweetpotatoes during the past two years.

V. PLANT BED REQUIREMENTS:

- A. At least one inspection shall be made by the MCIA when the plants have made a uniform growth and are nearly large enough to transplant.
- B. If two or more varieties and/or two or more classes are bedded in the same plant bed, there must be a definite partition separating them.

VI. FIELD INSPECTION:

Two or more inspections of Sweetpotatoes while growing in the field shall be made to determine varietal purity and trueness to type.

VII. ISOLATION:

All fields used for the production of Foundation, Registered, or Certified Blue Tag Sweetpotato seed stock must be isolated from other Sweetpotato plantings by definite and distinct barriers of not less than 15 feet.

VIII. FIELD STANDARDS:

Factor	Tolerance and Requirements		
	Foundation	Registered	Cert. Blue
1. Plant Beds - Off-types Caused by Mutation	.1%	.1%	.2%
Other Varieties	None	None	None
2. Field - Off-types Caused by Mutation	.1%	.1%	.2%
Other Varieties	None	None	None

IX. SEED STOCK AND STORAGE STANDARDS:

A. Seed Stock:

- 1. At least one storage inspection shall be made.
- 2. Seed stock must conform to the minimum standards for U.S. No. 1 grade except that minimum size shall be not less than 3 inches in length and 1 inch in diameter, and shall not exceed 10 inches in length and 3 3/4 inches in diameter.
- 3. The seed stock must have internal and external color typical of the variety.

4. Specific Seed Stock Standards:

Factor	Tolerance and Requirements		
	Foundation	Registered	Cert. Blue
Off-types caused by mutation	.1%	.1%	.2%
Other Varieties	None	None	None

B. Storage:

1. Each unit of Sweetpotatoes that passed field inspection shall be stored according to production unit* and treated separately and distinctly at the time of storage inspection. The grower shall separate each unit by an aisle of two feet or more and each crate shall be marked or labeled to correspond with the field unit that passed inspection.
2. Certified Sweetpotatoes shall not be stored in the same room with Non-Certified Sweetpotatoes.

*Unit defined: A field or portion of a field approved for Certification carrying the identification as designated by the field inspector at time of field inspection.

X. PACKING AND TAGGING:

Sweetpotatoes for Certification must be packed in new uniform size containers so constructed that MCIA tags may be attached.

VIRUS-TESTED SWEETPOTATO CERTIFICATION STANDARDS

I. EXPLANATION OF GENERAL STANDARDS AS APPLIED TO SWEETPOTATOES:

A. The General Seed Certification Standards are basic and together with the following specific standards constitute the Standards for certification of virus-tested sweetpotatoes.

B. Definitions:

Mericlones - all plants clonally propagated from a single meristem tip. For example, mericlone B-63 includes all plants descended from the sixty-third meristem-tip culture derived from the variety Beaureard.

Micropropagated - is the art and science of plant multiplication in vitro. The process includes many steps--stock plant care, explant selection and sterilization, media manipulation to obtain proliferation, rooting, acclimation, and growing out. Sweetpotato is most commonly micropropagated in tissue culture by aseptic transfer of stem segments containing 1-3 nodes to sterile tissue culture medium.

Vine cutting - sections preferably 8-12 inches in length cut from vines that can be transplanted in the greenhouse or field. All such cuttings will be made at least one inch above the surface of the soil or growing medium. Slips that have been pulled are not to be used to avoid the possibility of carrying pathogens or insects that can be present on stems below the soil surface.

Virus-tested - a plant that has been previously tested for the presence of viruses on at least three separate occasions by grafting to the standard indicator plant for sweetpotato viruses, the Brazilian morningglory (*Ipomoea setosa*). If the plant is found to be negative (no symptoms developed on the indicator) each time, it is considered "virus tested" since it is not possible to absolutely prove the absence of any and all viruses.

C. The general standards are further defined as follows to apply specifically to virus tested sweetpotatoes.

Classes and sources of certified "seed" are defined as follows:

1. Source "Seed" - shall be material entering the Mississippi Agricultural and Forestry Experiment Station (MAFES) seed program obtained by methods acceptable to the Mississippi Crop Improvement Association (MCIA).

2. Nuclear Stock Plants - shall be Source "Seed" that has been micropropagated, virus-tested, apparently free of other pests, and evaluated in field tests for trueness to variety. This material shall be maintained under strict isolation in laboratory facilities maintained by MAFES and/or any contracted micro-propagation provider approved by MCIA. The facilities shall be in a clean, dust-free building and be separated from any greenhouse or sweetpotato storage operations. This building shall be at least 250 feet from any sweetpotato field or greenhouse.
3. Foundation Plants - shall be greenhouse plants, produced by the MAFES from Nuclear Stock Plants that are virus-tested and recognized by MCIA. These plants must be grown under strict isolation in screen cages in which only plants that are virus-tested are grown.
4. Certified G0 - shall be greenhouse plants produced by certified greenhouse growers from Foundation Plants. Certified G0 Plants will be propagated as follows:
 - a. Mother Plants - are plants obtained from Louisiana Agricultural Experiment Station and/or North Carolina State University. Mother Plants will be kept isolated in screen cages. Mother Plants may be cut repeatedly for up to no more than 5 months to produce Daughter Plants.
 - b. Daughter Plants - are plants produced by cuttings from Mother Plants. Daughter Plants may be cut repeatedly for up to no more than 6 months to produce additional Daughter Plants.

All plants produced from these propagations will be designated as Certified G0 and may be used to establish certified G1 field plantings.

- c. Mini-roots - storage roots produced on plants grown in certified G0 greenhouses may be used to establish G2 field plantings

All plants, vine cuttings and roots produced from these mini-roots shall be designated as Certified G2.

5. Certified G1 (Field Generation1) - Certified G1 plantings will be established from Certified G0 Plants. Vine cuttings may be taken repeatedly from this original G1 planting, to establish a second G1 planting. Vine cuttings may be taken repeatedly from the second G1 planting to establish a third G1 planting. No additional plantings may

be established from this third G1 planting.

All vine cuttings and roots produced during this first year of field production shall be designated as Certified G1.

6. Certified G2 (Field Generation 2) - Certified G2 plantings will be established from Certified G1 stocks. Vine cuttings may be taken repeatedly from this original G2 planting, to establish a second G2 planting. Vine cuttings may be taken repeatedly from the second G2 planting to establish a third G2 planting. No additional plantings may be established from this third G2 planting.

All vine cuttings and roots produced during this second year of field production shall be designated as Certified G2.

7. Certified G3 (Field Generation 3) - Certified G3 plantings will be established from Certified G2 stocks. Vine cutting may be taken repeatedly from this original G3 planting, to establish a second G3 planting. Vine cuttings may be taken repeatedly from the second G3 planting to establish a third G3 planting. No additional planting may be established from this third G3 planting.

All vine cuttings and roots produced during this third year of field production shall be designated as Certified G3.

II. GREENHOUSE REQUIREMENTS:

A. Production:

1. Mother Plants will be kept isolated in screen cages
2. For Greenhouse production it is required that:
 - a. Entry shall be through double doors.
 - b. A system for sanitizing hands and feet shall be in place.
 - c. Doors shall be kept locked.
 - d. Yellow sticky traps shall be used to monitor aphids and other insects.
 - e. Screens of such mesh as to prevent entry of aphids shall be placed over all openings (vents, fans, windows, etc.).
 - f. Greenhouses shall be clearly marked to warn workers that they shall not enter if they are coming from the field or from other noncertified greenhouses.
 - g. Aphids, whiteflies or other insects with sucking mouthparts shall be controlled
 - h. Decontaminate cutting tools on a regular basis and always when moving to another group of stock plants or plant lots.

- i. All growing medium (e.g. soil), containers, etc. used in the greenhouse must be sanitized by a method approved by MCIA.
 - j. All plants shall be removed from the greenhouse and the greenhouse kept free of plants for a minimum of 6 weeks between crop years.
3. Isolation:
 - a. There shall be no plants growing within 10 feet of the greenhouse (grass for stabilization will be permitted, but weeds must be controlled).
 - b. No other plants are allowed in the greenhouse.
 - c. Greenhouses should be as far away as possible from sweetpotato storage sheds, cull piles or other potential sources of sweetpotato viruses.
 4. Different varieties or mericlones must be clearly identified and separated.
 5. MCIA must approve greenhouses before Mother Plants will be released to the grower.

B. Inspections:

1. Grower:
 - a. Producer will inspect vines twice weekly. If symptomatic plants are found, they will be removed and destroyed and parent plants will be inspected for disease symptoms. The grower will keep a log showing that inspections were made and if plants were removed.
 - b. There will be a weekly inspection in and around the greenhouse perimeters to insure isolation standards are being met.
 - c. If problems are observed during weekly inspections, the producer should notify MCIA.
2. MCIA:
 - a. MCIA will inspect certified greenhouses several times during the year as needed. If symptomatic plants are found during these inspections, they must be rogued and disposed of properly.
 - b. Once shipping of plants begins, final certification will not be allowed if symptomatic plants are found.

C. Inspection Standards:

1. General Requirements:
 - a. Unit of Certification shall be the entire greenhouse and such

- unit cannot be divided for the purpose of certification.
 - b. Isolation requirements are described in Section II, A3.
 - c. Increase requirements are described in Section II, A2.
2. Specific Greenhouse Requirements:

Maximum Tolerance Allowed

Certified	Foundation	
Presence or symptoms of:	(MAFES)	G0
Bacterial Stem Rot (<i>Erwinia Chrysanthemi</i>)*	0	0
Black Rot (<i>Ceratocystis fimbriata</i>)*	0	0
Scurf (<i>Monilochaetes infuscans</i>)*	0	0
Root-Knot Nematode (<i>Meliodogyne</i> spp.)	0	0
Feathery Mottle (sweetpotato feathery mottle virus(SPFMV))*	0	0
Russet Crack (a strain of SPFMV)*	0	0
Internal Cork (a virus)*	0	0
Wilt (<i>Fusarium oxysporum</i> f.sp. batatas)*	0	0
Sweetpotato Weevil (<i>Cylas formicarius</i> var. <i>elegantulus</i>)	0	0
Exotic or hazardous pests	0	0
Variety mixture	0	0
Off-types (mutations)	0	0

*Plants or mini-roots exhibiting symptoms

III. FIELD REQUIREMENTS:

A. Production:

1. All sweetpotatoes produced in a field for certification must be grown from virus-tested stock.
2. Virus-tested G1, G2 and G3 sweet potato “seed” will not be eligible for certification if produced on land which:
 - a. Has produced sweetpotatoes in the last 2 years.
 - b. Has received manure or sweetpotato residue in the last 2 years.
 - c. Is subject to drainage from fields in which sweetpotatoes have been grown in the last 2 years.
3. Isolation:
 - a. Virus-tested sweetpotato “Seed” production fields shall be 1500 feet from other sweetpotatoes.
 - b. An approved program shall be in place to control perennial plants of morningglories (e.g. *Ipomoea pandurata*, Bigroot Morningglory, *Ipomoea cordatotriloba* sharp-pod or cotton morningglory), and volunteer sweetpotato plants.
4. Different varieties or mericlones will be clearly identified and separated from each other by 20 feet.

5. Each unit of sweetpotatoes that passed field inspection shall be marked or labeled at harvest to correspond with the field unit.

B. Inspections:

1. The grower should inspect fields regularly during the growing season and remove any symptomatic plants that are found. MCIA should be informed if any problems are found.
2. At least two inspections by MCIA will be made during the growing season; others will be made if necessary.
 - a. At least one seed bed inspection will be made when applicable.
 - b. First field inspection - shall be made before vines have covered the ground so that symptomatic plants may be easily identified. Roguing will consist of pulling up the symptomatic plants, bagging them, and removing them from the field.
 - c. Final inspection - shall be made near to harvest.

C. Inspection Standards:

1. General requirements:
 - a. Unit of certification for production is a field and such unit cannot be divided for the purpose of certification.
 - b. Isolation requirements are described in section III, A3.
 - c. If the "Seed" of two virus-tested varieties are grown in the same field, they must be clearly identified and separated by at least 20 feet.
 - e. Land requirement for certified G1, G2 and G3 fields is subject to Section III, A2.
2. Specific Field Requirements (vine inspection):

Presence or symptoms of:	<u>Maximum Tolerance Allowed</u>		
	Certified G1	Certified G2	Certified G3
Bacterial Stem Rot (<i>Erwinia chrysanthemi</i>)	1.0%	1.0%	1.0%
Wilt (<i>Fusarium oxysporum</i> f. sp. <i>batatas</i>)	none	none	none
Exotic or Hazardous Pests	none	none	none
Variety Mixture	none	none	none
Off-types (mutations)	0.05%	0.05%	0.10%

IV. STORAGE REQUIREMENTS:

- A. Before sweetpotatoes grown for certification can be stored, the storage house must be cleaned and disinfected in a manner approved by MCIA.
- B. Sweetpotatoes grown for certification shall be stored in new containers (crates, pallet, boxes, etc.) or used containers that have been disinfected and decontaminated in a manner approved by MCIA.
- C. Certified seed roots shall be stored in separate houses from any noncertified roots.
(A house is a building separated from other existing buildings.)
- D. Sweetpotatoes from different field units shall be separated in storage by an aisle at least two feet wide.
- E. A minimum of 20 percent of each lot of sweetpotatoes entered for certification shall be inspected by MCIA during storage inspection.

V. STANDARDS FOR PLANT AND ROOT "SEED":

A. Plants:

- 1. Apparently free of injurious disease, insects, or other pests.
- 2. True to variety characteristics.
- 3. Of good color, fresh, firm, and strong.
- 4. Of satisfactory size for commercial planting (cuttings approximately 8" - 12" long).
- 5. Cuttings will be loosely packed and shipped in an upright position in new or decontaminated boxes.
- 6. Cuttings will not be shipped with other non-certified plants.

B. Seed Roots:

- 1. One storage inspection shall be made after harvest.
- 2. Sweetpotatoes for certification must be well shaped. The minimum size shall be one inch in diameter and three inches in length, 30 ounces maximum weight.

3. Specific Seed Root Standards

Presence or symptoms of:	<u>Maximum Tolerance Allowed</u>		
	Certified G1	Certified G2	Certified G3
Surface rots (<i>Fusarium</i> spp.) & Soft Rots (<i>Rhizopus</i> spp.)	5.0%	5.0%	5.0%
Bacterial Root Rot (<i>Erwinia</i> spp.)	none	none	none
Black Rot (<i>Ceratocystis fimbriata</i>)	none	none	none
Scurf (<i>Monilochaetes infuscans</i>)	1.0%	1.0%	2.0%
Streptomyces soil rot (<i>Streptomyces ipomoeae</i>)	1.0%	1.0%	2.5%
Root-Knot Nematode (<i>Meloidogyne</i> spp.)	5.0%	5.0%	5.0%
Russet Crack (a strain of SPFMV)	none	none	none
Internal Cork (a virus)	none	none	none
Wilt (<i>Fusarium oxysporum</i> f.sp. <i>batatas</i>)	none	none	none
Sweetpotato Weevil (<i>Cylas formicarius</i> var. <i>elagantulus</i>)	none	none	none
Exotic or hazardous pests	none	none	none
Variety Mixture	none	none	none
Off-types (mutations)	0.20%	0.20%	0.50%

VI. SWEETPOTATO WEEVIL QUARANTINE AREA:

Sweetpotato plants or seed grown in a sweetpotato-weevil quarantine area will not be approved for certification.

CERTIFICATION STANDARDS FOR VEGETATIVELY PROPAGATED BERMUDAGRASS

I. APPLICATION OF GENERAL CERTIFICATION STANDARDS:

The General Seed Certification Standards are basic and together with the following specific standards constitute the Standards for Certification of Vegetatively Propagated Bermudagrass.

II. PLANTING STOCKS RECOGNIZED:

Fields planted with Foundation, Registered, or Certified Blue Tag sprigs will be eligible for Certification. Sprigs harvested from fields planted with Foundation sprigs shall be classed as Registered sprigs; sprigs harvested from fields planted with Registered sprigs shall be classed as Registered sprigs; sprigs harvested from fields planted with Certified Blue Tag sprigs shall be classed as Certified Blue Tag sprigs, provided these fields and harvested sprigs meet the standards for these classes of seed stocks as prescribed in these regulations.

III. LAND REQUIREMENTS:

A field to be eligible for the production of all Certified classes of sprigs must be free, at planting time, of other strains of the same species or other objectionable species.

IV. APPLICATION FOR FIELD INSPECTION:

An official application for new field inspection must be filed with MCIA anytime from March 1 to September 1. Established fields, certified previous year, must have renewal application filed on or before June 1.

V. FIELD INSPECTION:

A. HANDLING THE CROP PRIOR TO INSPECTION: A field must be rogued sufficiently during the growing season and prior to harvest to remove any mixture of other bermudagrass and noxious weeds.

B. TIME OF INSPECTION: An inspection must be made during the growing season at a time when there is sufficient growth to make the identification of other bermudagrass strains possible. Harvested stolons may also be inspected.

VI. VARIETIES PER FARM:

Where Registered or Certified Blue Tag planting stock is being produced, no other variety or strain of the same species shall be grown for planting stock production, except by special permission from the Certifying agency prior to planting.

VII. ISOLATION:

A field to be eligible for the production of Registered or Certified Blue Tag planting stock of Bermudagrass must be isolated from any other strain of the same species by a strip at least 33 feet wide.

VIII. FIELD STANDARDS:

Factor	Maximum Permitted in Each Class	
	Registered	Cert. Blue
Other Varieties*	1%	2%
Noxious Weeds**	None	None

*Other varieties shall consist of all other Bermudagrass that can be differentiated from the variety that is being inspected.

**Wild Onions, Garlic, Johnsongrass, Cheat, Chess, Nutgrass, Dock, Dodder

IX. LABELING SHIPMENTS OF BERMUDAGRASS:

All sales of Certified stock will be accompanied by a Certification tag in the case of bag shipments; a Certified tag or a Certification Certificate in the case of bulk shipments.

X. PLANTING STANDARDS:

Pure living sprigs* (minimum by count)	90%
Other living plants (maximum by count)	2%
Noxious weeds** (maximum)	None

*Sprigs must be free of soil.

**Wild Onions, Garlic, Johnsongrass, Cheat, Chess, Nutgrass, Dock, Dodder.
The above percentages shall be determined by count.

CERTIFICATION STANDARDS FOR VEGETATIVELY PROPAGATED TURFGRASS

I. APPLICATION OF GENERAL CERTIFICATION STANDARDS:

The General Seed Certification Standards are basic and together with the following specific standards constitute the Standards for Certification of Vegetatively Propagated Turfgrasses.

II. PLANTING STOCKS RECOGNIZED:

Fields planted with Foundation, Registered, or Certified Blue Tag Sprigs will be eligible for Certification. Sprigs harvested from fields planted with Foundation sprigs shall be classed as Registered sprigs; sprigs harvested from fields planted with Registered sprigs shall be classed as Registered sprigs; sprigs harvested from fields planted with Certified Blue Tag sprigs shall be classed as Certified Blue Tag sprigs, provided these fields and harvested sprigs meet the standards for these classes of planting stocks as prescribed in these regulations.

III. LAND REQUIREMENTS:

A. A field to be eligible for the production of Foundation, Registered, or Certified Blue Tag stock must have been thoroughly inspected prior to establishment and a minimum of three times per year after establishment and must be found free of other perennial grasses and noxious or objectionable weeds.

B. All land used for the production of Foundation, Registered, or Certified Blue Tag sprigs must be free from other perennial grasses, noxious weeds, insects, nematodes, and diseases.

IV. APPLICATION FOR FIELD INSPECTION:

An official application for new field inspection must be filed with MCIA anytime from April 1 to September 1, and at least 10 days prior to preparation for planting.

Established fields, certified previous year, must have renewal application filed on or before June 1.

V. FIELD INSPECTION AFTER ESTABLISHMENT:

A field must be rogued sufficiently during the growing season and prior to harvest to remove any mixture of other perennial grasses, noxious weeds, or undesirable plants. There shall be a minimum of three inspections per year, two during the growing season and one during the time of dormancy for the variety inspected. Harvested stolons may be inspected periodically.

VI. FIELD STANDARDS:

A. NUMBER OF VARIETIES PER FARM:

Where Foundation, Registered, or Certified Blue Tag planting stock is being produced, no other variety or strain of the same species shall be grown for planting stock production except by special permission from the Certifying Agency prior to planting.

B. ISOLATION REQUIREMENT:

A field to be eligible for the production of Foundation, Registered, or Certified Blue Tag planting stock of Vegetatively Propagated Turfgrasses must be isolated 6 feet from any other perennial grasses.

C. FIELD STANDARDS:

Factor	Tolerance and Requirements		
	Foundation	Registered	Cert. Blue
Other Varieties*	None	1 plant per 1000 sq. ft.	3 plants per 1000 sq. ft.
Noxious and Objectionable Weeds**	None	None	None

*Other varieties shall consist of all other perennial grass that can be differentiated from the variety that is being inspected.

**Wild Onions, Garlic, Johnsongrass, Cheat, Chess, Nutgrass, Dock, Dodder, Field Bindweed, Hedge Bindweed, Blue Weed, Quack Grass, Russian Knapweed, Darnel, Corncockle, Horsenettle, Purple Nightshade, Buckhorn Plantain, Bracted Plantain, Sheep Sorrel, Red Rice, Chick Weed, Henbit, all varieties Crabgrass, Crowfoot, Dichondra species, Leafy Spurge.

VII. LABELING SHIPMENTS OF TURFGRASS:

All sales of Certified stock will be accompanied by a Certification tag in the case of bag shipments, and a Certified tag or a Certification certificate in the case of bulk shipments.

VIII. PLANTING STOCK STANDARDS:

Pure living sprigs (minimum by count)	90%
Other living plants (maximum by count)	2%
Noxious and objectional weeds (maximum)	None

The above percentages shall be determined by count. Any parcel post or public carrier shipments of sprigs or sod mats shall be in special moisture-proof bags which will insure satisfactory delivery of sprigs.