

## INSPECTION OF MILLET SEED

### 1. PURPOSE

This directive establishes procedures for the factor analysis of millet seed under the Agricultural Marketing Act of 1946 (AMA), as amended.

### 2. REPLACEMENT HIGHLIGHTS

This is a new directive.

### 3. GENERAL INFORMATION

There are no classes, subclasses, or grades for millet seed. Inspection of millet seed is on a factor only basis. Factors analyzed are foreign material and test weight per Winchester bushel. In addition to the analysis described in this directive for foreign material and test weight per Winchester bushel, an applicant may request an analysis for other factors such as purity, moisture, stones, insects, etc.

### 4. DEFINITION OF MILLET SEED

Millet seed consist of 50.0 percent or more of whole millet seed before the removal of foreign material.

Whole kernels are kernels with more than three-fourths of the kernel present.

**Basis of Determination.** A visual appraisal of the sample is sufficient to determine if it meets the definition of millet seed. However, if analysis is necessary, make it before removing foreign material on a representative portion of approximately 25 grams.

### 5. FOREIGN MATERIAL

Foreign material is all matter other than millet seed that you can remove from the original sample by use of an approved device according to procedures prescribed in the Federal Grain Inspection Service (FGIS) instructions. Foreign material is also underdeveloped, shriveled, and small pieces of millet kernels removed in properly separating the material other than millet seed and which cannot be recovered by properly rescreening or recleaning and includes detached millet hulls.

**Basis of Determination.** Foreign material is determined on a representative portion of the original sample of sufficient size to provide approximately 1 1/8 to 1 1/4 quarts of mechanically cleaned millet seed and approximately 50 grams cut from the mechanically cleaned sample.

Foreign material is determined in two steps: Mechanically separated foreign material and handpicked foreign material.

**STEP 1.** Procedure for determining mechanically separated foreign material using the Carter Dockage Tester:

- a. Set air control on 3 1/2.
- b. Set feed control to 4.
- c. Insert No. 000 riddle in the riddle carriage.
- d. Insert No. 4 sieve in the top sieve carriage.
- e. Insert No. 2 sieve in the middle sieve carriage.
- f. Insert No. 7 sieve in the bottom sieve carriage.
- g. Run sample portion through the Carter Dockage Tester.
- h. Combine aspirated material in air collection pan and material over No. 000 riddle (excluding unthreshed millet seed). Total of this material is the mechanically separated foreign material.

Occasionally a small amount of unthreshed millet may pass over the riddle. Consider these unthreshed kernels as millet and return to the sample.

- i. Combine all material passing over the top sieve, middle sieve, and bottom sieve. Total of this material is the mechanically cleaned millet seed.

The material passing through the bottom sieve, although primarily foreign material, will usually contain small kernels of millet and cracked millet that you must reclaim by using the appropriate handsieve.

- (a) Use a 4/64" round hole sieve for samples containing a substantial amount of green seed (small kernels). Material passing through the 4/64" round hole sieve is foreign material.

- (b) Use a 1/20" round hole sieve for samples that do not contain green seeds (small kernels). This sieve permits reclaiming of a larger portion of cracked millet. Material passing through the 1/20" round hole sieve is foreign material.

**STEP 2.** Procedure for determining handpicked foreign material.

- a. Cut down the mechanically cleaned sample to approximately 50 grams (combination of material that passed over the top, middle, and bottom sieve of the Carter Dockage Tester).
- b. Handpick the 50-gram portion to remove all material other than millet seed.

Computing Foreign Material. Compute the percentage of foreign material by adding the percentage of mechanically separated foreign material to the percentage of handpicked foreign material in hundredths (disregard thousandths).

**STEP 1.**  $(\text{Weight of mechanically separated foreign material} \div \text{Original sample weight}) \times 100 = \text{Percent of mechanically separated foreign material.}$

**STEP 2.**  $(100 \text{ Percent} - \text{Percent of mechanically separated foreign material}) \div 100 = \text{Change of base factor}$

**STEP 3.**  $(\text{Weight of handpicked foreign material} \div \text{Weight of handpicked portion}) \times 100 = \text{Percent of handpicked foreign material.}$

**STEP 4.**  $\text{Percent of handpicked foreign material} \times \text{Change of base factor} = \text{Adjusted percentage of handpicked foreign material.}$

**STEP 5.**  $\text{Percent of mechanically separated foreign material} + \text{Adjusted percentage of handpicked foreign material} = \text{Percent of foreign material.}$

Certification. Show the percentage of foreign material on the work record and on the certificate to the nearest tenth percent.

**6. TEST WEIGHT**

Test weight is the weight per Winchester bushel (2,150.42 cubic inches) as determined using an approved device according to procedures prescribed in FGIS instructions.

**Basis of Determination.** Determine test weight after removing mechanically separated foreign material on a portion of sufficient quantity to overflow kettle and before removal of handpicked foreign material.

The procedures for performing test weight determination are in book II, chapter 1, section 1.11 of the Grain Inspection Handbook.

**Certification.** Record test weight results on the work record as displayed on the electronic scale or in whole and tenth pounds to the nearest tenth pound. Record the test weight on the certificate in whole and tenth pounds to the nearest tenth pound.

**7. CERTIFICATION**

Certify analysis of millet seed on a commodity inspection certificate (FGIS-993). Issue a lot inspection certificate for lots that are officially sampled. Issue a submitted sample certificate (FGIS-994) for a sample submitted by an applicant or their agent.

*/s/ David Orr*

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