

Program Notice

FGIS-PN-05-01

11-15-04

ALTERNATE PROCEDURE FOR SEPARATING BROKEN CORN AND FOREIGN MATERIAL IN CORN

1. PURPOSE

This program notice announces that an alternate procedure (hand sieve method) is available for separating the individual components of broken corn (BC) and foreign material (FM) from the factor, broken corn and foreign material (BCFM) in corn.

2. BACKGROUND

In an effort to satisfy the request for information concerning the individual percentages of BC and FM in export shipments of corn, the Federal Grain Inspection Service (FGIS) established, in 1988, a mechanical procedure for automatically separating the components of BCFM. The procedure required the use of a double corn sieve and a Carter Dockage Tester.

Over the past 10 years requests for the individual percentages of the components of BC and FM in corn have dropped off significantly. The limited number of requests for this service has ultimately affected the equipment manufacturer's decision to produce and stock the double corn sieve. Therefore, in an effort to minimize the costs to official inspection agencies interested in providing the analysis of the individual components of BC and FM in corn, FGIS has developed a procedure using a Carter Dockage Tester equipped with a #3 (12/64 round-hole) sieve, and a 6/64 round-hole hand sieve.

3. PROCEDURE

Official personnel have the option of manually hand-sieving or mechanically sieving (using a sizer shaker) the BCFM portion.

Follow the procedures listed below to separate the components BC and FM from machine (Carter Dockage Tester) separated BCFM.

a. Mechanically Sieving Method.

1. Mount a 6/64 round-hole hand sieve and a bottom collection pan on a mechanical sieve shaker.
2. Set the stroke counter to 5.
3. Remove the BCFM collection pan from the Carter Dockage Tester and pour the contents into the center of the 6/64 round-hole sieve.

4. Turn the sieve shaker on.
5. After the sieve shaker has stopped carefully remove the sieve and bottom collection pan.
6. Combine the material that lodged in the perforations with the material that remained on top of the sieve. Consider this material as broken corn.
7. Consider the material in the bottom collection pan as foreign material.
8. Remove all matter other than corn, including sweet corn, blue corn, and popcorn from the mechanically (Carter Dockage Tester) cleaned portion and combine with the foreign material in step 7 above. This combination of mechanically separated FM and hand-picked FM functions as foreign material.
9. Calculate the percentages of BC and FM separately.

b. Hand Sieving Method.

1. Mount a 6/64 round-hole hand sieve to a bottom collection pan.
2. Remove the BCFM collection pan from the Carter Dockage Tester and pour the contents into the center of the 6/64 round-hole sieve.
3. Hold the sieve level in both hands with elbows close to the body.
4. In a steady motion, move the sieve from left to right approximately 10 inches and then return from right to left.
5. Repeat this operation 5 times.
6. Combine the material that lodged in the perforations with the material that remained on top of the sieve. Consider this material as broken corn.
7. Consider the material in the bottom collection pan as foreign material.
8. Remove all matter other than corn, including sweet corn, blue corn, and popcorn from the mechanically (Carter Dockage Tester) cleaned portion and combine with the foreign material in step 7 above. This combination of mechanically separated fm and hand-picked FM functions as foreign material.
9. Calculate the percentages of BC and FM separately.

4. FILING INSTRUCTIONS

File a copy of this notice with the Grain Inspection Handbook, Book II, Chapter 4 (Corn), until the handbook is revised to include this procedure.

5. QUESTIONS

Direct any questions concerning this procedure to Bob Lijewski, Standards and Procedures Branch at (202) 720-0224 or email at Robert.S.Lijewski@USDA.Gov

/s/ Marianne Plaus

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