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EC63-127 Grain Sorghum Kernel Damage

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EC-63-127



GRAIN SORGHUM KERNEL DAMAGE

PRINCIPAL GRAIN SORGHUM KERNEL DAMAGE



HEAT DAMAGED

Kernels and pieces of kernels of grain sorghum and other grains which have been materially discolored and damaged by heat.



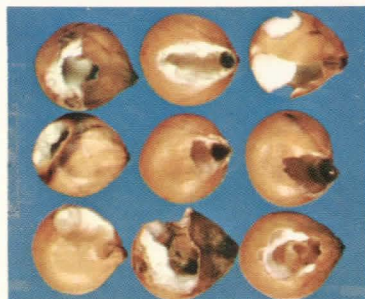
BLACK GERM DAMAGE

Black germ and some mold damage results from grain going out of condition in storage. Damage may be in sufficient quantity to result in a musty or sour odor.



MOLD AND GROUND DAMAGE

Damage as a result of weather or having been on the ground. Care should be taken not to confuse this condition with stains and discolorations resulting from weathering.



INSECT DAMAGE (Weevil Bored)

Kernels which have been bored by insects are considered damaged.



SPROUT DAMAGED

Sprouted kernels are considered damaged, but the evidence of sprouting must be conclusive.



BADLY WEATHERED

Grain sorghums which are "*badly weathered*" are graded "Sample grade." "*Badly weathered*" is a grading factor for the determination of "Sample grade" and is not shown on the certificate as a special grade but is shown as a reason for applying "Sample grade."

OTHER GRADING FACTORS



BROKEN KERNELS, FOREIGN MATERIAL AND OTHER GRAINS

Shall be all matter including kernels and pieces of kernels of grain sorghum except dockage which will pass readily through a $5/64$ triangular hole sieve and all matter other than grain sorghums, which remains on the sieve after sieving.



Other grains shall be barley, hull-less barley, corn, flaxseed, oats, rye soybeans, wheat, cultivated buckwheat, einkorn, emmer, Polish wheat, popcorn, poulard wheat, rice, spelt, sweet corn, wild oats, and nongrain sorghum.

Nongrain sorghum shall be the seeds of sweet sorghum (sorgo), sorghum-sudan-grass hybrids, sorgrass, broomcorn, Johnsongrass and sudangrass.



DOCKAGE

Shall be sand, dirt, finely broken kernels of grain sorghum, weed seeds, and any other material which will pass readily through a $2\frac{1}{2}/64$ round hole sieve. Dockage is stated in terms of a whole per cent. A fraction of a per cent is disregarded.

SPECIAL GRADES



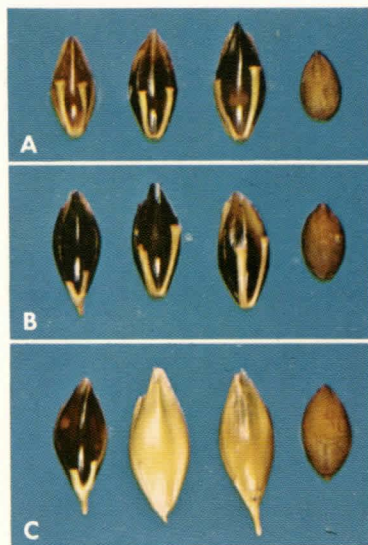
WEEVILY

Grain Sorghums which are infested with live weevils or other insects injurious to stored grain. The word "weevily" is added to and made a part of the grade designation.



SMUTTY

Smutty grain Sorghum shall be grain sorghum the kernels of which are covered with smut spores, or which contains 20 or more smut masses in 100 grams of grain sorghum. The word "smutty" is added to and made a part of the grade designation.



A. Johnsongrass. Note color and shape. Knob-shaped, sucker mouth rachilla. Smooth and rounded break at base of seed. Margin of germ in hulled seed well defined.

B. Sorghum Alnum. Note similarity to Johnsongrass. Some rachilla knobbed, some broken.

C. Sudangrass. Note shape. Rachilla broken, portion of pedicel adhering to base of seed. Easily distinguished from Johnsongrass.

JOHNSONGRASS MIXTURE IN GRAIN SORGHUM

Johnsongrass is a more serious mixture in grain sorghums than are other non-grain sorghums. It is a troublesome, hard to control weed and is declared a noxious weed in many states. Johnsongrass spreads by seed and by rhizomes. Every effort needs to be made to prevent spreading this weed through seed and feed grains.

Johnsongrass-sorghum crosses, such as sorghum alnum, have seed characteristics almost identical to Johnsongrass. For this reason, the sale of such crop seed is prohibited by law in many states. These Johnsongrass derivatives usually are not serious weeds in themselves. However, since the seed cannot definitely be distinguished from Johnsongrass, it is called Johnsongrass when found in other crop seed or grain and must be handled as Johnsongrass contamination. Therefore, sorghum alnum and similar Johnsongrass derivatives must be considered serious mixtures in seed and grain.

**EFFECTIVE WEED CONTROL DEPENDS ON THE PREVENTION OF
WEED SEED DISTRIBUTION THROUGH SEED AND FEED**

GRADE REQUIREMENTS FOR GRAIN SORGHUMS

GRADE	MINIMUM TEST WEIGHT PER BUSHEL	MOISTURE	DAMAGED KERNELS		BROKEN KERNELS, FOREIGN MATERIALS AND OTHER GRAINS
			TOTAL	HEAT- DAMAGED KERNELS	
	<i>Pounds</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>
1	57	13	2	0.2	4
2	55	14	5	.5	8
3*	53	15	10	1.0	12
4	51	18	15	3.0	15

SAMPLE:

Sample grade shall be grain sorghums which do not meet the requirements of any of the grades from No. 1 to No. 4, inclusive; or which contain stones; or which is musty, or sour, or heating, or which are badly weathered; or which have any commercially objectionable foreign odor except of smut; or which are otherwise of distinctly low quality.

*Grain sorghum which is distinctly discolored shall not be graded higher than No. 3.

GRAIN SORGHUM

Grain sorghum shall be any grain which, before the removal of dockage consists of 50 percent or more of whole kernels of grain sorghum and which contains not more than 10 percent of other grains for which standards have been established under the United States Grain Standards Act.

YELLOW GRAIN SORGHUM (Class I)

This class shall be grain sorghum with yellow, salmon-pink, or red seedcoats, which contains not more than 10 percent of grain sorghum of other colors.

WHITE GRAIN SORGHUM (Class II)

This class shall be grain sorghum with white seedcoats, which contains not more than 10 percent of grain sorghum of other colors. Colored spots upon kernels of grain sorghum otherwise white shall not affect their classification as White Grain Sorghum. Grain sorghum with white seedcoats and brown subcoats shall not be classed as White Grain Sorghum.

BROWN GRAIN SORGHUM (Class III)

This class shall be grain sorghum with brown seedcoats, which contains not more than 10 percent of grain sorghum of other colors. Grain sorghum with white seedcoats and brown subcoats shall be classed as Brown Grain Sorghum.

MIXED GRAIN SORGHUM (Class IV)

This class shall be grain sorghum which does not meet the requirements for the class Yellow Grain Sorghum, White Grain Sorghum, or Brown Grain Sorghum.

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EC 63-127

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