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EC59-126 Corn Kernel Damage

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CORN KERNEL DAMAGE

PRINCIPAL CORN KERNEL DAMAGES

Samples pictured were selected by Joseph E. Elstner, officer in charge Kansas City District, U. S. Department of Agriculture, Agricultural Marketing Service, Grain Division, and passed on by Board of Grain Supervisors at Chicago.



BLUE-EYED MOLD DAMAGE

A kernel of corn, the germ of which is affected with blue-eyed mold.



COB-ROT DAMAGE

Damage distinctly apparent and of such character as to be recognized as damaged for commercial purposes.



VARIOUS TYPES OF MOLD DAMAGE

Kernels of corn affected by mold; or kernels having surface mold growths are considered damaged.



HEAT DAMAGED KERNELS YELLOW CORN

Heat damaged kernels shall be kernels and pieces of kernels of corn which have been materially discolored and damaged by heat.



YELLOW CORN SLIGHT DISCOLORATION NOT CONSIDERED HEAT DAMAGE

Kernels of corn which have been damaged by heat, but are not materially discolored shall be considered as damaged kernels, but not heat damaged kernels.



HEAT DAMAGED KERNELS WHITE CORN

Heat damaged kernels shall be kernels and pieces of kernels of corn which have been materially discolored and damaged by heat.



WHITE CORN — SLIGHT DISCOLORA- TION BY HEAT NOT CONSIDERED HEAT DAMAGE

Kernels of corn which have been damaged by heat, but are not materially discolored shall be considered as damaged kernels but not as heat damaged kernels.



DRIER DAMAGE

When excessive heat is applied to corn to reduce moisture thereby scorching the kernel it is considered damaged. Excessive heat in drying may also result in heat damage.



GROUND AND WEATHER DAMAGE

Kernels which have been badly damaged by weather or having been on the ground.



SPROUTED DAMAGE

Kernels which have the germ broken open from germination, and kernels which have sprouted are considered damaged.



INSECT DAMAGE

Kernels which bear evidence of boring or tunneling indicating the presence within the kernel of insects, insect webbing, or insect refuse, and kernels in which webbing or refuse still remain, shall be damaged kernels. Kernels which have been partially eaten by insects or rodents but which are entirely free from refuse, webbing, or insects or other forms of damage shall be considered as sound kernels.

SPECIAL GRADES



WEEVILY (Special Grade)

Weevily corn is corn that is infested with live weevils or other insects injurious to stored corn. In such cases the word "weevily" is made a part of the grade designation.



SAMPLE GRADE (Stones)

Corn containing in excess of seven inseparable stones or cinders which have a total weight in excess of 0.2 percent.



SAMPLE GRADE (Distinctly Low Quality)

Corn containing large pieces of glass, stones, or pieces of concrete, or corn containing rodent excreta in excess of 0.2 percent is considered as being of distinctly low quality.

OTHER GRADING FACTORS



CRACKED CORN AND FOREIGN MATERIAL

Cracked corn and foreign material includes kernels and pieces of kernels of corn and all matter other than corn which will pass through a No. 12 sieve (12/64-inch round hole), and all matter other than corn remaining on the sieve after screening.

GRADE REQUIREMENTS

for Yellow Corn, White Corn, and Mixed Corn

Effective October 1, 1959.

Grade	Minimum test weight per bushel	Maximum limits of—			
		Moisture	Cracked corn and foreign material	Damaged kernels	
				Total	Heat-damaged
	Pounds	Percent	Percent	Percent	Percent
1	56	14.0	2	3	0.1
2	54	15.5	3	5	.2
3	52	17.5	4	7	.5
4	49	20.0	5	10	1.0
5	46	23.0	7	15	3.0

SAMPLE: Sample grade shall be corn which does not meet the requirements for any of the grades from No. 1 to No. 5, inclusive; or which contains stones; or which is musty, or sour, or heating; or which has any commercially objectionable foreign odor; or which is otherwise of distinctly low quality.

CORN

Corn shall be any grain which consists of 50 percent or more of whole kernels of shelled dent corn and/or shelled flint corn (*Zea mays*) and may contain not more than 10.0 percent of other grains for which standards have been established under the United States Grain Standards Act.

YELLOW CORN (Class I)

The class yellow corn shall be yellow-kerneled corn and may contain not more than 5.0 percent of corn of other colors. Yellow kernels of corn with a slight tinge of red shall be considered as yellow corn.

WHITE CORN (Class II)

The class white corn shall be white-kerneled corn and may contain not more than 2.0 percent of corn of other colors. White kernels of corn with a slight tinge of light straw or pink color shall be considered as white corn.

MIXED CORN (Class III)

The class mixed corn shall be corn which does not meet the color requirements for either of the classes yellow corn or white corn and shall include white-capped yellow corn.

"Prepared by Norman V. Whitehair, Extension Economist in Grain Marketing, and R. A. Bohannon, Extension Agronomist, Kansas State University in cooperation with James R. Enix, Regional Wheat Marketing Specialist, Federal Extension Service, USDA.

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