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EC64-162 New Grade Requirements for Wheat

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New Grade Requirements for Wheat

By Duane Foote, Extension Agronomist

The revised grading standards for wheat become effective June 1, 1964. According to the USDA the new standards will narrow the variability within each grade and provide a better means of measuring quality as an aid in determining value. The smaller ranges of tolerance for the various grades will allow for the price to more nearly reflect the grain's value according to end use.

The following changes are included in the newly-revised standards:

(1) Provide maximum limits for total defects (damaged kernels, foreign material and shrunken and broken kernels).

(2) Express dockage in intervals of one-half percent. Dockage over one-half percent is reduced to the next lower half or whole percent.

(3) Change the limits of shrunken and broken kernels.

(4) Reduce the minimum moisture content for "tough" wheat. Moisture is eliminated as a factor in determining sample grade.

(5) Provide a special grade of "Heavy Wheat" for all classes of wheat.
### GRADE REQUIREMENTS

<table>
<thead>
<tr>
<th>Grade</th>
<th>Minimum test weight per bushel</th>
<th>Heat-damaged kernels</th>
<th>Damaged kernels (total)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Hard Red Spring Wheat</td>
<td>All other classes</td>
<td>Percent</td>
</tr>
<tr>
<td>Pounds</td>
<td>Pounds</td>
<td>Percent</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>58.0</td>
<td>60.0</td>
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<tr>
<td>2</td>
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<td>0.2</td>
</tr>
<tr>
<td>3</td>
<td>55.0</td>
<td>56.0</td>
<td>0.5</td>
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<td>53.0</td>
<td>54.0</td>
<td>1.0</td>
</tr>
<tr>
<td>5</td>
<td>50.0</td>
<td>51.0</td>
<td>3.0</td>
</tr>
</tbody>
</table>

Sample grade: Sample grade shall be wheat which does not exceed No. 5, inclusive; or which contains stones; or which is injurious foreign odor except of smut or garlic; or which has defects such as the grade requirements cannot be applied accurately; or:

a/ Heat damage is included in total damage.
b/ Total defects includes damaged kernels, foreign material.

### SPECIAL GRADES

**Heavy** (new) -- Hard Red Spring wheat of grades No. 1, No. 2, and No. 3 which has a test weight per bushel of 60 pounds or more or any other class of wheat of grades No. 1, No. 2, and No. 3 which has a test weight per bushel of 62 pounds or more.

**Tough** (revised) -- Contains more than 13.5 percent moisture.

**Weevily** -- Infested with live weevils or other insects injurious to stored grain.

**Smutty** -- Contains smut equivalent to more than 30 average size smut balls in 250 grams of wheat.

**Light Smutty** -- Has an unmistakable odor of smut or contains smut equal to 14 but not more than 30 average size smut balls in 250 grams of wheat.

**Garlicky** -- Contains more than six green garlic bulbets, or an equivalent quantity of dry or partly dry bulbets in 1,000 grams of wheat.
**ENTS FOR WHEAT**

Maximum limits of --

<table>
<thead>
<tr>
<th>Defects</th>
<th>Shrunken and broken kernels</th>
<th>Defects b/ (total)</th>
<th>Con-contrasting classes</th>
<th>Wheat of other classes (total)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent</td>
<td>Percent</td>
<td>Percent</td>
<td>Percent</td>
<td>Percent</td>
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<tr>
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<td>20.0</td>
<td>20.0</td>
<td>10.0</td>
<td>10.0</td>
</tr>
</tbody>
</table>

Wheat of other classes:

- Meet the requirements for any of the grades from No. 1 to No. 8.
- Or which has any commercially objectionable material; or which has any distinctly low quality.

Wheat of other classes (total):

- Or which contains a quantity of smut so great that any one or more of the broken kernels.

**Light Garlicky** -- Contains two to six green garlic bulbets or an equivalent quantity of dry or partly dry bulbets in 1,000 grams of wheat.

**Ergoty** -- Contains more than 0.3 percent of ergot.

**Treated** -- Has been scoured, limed, washed, sulfured, or treated in such a manner that the true quality is not reflected by the grade designation.

**SUBCLASSES OF HARD RED WINTER WHEAT**

**Dark Hard Winter** -- 75 percent or more of dark, hard and vitreous kernels.

**Hard Winter** -- 40 percent or more but less than 75 percent of dark, hard, and vitreous kernels.

**Yellow Hard Winter** -- Less than 40 percent of dark, hard and vitreous kernels.
EFFECT OF GRADE CHANGES ON 1964 CROP

The establishment of maximum limits for total defects and the change in the expression of dockage will have the greatest effect on the 1964 wheat crop to be marketed under the new standards. The selection of pure, adapted wheat varieties and the use of recommended cultural practices becomes increasingly essential in the production of top quality wheat. Careful threshing at optimum maturity, followed by proper handling and storage will pay dividends. These practices will have an important influence on the factors which may change the grade and consequently the value of the wheat harvested.

Total defects includes damaged kernels, foreign material and shrunken and broken kernels. Limits for total defects did not exist in previous standards except for the summation of the maximum limits for each of these three factors. Total defects for Grade No. 1 would be reduced from 7.5 percent to 3 percent and in Grade No. 2 from 10 percent to 5 percent. This means that some of the wheat, graded according to the three factors individually, will be lowered a grade under the new standards because of the total defects provision. Each of the three factors (damaged kernels, foreign material and shrunken and broken kernels) becomes more important in determining the final grade than under the old standards. For instance, foreign material such as rye and milo can have a greater effect on grade and value than in the past because it is added to other down-grading factors to make total defects.

Dockage includes weed seeds, weed stems, chaff, straw, grain other than wheat, sand, dirt and any other foreign material which may be removed with appropriate sieves and cleaning devices. The lowering from one percent to one-half a percent the amount of dockage material necessary before it is recorded as dockage will mean that some of the wheat which previously would not have had dockage recorded will now have dockage assessed. Dockage is not a grade determining factor, but does affect the price of wheat. Under the new standards dockage is recorded in intervals of one-half percent. When dockage is over one-half percent it is reduced to the next lower half or whole percent as shown in the following examples: Dockage ranging from 0.5 to 0.9 percent shall be expressed as 0.5 percent, from 1.0 to 1.4 percent as 1.0 percent, from 1.5 to 1.9 percent as 1.5 percent, etc.