Changes in wheat grade standards will make the old saying "the crop you harvest can be no better than the seed you plant" even more true than ever.

Under the new grades an admixture of hard red spring and durum wheat is a "contrasting class" and grade number's 1, 2 and 3 of either hard red spring or durum allow only 0.5 per cent, 1.0 per cent and 2.0 per cent, respectively. Regardless of how good the crop quality may be otherwise, durum with over 2 per cent hard red spring or hard red spring with over 2 per cent durum can grade no higher than No. 4. Both grade number's 4 and 5 allow 10.0 per cent. This emphasizes that while hard red spring wheat makes good bread flour, it does not make good semolina for macaroni products, and that durum does not make good bread flour.

Where They Get Mixed

Wheat class admixtures can occur during both the production of the crop and handling the crop during marketing on the way to the processor. This means that mixtures can occur both on the farm and off the farm.

On the farm admixtures can result from:

1. Planting mixed seed containing both hard red spring and durum. This means the producer must select pure seed.

2. Volunteer wheat growing in a field where a different class of wheat is planted on last year's wheat field. For example durum planted on last year's hard red spring wheat field.

3. Not cleaning drill boxes, truck boxes, swathers, combines and storage bins carefully where both classes of wheat are grown on the same farm.

4. Planting two classes of wheat side by side which may allow seed to blow or wash from one field into the next. Such closely planted fields also are easily mixed in opening them up with the swather, and in combining.

The grower must provide enough margin of safety to allow for some further unavoidable mixing that may occur after the crop leaves the farm.

Off-the-farm admixture:

1. Often starts at the local elevator in the normal course of receiving and handling both classes of wheat in the same house.

2. Some mixing also may take place in processing and loading the wheat for market.

3. If the wheat goes to a terminal elevator, there is further chance for mixing.

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<th>Wheat Grade Standards</th>
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**NEW WHEAT GRADES PLACE EMPHASIS ON GOOD SEED**

L. A. JENSEN
AGRONOMIST

CIRCULAR A-465
OCTOBER 1964

<table>
<thead>
<tr>
<th>Grade</th>
<th>Minimum test weight per bushel</th>
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<tr>
<td></td>
<td>Pounds</td>
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Sample grade: Sample grade shall be wheat which does not meet the requirements for any of the grades from No. 1 to No. 4 inclusive, or which contains stones, or which is dirty, or moist, or broken, or which has any economically objectionable foreign odor except of must or guaiac, or which contains a quantity of must so great that any one or more of the grade requirements cannot be applied accurately, or which is otherwise of distinctly low quality.

1 Red Durum Wheat of any grade may contain not more than 10.0 per cent of wheat of other classes.
4. The chance for mixing doesn’t end until the wheat is being ground in the flour or semolina mill.

The possibility of admixture in both production and market handling of the crop is present at every step on the way to the mill. Even if the planted seed contains just under 2 per cent admixture, the crop may be over 2 per cent by the time it reaches the miller. Such admixture means a market discount which is reflected back to the producer. This puts a strong emphasis on quality seed which must be as free as possible of class admixture.

**Durum Growers Have More Difficulty**

This problem is likely to be more serious in durum production than it is in hard red spring wheat. An admixture of 2.0 per cent hard red spring in durum represents a fairly small amount but it tends to increase, especially on farms growing both classes of wheat. Several factors contribute to the rapid buildup of hard red spring wheat in durum. Some of these factors include:

1. Hard red spring wheat normally germinates 5 to 10 per cent better than durum.

2. Hard red spring wheat normally produces more stalks per plant than durum grown in the same field.

3. Durum is often seeded on fields that were planted to hard red spring wheat the year before. This usually results in some volunteer hard red spring wheat.

Greater emphasis on pure durum and pure hard red spring wheat likely will result in durum production by specialized durum growers in rather well defined areas. Growing both hard red spring and durum on the same farm will become less attractive and cause growers to shift to only one class of wheat.

**Selecting Good Seed**

Any terminal market price discounts resulting from class admixture will be reflected in the price received by the producer. Growers must, therefore, make every effort to avoid producing a crop containing class admixture. The place to start is by selecting seed free of class admixture.

Certified or registered seed is a reliable source. This class of seed should be planted on a field where there is no chance of volunteer wheat and it should be separated from neighboring fields to keep it pure. Such a seed production field can be a good source of seed for next year’s commercial production.

The best time to size up class admixtures of hard red spring and durum is while the crop is heading. During this stage, wheat class admixtures along with mixtures of rye or barley can be spotted easily. Select your seed from fields free of these admixtures because mixtures are hard to remove by cleaning.

Regardless of how pure the harvested crop may be, it is still commerical wheat. Such wheat in the bin does not become "good seed" until it has been processed properly. This means something more than just removing weed seeds and chaff. Good seed cleaning involves grading and sizing to remove small kernels saving only the large healthy and strong kernels for planting.

Good seed in addition to being high in purity and well graded should also have good germination. No seed should ever be planted without knowing both the purity and germination. Sprout and other seed damage when it occurs makes germination tests very important when selecting seed.