Typical Composition of Yellow Dent Corn

Our products are processed by the “corn dry milling” method, where the objective is to remove the germ and bran coat from the corn kernel while keeping the endosperm portion largely intact. As the composition chart below shows, this process results in a concentration of starch in the endosperm portion, oil in the germ portion, and dietary fiber in the bran portion.

<table>
<thead>
<tr>
<th>Component</th>
<th>Kernel Percent</th>
<th>Starch</th>
<th>Protein</th>
<th>Oil</th>
<th>Ash</th>
<th>Sugars</th>
<th>Fiber</th>
</tr>
</thead>
<tbody>
<tr>
<td>Endosperm</td>
<td>82.9%</td>
<td>88.4%</td>
<td>8.0%</td>
<td>0.8%</td>
<td>0.3%</td>
<td>0.6%</td>
<td>1.9%</td>
</tr>
<tr>
<td>Germ</td>
<td>11.0%</td>
<td>11.9%</td>
<td>18.4%</td>
<td>29.6%</td>
<td>10.5%</td>
<td>10.8%</td>
<td>18.8%</td>
</tr>
<tr>
<td>Bran Coat</td>
<td>5.3%</td>
<td>7.3%</td>
<td>3.7%</td>
<td>1.0%</td>
<td>0.8%</td>
<td>0.3%</td>
<td>86.9%</td>
</tr>
<tr>
<td>Tip Cap</td>
<td>0.8%</td>
<td>5.3%</td>
<td>9.1%</td>
<td>3.8%</td>
<td>1.6%</td>
<td>1.6%</td>
<td>78.6%</td>
</tr>
<tr>
<td>Whole Kernel</td>
<td>100.0%</td>
<td>75.0%</td>
<td>8.9%</td>
<td>4.0%</td>
<td>1.5%</td>
<td>1.7%</td>
<td>8.9%</td>
</tr>
</tbody>
</table>
The Corn Dry Milling Process

A product can only be as good as the corn that goes into it. That's why we're so particular about the corn we buy. We purchase yellow and white corn directly from growers and leading dealers, testing each truckload for weight, moisture, stress cracks and foreign material. We accept only high test weight, low stress corn. This is how we process it.

**SAMPLING PROBE**
As the trucks arrive, we use a pneumatic grain probe to collect a representative sample from each load of corn.

**CORN TESTING**
Prior to unloading, we perform quality checks for foreign material, moisture, test weight, stress cracks, aflatoxin and other attributes.

**GRAIN STORAGE**
"Milling quality" corn is stored in large silos where grain temperature is constantly monitored.

**CLEANING**
To ensure that only whole kernels enter the milling process, corn is cleaned to remove foreign material and damaged kernels.

**TEMPERING CONVEYOR**
To soften the germ and loosen the bran coat, cleaned corn kernels are moistened or "tempered."

**DEGERMINATOR**
This milling device uses an abrading action to peel the bran coat and germ away from the endosperm portion of the corn kernel.

This splits the "tail stock" (large endosperm pieces) from the "thru stock" (null, germ and smaller endosperm pieces) into two separate streams.
**GRAVITY TABLE**
Gravity tables take advantage of the density difference between corn germ and endosperm to further separate kernel components.

**REDUCTION ROLLS**
Reduction rolls break the endosperm pieces into small, more uniform sizes. This is the first step in making finer granulation products.

**SIFTER**
Sifters are equipped with fine-meshed sieves or screens that use a circular motion to separate larger particles from smaller ones.

**DRYER/COOLER**
To prevent condensation, we first use heat to remove excess moisture from the product stream. Then cool, dry air aerates the finished product.

**PRODUCT PROTECTION**
Product protection systems employ a combination of scalp sifters, rare earth magnets and metal detectors to assure the purity of the final product.

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**THRU STOCK**

**TAIL STOCK**

**SIFTER**
Sifters are equipped with fine-meshed sieves or screens that use a circular motion to separate larger particles from smaller ones.

**DRYER/COOLER**
To prevent condensation, we first use heat to remove excess moisture from the product stream. Then cool, dry air aerates the finished product.

**ASPIRATOR**
Because of the differences in densities and aerodynamic properties, airflow is an efficient way to separate lightweight particles like bran from heavier particles like endosperm.

**OPTICAL SORTER**
High-resolution cameras scan flaking grits for any imperfections (i.e., heat damaged grits, soybeans, weed seeds and other foreign material). Any unwelcome components are then ejected from the product stream.

**PRODUCT PROTECTION**
Product protection systems employ a combination of scalp sifters, rare earth magnets and metal detectors to assure the purity of the final product.

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**CORN FLOUR**

**CORN MEAL**

**CORN GRITS**

**FLAKING GRITS**