Winter 2018-19

We’re #1

North Dakota usually ranks first or second in the nation in production of these 16 agricultural commodities:

- Spring Wheat
- Durum Wheat
- All Wheat
- Flaxseed
- Pinto Beans
- Navy Beans
- Black Beans
- Great Northern Beans
- Dry Edible Beans
- Dry Edible Peas
- Oil Sunflowers
- Non-oil Sunflowers
- All Sunflowers
- Canola
- Lentils
- Honey

Crop Categories

Crops can be divided into oilseeds, legumes and cereal grains. The major purpose of oilseeds is to produce vegetable oil. Legume crops grow in pods and produce foods that humans and animals eat and are high in protein. Cereal crops are mainly grasses that have an edible fruit, which is a grain.

Sort each #1 or #2 commodity into its category.

Oilseeds

Legumes

Cereal Grains

Other
Crop Production

What Crop is It?

Use the description to identify each crop plant. Write the plant name in the white box under the drawing. Also, write the words in bold on the plants.

**Pinto Beans** are a bushy legume plant with leaves separated into three sections (*trifoliate leaflets*). Flowers develop into pods that hang under the leaves, are 4 to 5 inches long and somewhat flat, and have spotted beans when mature.

**Canola** grows 3 to 6 feet tall and has a cluster of bright yellow flowers at the top of each branch in early summer. The flowers produce seed pods 3 to 4 inches long. Each pod turns brown as it ripens and contains 20 or more tiny, round black or brownish-yellow seeds.

**Lentil** plants grow 8 to 24 inches tall and have 9 to 15 leaflets on each branch. Before flowering, new leaves develop a tendril (small vinelike structure) at the leaf tip. Lentils have flowers on top and small, round pods that contain one or two seeds.

**Dry Edible Peas** come in green and yellow. Later leaves have tendrils and a large stipule, which is a leaflike structure wrapped around the stem. Pea pods are similar to regular garden variety peas.

**Flax** comes in two types: seed flax for the oil in its seed and fiber flax for the fiber in its stem. Most Midwestern producers now grow seed flax. Each flax plant’s stem has a single purplish-blue flower at the top when it blooms. The tiny seeds are in a boll or capsule containing 6, 8 or 10 brown or yellow seeds.
Honey Production

Honey is food for bees. Bees produce so much honey that humans can harvest the excess. In the United States, there are about 2.5 million honey-producing colonies. North Dakota produces about 34 million pounds of honey in one year.

Bees are social insects because different members of the colony have special jobs that help the entire colony. A colony includes one queen; drones, which are male bees; and tens of thousands of female worker bees that gather nectar and make honey.

One of the ways honeybees communicate with each other is by dancing. The dance alerts other bees where nectar and pollen are located and explains the direction and distance.

The color and flavor of honey depend on the type of flower the nectar came from. There are more than 300 different kinds of honey. In addition to gathering nectar to produce honey, bees and other animals are responsible for 75 percent of all plants’ pollination.

Honeybee Math

1. The average worker honeybee makes 1/12 teaspoon of honey in its lifetime. How many bees could make 1 tablespoon? ______

2. A hive of bees flies more than 55,000 miles to gather nectar for 1 pound of honey. How many miles would a hive of bees travel to bring 8 pounds of honey? ______

3. A honeybee flies about 15 miles per hour. How far could a bee travel in 3 1/2 hours? ______

4. In the United States, each person consumes about 1.3 pounds of honey per year. How much honey would a family of five consume? ______

5. A honeybee must tap 2 million flowers to make 1 pound of honey. How many flowers would a honeybee tap to make 5 pounds of honey? ______

6. About 2 tablespoons of honey would fuel a bee’s trip around the world. How many tablespoons would it take to fuel a bee to travel around the world 7 times? ______

How many cups would that be? ______

7. North Dakota produces about 34 million pounds of honey in one year. With an estimated 755,000 people in the state, how many pounds of honey per North Dakotan is that? ______
Where in North Dakota?
Many agricultural products are processed in North Dakota. Write the names of the towns where these processing plants are located on the state map.

**Dry Edible Peas**
Dakota Dry Bean, Crary and Devils Lake
Paulson Premium Seed and Conditioning, Bowman

**Lentils**
JM Grain, Garrison
Paulson Premium Seed and Conditioning, Bowman
Premier Pulses International, Minot
Stone Mill, Richardton
West Dakota Feed and Seed, Ross

**Canola**
ADM, Velva
ADM Northern Sun, Enderlin
Cargill, West Fargo

**Oil Sunflowers**
ADM Northern Sun, Enderlin
Cargill, West Fargo

**Non-oil Sunflowers**
CHS, Grandin
Red River Commodities, Fargo

**Flaxseed**
Cargill, West Fargo
ADM Northern Sun, Enderlin

**Honey**
SpringTime Honey Co., Belfield
American Honey Co., Hettinger
Jaynes Honey Co., Tioga
A Touch of Honey, Linton
Grand River Honey Co., Hettinger
Stewart Apiaries, Bismarck
Kloten Apiaries, Kloten
Mackrill Honey, Cathay

**Hard Red Spring or Durum Wheat**
North Dakota Mill, Grand Forks
Dakota Growers, Carrington
Minot Milling, Minot
Ardent Mills, Fairmount
Eric Bartsch

Global Division Head
AGT Food and Ingredients’ Ingredient Division
Bismarck, North Dakota

Eric Bartsch loves talking with customers around the world about North Dakota and the great agricultural products our state produces and sells.

Eric’s company, AGT Food and Ingredients, buys peas, lentils, chickpeas and dry beans from North Dakota farmers. AGT sorts, cleans and packages the pulse crops, and sometimes processes them, such as into flour. Buyers can use the specialty flours to make food items such as pasta, cookies and snacks.

“I oversee our company’s food ingredient division and focus on the products that we mill into flour,” Eric said. “We then separate the flour into protein, starch and fiber, which each are used as food ingredients.

“I also am responsible for operations of the plant, sales of the products we make, and research and development of new products.”

Eric sees that the plants are running safely and efficiently to process the products farmers have sold to AGT. He also works with staff to imagine and test new products.

But Eric especially likes selling those products. “I enjoy that I get to contribute to the growth of production and value-added agriculture every day,” he says.

“I grew up on a farm at Velva, N.D., and received a degree from North Dakota State University in Crop and Weed Sciences. Growing up on a farm taught me hard work and a passion for North Dakota agriculture that I use daily when working for AGT.

“The work of AGT Foods is important to North Dakota because we give producers a market for the products they produce on their farms. In addition, AGT employs more 150 people in Bismarck, Minot and Williston.”

Eric hopes more North Dakota young people will consider careers in agriculture.

“Agriculture is an important profession not only to North Dakota but to the world,” he says. “As the world population grows, we must produce more food. But we cannot produce more food unless we continue to advance agriculture on many levels, including making sure students are studying agriculture and making it a career. I would encourage students to continue focusing on math and science as those are two critical areas for the agriculture profession.”
Where in the World?

To export means to move to another country, and import means to bring into from another country.

Color the key square and the country to identify the major importers of North Dakota’s #1 products.

- Japan – Hard Red Spring Wheat
- Philippines – Hard Red Spring Wheat, Honey
- Italy – Durum Wheat
- Algeria – Durum Wheat
- Mexico – Pinto Beans, Dry Edible Beans
- Canada – Dry Edible Peas, Sunflower Oil, Honey
- Spain – Lentils, In-shell Sunflower Seeds
- Germany – Sunflower Kernels
- Saudi Arabia – Honey
- United Kingdom – Navy Beans
Many North Dakota products are consumed daily as part of a healthy diet. Complete the crossword puzzle to learn more about how these products are used.

**Across**

2. Produces a heart-healthy oil.
5. Requires cracking the shell before eating the seed inside.
6. Used in malted food and in feed for animals.
7. A sweetener that helps prevent harmful chemical reactions in the body.
9. Adding this to baked goods increases protein and dietary fiber.

**Down**

1. These are called pulse crops, which comes from a Latin word for a thick soup.
3. Durum is made into this Italian specialty.
4. Various kinds are used in chili and soups.
6. Spring wheat is made into this for sandwiches.
8. They produce honey.

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**Pack MyPlate**

Review www.ChooseMyPlate.gov and list each of North Dakota’s #1 or #2 commodities on the cover in its MyPlate section or on the Not On MyPlate List.
Take this issue of Ag Mag home to share what you’ve learned about North Dakota’s #1 products.

Sources:

AmeriFlax
National Honey Board
National Sunflower Association
Northarvest Bean Growers Association
North Dakota Agricultural Statistics Service
North Dakota Beekeepers Association
North Dakota Department of Agriculture
North Dakota State University
North Dakota Wheat Commission
Northern Pulse Growers Association
Northern Canola Growers Association

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