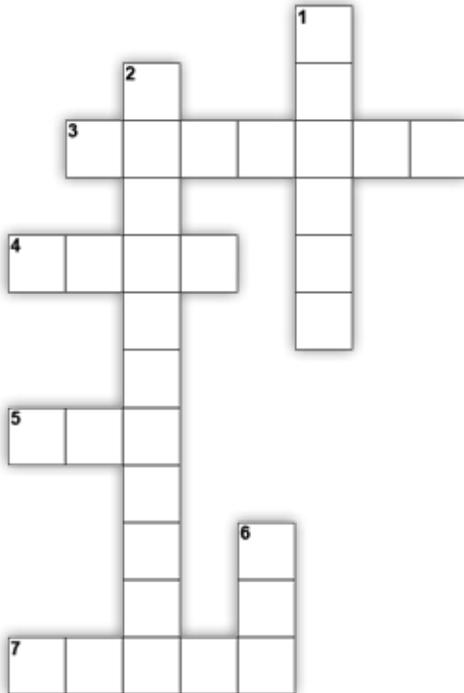


CROSSWORD

Natural Resources

Agriculture depends on Earth's natural and renewable resources.
Solve the puzzle to find out what kinds of resources are needed by agriculture.



1. Tomatoes, strawberries, and soybeans all grow on these.
2. The surroundings in which plants and animals grow.
3. Car tires, leather, wool, and meat all come from these.
4. Plants are rooted in this and soak up nutrients from it.
5. This gives energy to plant leaves for photosynthesis.
6. Plants take carbon dioxide from this, which they need to grow food.
7. Just like humans, plants and animals need plenty of this to survive.

Production, Processing, Distribution

1. Which part of agriculture does each group of workers below fit into?
Label the three groups: production, processing, distribution.

2. Circle a career that interests you. How can you find out more about it?

A _____

- Food safety inspector
- Epidemiologist
- Sawmill worker
- Biochemist
- Food biosecurity specialist
- Food scientist
- Mechanical engineer
- Fashion designer
- Wood scientist
- Nutritionist
- Carpenter
- Meat scientist
- Microbiologist
- Food processors

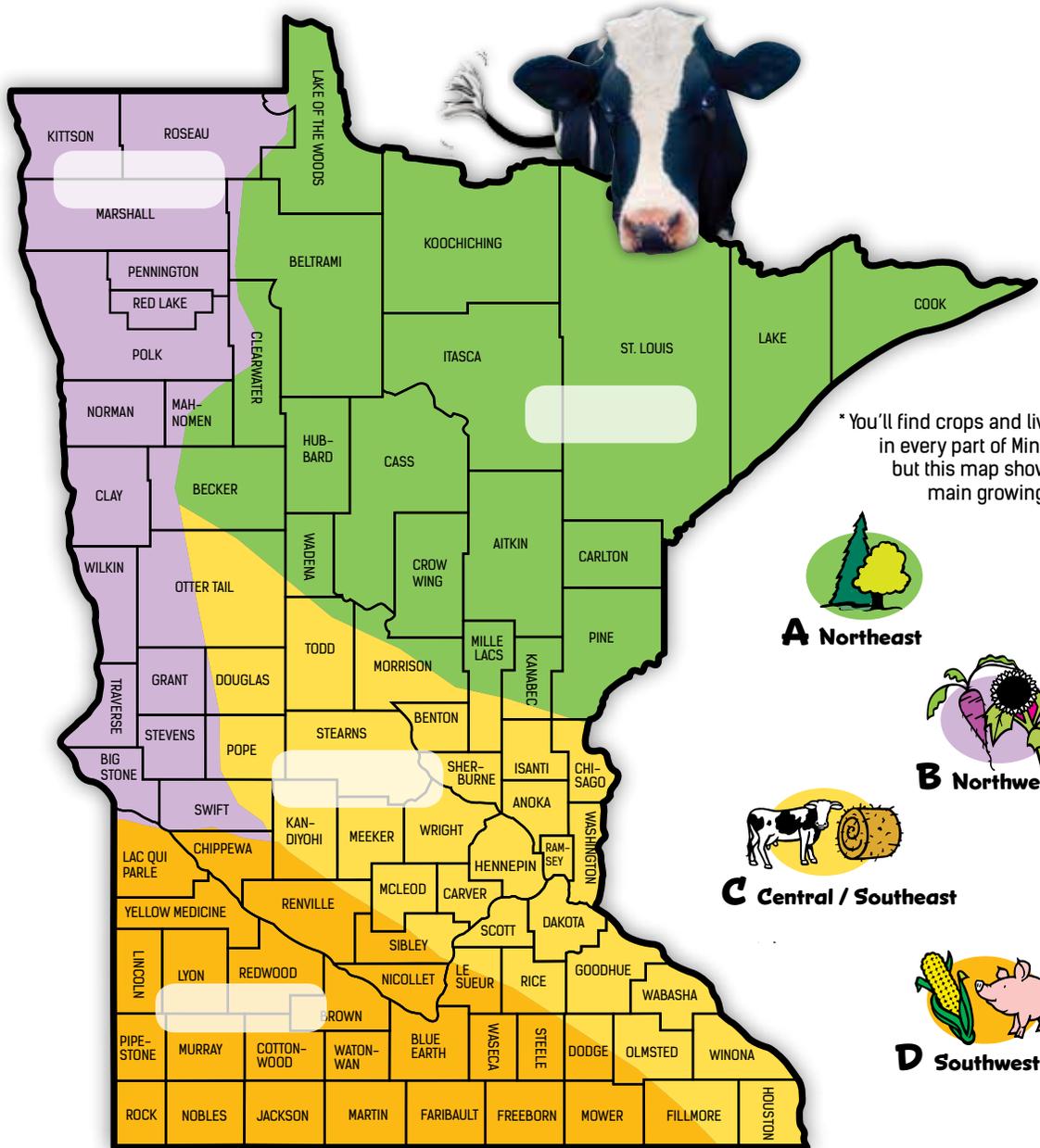
B _____

- Rancher
- Forester
- Seed grower
- Veterinarian
- Farmer
- Biotechnologist
- Greenhouse manager
- Gardener
- Animal geneticist
- Soil scientist
- Horticulturist
- Entomologist
- Agronomist
- Climatologist
- Plant breeder
- Viticulturist

C _____

- Exporter
- Truck driver
- Highway engineer
- Restaurant owner
- Florist
- Grocer
- Software specialist
- Ship captain
- Pilot
- Pizza delivery driver
- Farmers market vendor
- Food store inspector
- International trade advisor
- Grain merchandiser
- Ad designer/writer

Minnesota Grown



* You'll find crops and livestock in every part of Minnesota, but this map shows their main growing areas.



A Northeast



B Northwest



C Central / Southeast



D Southwest

Matching Match these 4 clues with the names of the growing areas on the right (A, B, C, or D). Write the name of each area in its space on the map.

1.

- Flat terrain where large machinery can operate.
- Big producer of cash crops such as wheat, soybeans, sunflowers, sugarbeets, and potatoes.
- Fertile prairie soils.

2.

- Fertile soils with good moisture.
- Big producer of corn, soybeans, cattle, and hogs.
- More southern location (longer growing season).

3.

- Hilly with moisture.
- Big producer of hay, pasturelands, dairy cattle, and turkeys.
- Soils vary, including rich, shallow, poorly drained, and sandy.

4.

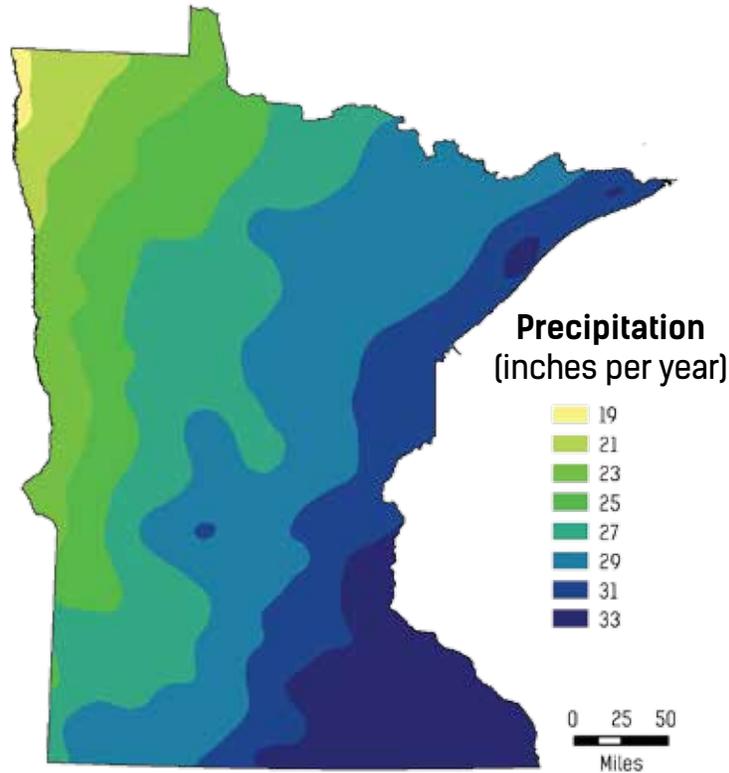
- Rough terrain.
- Short frost-free season, lots of snow.
- Big producer of forests, but few field crops.

Did you know? Find these counties on the map:

- Martin County has the most hogs of any county: **700,000!**
- Minnesota is the TOP producer in the country of turkeys. Kandiyohi County raises the most.
- The Mississippi River transports **59%** of all grain exported from the United States. The headwaters of the Mississippi River are in Clearwater County.
- Otter Tail County leads the state in bison (buffalo) production.
- Minnesota raises more sugarbeets than any other state in the U.S. Polk county leads Minnesota in sugarbeet production with **2.5 million tons.**

Minnesota Rainfall: What and Where?

Average Annual Precipitation (rain and snow)



1. Which biome normally gets the least rainfall each year? _____

Which biome gets the most? _____

2. Why must farmers understand rainfall patterns when they choose which crops to plant? _____

3. What happens to farm crops when rainfall is way above normal? _____

Way below normal? _____

4. Imagine you're a farmer. In which of the four areas would it make the most sense to grow these crops?
Write your answers in the table below, then read the clues again (page 1) to check your work.

Crop	Which Growing Area?
Hay and Pastureland	
Sugarbeets	
Corn and Soybeans	
Forest and Pine Trees	
Wheat	

State Agriculture Symbols

State Tree: Red (Norway) Pine Chosen: 1953

Red (Norway) pine trees can grow over 100 feet tall.

What is the average life span of a red pine tree?

State Grain: Wild Rice Chosen: 1977

This was a staple food of the Ojibwe for centuries. Minnesota produces over half of the world's hand-harvested wild rice.

Where does our wild rice grow?

What are two ways it's harvested in Minnesota?

State Drink: Milk Chosen: 1984

Name the Symbol

Clue: Thriving in swamps, bogs, and damp woods, they grow slowly. They can live for 50 years or longer. It is illegal to pick them.

State Flower: _____

Clue: These large black-and-white water birds have long black bills. Clumsy on land, they are excellent divers, underwater swimmers, and high-speed flyers.

State Bird: _____

Clue: Minnesotans love to eat this fish which inhabits waters in all parts of the state, but mainly the large, cool lakes in northern Minnesota. Their eyes are sensitive, so they go to deep, dark waters during the day and move to shallow lake areas at night.

State Fish: _____

Minnesota cows produce over one billion gallons of milk each year!

Name ten milk products you have tasted.

State Fruit: Honeycrisp Apple Chosen: 2006

Fourth graders from Anderson Elementary in Bayport lobbied the State Legislature to give us this state apple.

Where was this juicy, crisp apple developed?

Minnesota Ag Brags



The U.S. is the world's largest exporter of farm products. Can you name Minnesota's four biggest ag customers? (HINT: These are their flags.)

1. _____
2. _____
3. _____
4. _____

The U.S. sends many kinds of foods to these four countries. Here are some examples (and many of these things are produced in Minnesota):

- **Mexico** imports lots of corn, as well as soybeans, dairy, and pork.
- **Canada** imports fruits and vegetables.
- **China** imports lots of soybeans, mostly as feed for its growing livestock industry.
- **Japan** imports corn and red meat (Japan's small size means it does not have much room for crops and livestock).

Think and Discuss:

Minnesota is the 3rd largest agricultural exporting state in the U.S.

1. Why do these countries want Minnesota's products?
2. What foods are imported to Minnesota from around the world?
3. Why is this necessary?

Acres of Pizza

Americans eat 75 acres of pizza every day!

Think about having a pizza delivered to your home.
Match the pizza part with its' agricultural source.

Cardboard for pizza box

Crust

Pepperoni

Sauce

Cheese

Wheat

Pig

Tree

Cow

Tomatoes