

Fourth Graders Learn About Commodities

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FREDERICK, Md.—How many kernels of corn on an average ear?

An estimated 800.

Know how much a bushel of corn weighs?

One bushel of corn weighs 56 pounds—about as much as a fourth grade student.

How much water is needed to grow corn?

It takes 25 gallons of water to grow just one ear of corn!

What is most of the corn we grow used for?

The number one use for corn is livestock feed.

Frederick and Hagerstown fourth graders learned the answers to these questions and other fascinating facts recently during their field day at the Agricultural Experiment Station's Western Maryland Research and Education Center (WMREC).

"Kids Growing With Grains," the award-winning program established by the Cooperative Extension Service and WMREC, hosted 200 students from Frederick city and Hagerstown at the research farm. Bester, Winter Street, South Frederick, and Waverly Elementary Schools participated in this year's program. The students come from urban areas where their exposure to agriculture is often very limited; many have never seen a pig or sheep or calf. They were there to learn about grain production and consumption, and how important agriculture is in their lives.

In 1994, "Kids Growing With Grains" won a national award from Monsanto. The National Association of Home Economics recognized the program for its innovation in dealing with food quality and safety. And it will be presented at the Ag in the classroom national meeting in Dallas in October. Project coordinators have also been invited to present the program to Congress members and their staff in McLean, Va. The program was developed by the College of Agriculture; by Maxine Casey, Cassandra Corridon, Mary Ellen Waltemire, Kay Derr, Kristi Wolfensberger, and Don Schwartz

of the Cooperative Extension Service; and by the Agricultural Experiment Station's Francis "Frank" Allnutt. A grant from Maryland Grain Producer's Utilization Board helped establish the program. Farm Bureaus from Frederick and Washington counties pay for the busses that transport the children, and the Washington County Farm Bureau Women's Committee actively helps out with the lunches for the day.

Hands-on learning stations at the field day gave the youngsters an opportunity to experience agriculture up close, in a fun and friendly way. The children and their chaperons, divided into groups of 50, rotated through grain planting, animal consumption, human nutrition, and unusual uses of grain centers. Activities ranged from cooking to the introduction of farm animals in pens.

At the planting station, Agricultural Experiment Station's Frank Allnutt explained planting and growing grain crops. Wagon loads of fourth graders toured the rolling farm fields, getting an introduction to Best Management Practices. Barley, corn, wheat, oats, and soybeans are grown on the more than 300 acres devoted to field crops on the research farm. The groups then had an opportunity to learn the functions and costs of various pieces of equipment using scale replicas. "It is a real eye opener for the children, they never imagined how much money is involved in farming," said Allnutt.

Non-food and unusual uses of grains were highlighted in another station. Crayons, ink and paper, paint, paste, and diapers are just a few of the products produced using corn crops, the youngsters learned. Here they saw how biodegradable bags made from corn starch could help the environment by decomposing 20 times faster than plastic bags. They learned about ethanol, an alcohol made from corn, which reduces carbon monoxide pollution in the air. They could also sample grits and make popcorn balls under the supervision of county home economists.

The nutrition station stressed

the importance of grains in our diet. Students could help make whole wheat pancakes, and could create trail mix using cereal made from the same kinds of grains grown on the farm. Home economists explained how eating whole grains is an excellent way to increase the complex carbohydrates in their daily diets.

Washington County 4-H club members were on hand to do some teaching at the animal consumption exhibit. Katie Herbst, a 13-year-old member of the Ringgold Dairy club, brought a holstein heifers to the field day. Katie explained to the city dwellers how grain is converted into milk. A lamb belonging to 13-year-old Jesse Rohrer of the Washington County Lamb and Sheep club, and some piglets were included in the sample group of farm animals. Also helping with the animals was 12-year-old Ashleigh Reeder, of the Benevola 4-H club.

Sharpsburg farmer Bill Poffenberger brought a 850-pound hereford heifer from his beef herd to round out the livestock tent. The 4th graders were given a basic understanding of what is involved in milk and meat production on the farm.

"If they leave here with the assumption it takes a lot of effort, then it's worth it," said Washington County Ag Agent Don Schwartz. "The children's concept of what is involved in production is often extremely limited. They've been removed from the farm so long, even their parents and grandparents may not know what's involved."

After a bag lunch, with milk donated by MD-VA Cooperative, and help provided by the Washington County Farm Bureau Women's Committee, the nine year olds went to a display of commodity bins. Here they could create a decorative jar filled with the different grains grown on the farm to take home. These jars were taken home as a reminder of their day on the farm, for the children to share with their families. Buried up to their elbows in the grains, it was clear the city youth were enjoying "Kids Growing With Grains."

Trail Mix

2 cups corn cereal*
2 cups wheat cereal
2 cups oat cereal
1 cup pretzels
½ cup raisins



Washington County Ag Agent Don Schwartz, left, talks to fourth graders about livestock production. Shown with Schwartz are 13-year-old Jesse Rohrer of Washington County 4-H Sheep and Lamb Club, and Bill Poffenberger, a local farmer.



Fourth graders from Mrs. Mallin's class are up to their elbows in commodities. Enjoying the grain field-day activities are, from foreground back: Michael Starner, Ronnie Lathey, Travis Robinson, and Michael Williams.

Mix cereals and pretzels in pan and bake for 45 minutes at 250°F, stirring every 15 minutes. Cook; store in airtight container.

*Flavoring for cereal can be added before baking. Mix 3 tablespoons melted margarine, 2 teaspoons season salt and 3 teaspoons Worcestershire Sauce. Pour over one kind of cereal and mix well.

Pancakes

1 egg
1¼ cup milk
½ teaspoon baking soda
1¼ cups flour
1 tablespoon sugar
2 tablespoons soft shortening
1 teaspoon baking powder
½ teaspoon salt (optional)

Beat ingredients together until smooth. For healthier pancakes, whole wheat flour can be used instead of regular flour.

For extra convenience, use pre-

pared pancake mix and add 1 cup whole wheat flour to batter. Fruits such as apples and blueberries can be added for variety as well.

Pizza Flavor Mix

¼ cup Parmesan cheese
3 tablespoons dry spaghetti sauce mix

2 teaspoons basil
2 teaspoons oregano
2 teaspoons garlic powder
8 cups Kellogg's Crispix cereal
4 cups pretzel nuggets
3 tablespoons vegetable oil

Combine Parmesan cheese, spaghetti sauce mix, and spices. Set aside.

In a 2 gallon storage bag, combine Kellogg's Crispix cereal and pretzel nuggets. Pour oil over cereal mixture, tossing gently to coat. Add Parmesan cheese mixture to bag, tossing gently until cereal mixture is thoroughly coated. Store in airtight container.

YIELD: 12 cups



Frank Allnutt of the Agricultural Experiment Station explains what a disc does using a scale replica. The children were introduced to Best Management Practices implemented on the research farm, where more than 300 acres of field crops are grown.