



Trivia Facts

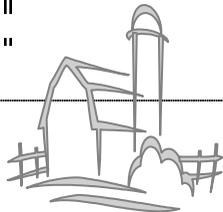
- Each man, woman and child in America consumes almost 80 pounds of tomatoes every year.
- The largest tomato on record is a 7-pound monster grown in Oklahoma.
- Tomato soup was first made in 1872.
- Americans eat a little more than 20 pounds of rice per person each year. Asians eat as much as 300 pounds per person each year.
- In China a typical greeting, instead of "How are you?" is "Have you had your rice today?" A greeting to which one is expected to always reply, "Yes".
- The heavy tea tax imposed on the colonies in 1773, which caused the "Boston Tea Party," resulted in America switching from tea to coffee. Drinking coffee was an expression of freedom.

Joke

A family of three tomatoes were walking downtown one day when the little baby tomato started lagging behind. The big father tomato walked back to the baby tomato, stomped on her, squashed her into a red paste, and says, "Ketchup!"

Farm Facts

- When you've gone without watering your tomatoes for a few days, then you try to hurry and catch up in watering, it will cause them to crack. The inside will soak up the water, getting nice and plump, but the outside will not be able to stretch fast enough to catch up with the inside.
- More than 1 billion people throughout the world are actively involved in growing rice.
- 50% of all the world's rice is eaten within 8 miles of where it is grown.
- Most of the world's coffee is grown in Third World nations in Latin America, Asia and Africa. On small plantations, most pickers earn under \$2 a day.



www.maefonline.com



www.aglab.pfb.com

Tomatoes



Genes naturally occur in plants and are transferred from one plant to another through cross pollination. Through biotechnology plants are being developed that have genes artificially inserted in them by a scientist. A genetic engineer might place a combination of genes into a plant to make it more **useful or productive**. A scientist might try to create a tomato plant that provides more tomatoes or she may try to make a plant resistant to a pest like a worm or a beetle. Some scientists work to make plants more tolerant to heat or cold or drought. All of this work is a long and difficult process and takes patience on the part of the scientist.



Tomatoes are one of the world's most popular vegetables and they contain a special nutrient called *lycopene* which may reduce the risk of cancer and heart disease. Because of the health benefits of lycopene, scientists are now looking for ways to increase the *lycopene* in tomatoes. Scientists have also looked for ways to slow the ripening of a tomato so that the tomatoes can stay on the vine longer. Staying on the vine would improve their flavor. At other times, scientists have tried to make tomatoes that would ripen all at one time. This would help farmers that sell their entire crop to a producer for sauce or ketchup because they would only have to harvest their field one time. But, if you had those same tomato plants in your back yard, it would be awful if they all ripened at the same time. You would only have tomatoes to eat for one week not for several months.



Golden Rice



Millions of people in the world eat rice as their staple food. Many of these people often suffer from *Vitamin A* deficiency. When a person doesn't get enough *Vitamin A*, it can affect their vision and cause other medical problems. Scientists are looking into ways to insert genes into rice which may produce a kind of rice that contains more nutrients and would help improve the health of people that eat rice as the main part of their diet.

Coffee and Tea



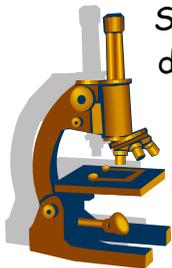
Other scientists are working to produce coffee beans and tea leaves that would provide naturally decaffeinated products. They will have to be sure that the new products still have the same taste as caffeinated coffee and tea. A scientist in Hawaii is developing a method for making all coffee beans ripen at one time so that harvesters could pick all the beans at the same time. This would save time and money for the farmer.



What Does the Future Hold?

Scientists will continue to work hard to develop seeds for foods that are healthy for you and can be shipped without spoiling. They will also look for ways to adapt plants so they can grow in new environments.

Scientists will try to reduce the need for pesticides by discovering ways to make plants insect resistant. What will happen in the future? We will have to wait and see.



What Do You Remember?



1. What was the author's purpose in writing this article? Circle any that apply. Be ready to prove your answer.
 - a. to make you laugh
 - b. to make you eat more rice
 - c. to inform you
 - d. to make you drink coffee
2. Who would benefit by having all tomatoes ripen at the same time? Why?
3. Who would **not** benefit by having all tomatoes ripen at the same time? Why?
4. According to the article, circle any things that genetic engineers might be trying to do:
 - a. make plants in drought conditions
 - b. make coffee beans that are naturally decaffeinated
 - c. make plants more productive or useful
 - d. increase lycopene in tomatoes
5. What change in a food that is grown would you ask a scientist to make? How would this be helpful?

Genetic Engineering is changing the structure of **DNA** molecules by replacing the original genes with new ones from another **DNA** model. **DNA** is a complex chemical that makes up a gene. **DNA** stands for **DEOXYRIBONUCLEIC ACID** ?

How many words can you make from the letters in

DEOXYRIBONUCLEIC ACID?



(One student was able to find 763 words. Can you beat that record?)