

Key to Agricultural Science and Technology Worksheet

Agricultural Product	Actual scientific changes applied to the development product	Harvesting Technology
Apples	sweeter, crunchier, crisp, enzyme coating to deter browning	robotic pickers
Carrots	more vitamin A, new/old colors, enzyme to enhance color	
Tomatoes	colors, more beta-carotene, longer shelf life for processing	thicker-skinned fruit (plant breeding), mechanical harvesting machine that sees color
Peaches	new cold tolerant varieties	
Pears	pest resistance	
Watermelon	disease resistant, improved sweet taste	
Berries	extend the growing season, flavor, thornless varieties	
Peanuts	lower the fat, but maintain flavor	
Cayenne Pepper	increase the heat by 20%	
Bread/Wheat	changes in gluten, protein; ability to make sour dough anywhere with the identified bacteria; insect resistance	GPS/GIS technology, combine harvesting
Oranges/Citrus	higher yielding trees, increased disease resistance, better color, longer shelf life, freezing technology	picking machine, sensors for ripe fruit
Cheese	low-fat cheeses	
Milk	Lactose-free milk bacteria that produces an enzyme that breaks down milk sugar	
Grapes	seedless varieties, disease resistance, packaging technology	mechanized grape moving and picking
Potatoes	disease resistance, low-fat frying potato	
Rice	doubled the shelf life, rice flour to make bread and reduce oil absorption	GPS/GIS technology, combine harvesting
Poultry	turkeys bred to have more meat, disease resistance	
Beef	disease prevention, breeding programs for tender, low-fat, flavorful meat	
Oats	reduce cholesterol research	
Corn	enhance "corn flavor" in tortillas, corn starch, fat replacer,	
Soybeans	used as a substitute product in lipstick, plastics, flooring, paints, ink, cleaners, etc.	
Diapers	cornstarch-based moisture absorber, Super Slurper	
Cotton		cotton picking machine
Sugar Beets		lifter harvester
Walnuts	stronger trees developed through plant breeding	tree shaker
Olives	better canning methods	tree shaker
Lettuce		lettuce harvester for boxing, precision packing

Agricultural Science and Technology Worksheet

What scientific changes do we think have been applied to the development of the product we have been assigned?

Agricultural Product	Actual scientific changes applied to the development of the product <i>"Science in Your Shopping Cart" (video)</i>	Harvesting Technology <i>"Modern Marvels: Harvesting Technology" (video)</i>
Apples		
Carrots		
Tomatoes		
Peaches		
Pears		
Watermelon		
Berries		
Peanuts		
Cayenne Pepper		
Bread/Wheat		
Oranges/Citrus		
Cheese		

Agricultural Product	Actual scientific changes applied to the development of the product <i>“Science in Your Shopping Cart” (video)</i>	Harvesting Technology <i>“Modern Marvels: Harvesting Technology” (video)</i>
Milk		
Grapes		
Potatoes		
Rice		
Poultry		
Beef		
Oats		
Corn		
Soybeans		
Diapers		
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* other food products shown in *“Modern Marvels: Harvesting Technology”*









