

# Pizza Comes From Farms?



Stacy DeVeau  
4-H STEM Program Coordinator  
University of Arizona, Yavapai County Cooperative Extension



## Summer Agricultural Institute

<http://cals.arizona.edu/agliteracy/programs/SAI>

The Summer Agricultural Institute (SAI) is a five-day tour designed to teach Arizona K-12 teachers about food and fiber production and help them incorporate that knowledge in the classroom curriculum. SAI combines hands-on learning about agriculture with practical curriculum development.



ARIZONA AGRICULTURE

# BEE'S AMAZING ADVENTURE



BY **BONNIE APPERSON JACOBS AND TERBI HAINMARING**

In cooperation with  
The University of Arizona College of Agriculture and Life Sciences, Cooperative Extension  
and Maricopa County Farm Bureau

# Did you know...

**An average American eat 22.5 pounds of pizza a year!**

**As a nation that means we eat 90 acres of pizza per day.**

**An acre is about the size of a football field so that means  
as a nation we eat 90 football fields of pizza each day!**

**Only hamburgers sell more often than pizza.**





**Hot Pizza**  
212-555-1212  
FREE LOCAL DELIVERY

**2016**

January							April							July							October							
sun	mon	tue	wed	thu	fri	sat	sun	mon	tue	wed	thu	fri	sat	sun	mon	tue	wed	thu	fri	sat	sun	mon	tue	wed	thu	fri	sat	
					1	2						1	2							1	2						1	2
3	4	5	6	7	8	9	3	4	5	6	7	8	9	3	4	5	6	7	8	9	2	3	4	5	6	7	8	
10	11	12	13	14	15	16	10	11	12	13	14	15	16	10	11	12	13	14	15	16	9	10	11	12	13	14	15	
17	18	19	20	21	22	23	17	18	19	20	21	22	23	17	18	19	20	21	22	23	16	17	18	19	20	21	22	
24	25	26	27	28	29	30	24	25	26	27	28	29	30	24	25	26	27	28	29	30	23	24	25	26	27	28	29	
31														31							30	31						

February							May							August							November						
sun	mon	tue	wed	thu	fri	sat	sun	mon	tue	wed	thu	fri	sat	sun	mon	tue	wed	thu	fri	sat	sun	mon	tue	wed	thu	fri	sat
1	2	3	4	5	6		1	2	3	4	5	6	7	1	2	3	4	5	6	7	1	2	3	4	5	6	7
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22	23	24	25	26	27	28	22	23	24	25	26	27	28	21	22	23	24	25	26	27	20	21	22	23	24	25	26
29	30	31					29	30	31					28	29	30	31				27	28	29	30			

March							June							September							December						
sun	mon	tue	wed	thu	fri	sat	sun	mon	tue	wed	thu	fri	sat	sun	mon	tue	wed	thu	fri	sat	sun	mon	tue	wed	thu	fri	sat
1	2	3	4	5	6	7	1	2	3	4	5	6	7	1	2	3	4	5	6	7	1	2	3	4	5	6	7
8	9	10	11	12	13	14	8	9	10	11	12	13	14	8	9	10	11	12	13	14	8	9	10	11	12	13	14
15	16	17	18	19	20	21	15	16	17	18	19	20	21	15	16	17	18	19	20	21	15	16	17	18	19	20	21
22	23	24	25	26	27	28	22	23	24	25	26	27	28	22	23	24	25	26	27	28	22	23	24	25	26	27	28
29	30	31					29	30	31					29	30	31					29	30	31				

**Pizza is so popular,  
one day just isn't enough...**

February 9

*National Pizza Pie Day*

September 5

*National Cheese Pizza Day*

October

*National Pizza Month*

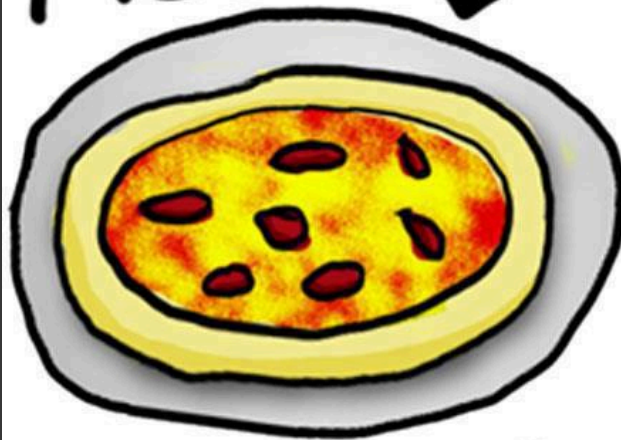
November 12

*National Pizza with the Works  
Except Anchovies Day*

# Pizza by the Numbers

$$V = \text{Pi}(z \cdot z) a$$

Pizza ↘



↕ depth = a

↔ radius = z

$$\text{Volume} = \text{pi} \cdot z \cdot z \cdot a$$

# Pizza by the Numbers

If you could only have one pizza topping (in addition to cheese) what would you choose?

Write your single favorite pizza topping on a post-it.

If you prefer plain cheese pizza, cheese is your favorite topping.

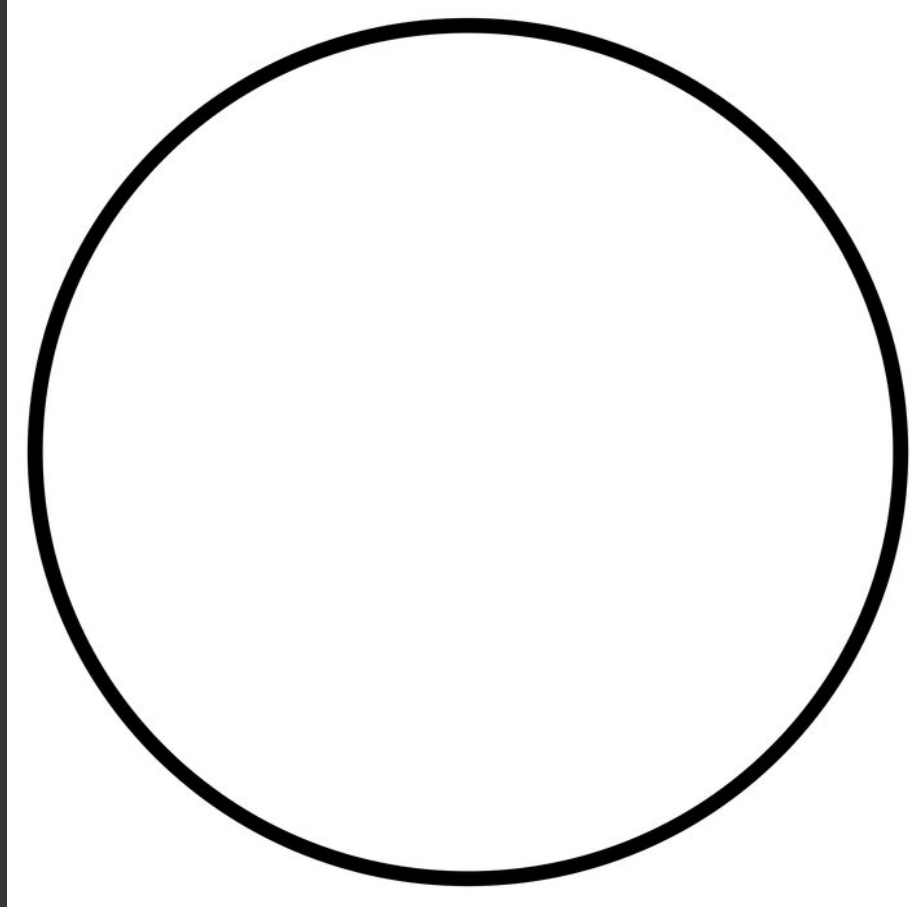
# Pizza by the Numbers

Create a labeled graph comparing favorite pizza toppings.



# Pizza by the Numbers

Create a labeled graph comparing favorite pizza toppings.



# Did you know...

**Pepperoni is the most popular pizza topping.**

**36% of all pizzas ordered are pepperoni pizzas.**

**Italian sausage is the second most popular pizza topping.**

**Mushrooms come in third.**



**Seed** - The fertilized, matured ovule of a flowering plant, containing an embryo or rudimentary plant; any propagative part of a plant.



**Fruit** - A seed-bearing structure that develops from the ovary of a flowering plant.

**Flower** - The part of a seed plant containing the reproductive organs.

**Stem** - The stalk that supports a leaf, flower, or fruit.



**Leaf** - Expanded, usually green organs borne by the stem of a plant; any similar or corresponding lateral outgrowth of a stem.

**Root** - Part of the body of a plant that grows downward into the soil, anchoring the plant and absorbing nutrients and moisture.



Let's Make a Pizza!



# A Pizza Dough Farm?





# Gem of the Southwest: Desert Durum Wheat



[https://www.youtube.com/watch?v=l2Oa8nmR\\_30](https://www.youtube.com/watch?v=l2Oa8nmR_30)

High Yield - Early Maturing - High Protein  
Low Moisture - High Gluten Strength



# How Wheat is turned into Flour



[HowStuffWorks Show: Episode 7: From Wheat to Flour](#)

In this clip from Discovery Channel's "HowStuffWorks" show, find out how wheat kernels are transformed into flour through a complex system of chutes..



howstuffworks

# All wheats/flours are not created equal: 6 classes



## Soft White

A low-moisture wheat producing a whiter flour for cakes, pastries and Asian-style noodles, ideally suited to crackers and Middle Eastern flat breads.



## Hard White

Asian noodles, whole wheat or high extraction applications, pan breads and flat breads.



## Durum

The hardest of all wheats, Durum has a rich amber color and high gluten content, ideal for pasta, couscous and some Mediterranean breads.



# All wheats/flours are not created equal: 6 classes



## Soft Red Winter

A versatile weak-gluten wheat suited for cookies, crackers, pretzels, pastries and flat breads.



## Hard Red Winter

Pan bread, Asian noodles, hard rolls, flat breads, general purpose flour and cereal.

↑ High *Gluten/Protein* ↓



## Hard Red Spring

Hearth breads, rolls, croissants, bagels and pizza crust.





Seed, fruit, flower, stem, leaf or root?



**Seed** - The fertilized, matured ovule of a flowering plant, containing an embryo or rudimentary plant; any propagative part of a plant.



Protein = Gluten = Airy & Chewy  
Cake & Pastry Flour are soft flours with low gluten  
Bread Flour is a hard or strong flour with higher gluten  
Finely milled wheat flour requires less water.  
Result: crackly thin crispiness + airy structure + medium chewiness



# A Pizza Sauce Farm?







Seed, fruit, flower,  
stem, leaf or root?





**Fruit** - A seed-bearing structure that develops from the ovary of a flowering plant.



## Tomatoes: Plant to Paste



<http://www.smithsonianmag.com/science-nature/a-passion-for-tomatoes-947254/>

# A Pizza Cheese Farm?







Triple G Dairy  
Buckeye, AZ



Milk tested for quality/purity; weighed and pasteurized for uniformity and safety

<http://youtube.com/watch?v=mwViMnkbPLM>

Starter culture and an enzyme called rennet coagulate the milk into a custard-like consistency.

Solids (curds) separated from liquid (whey)

Large curds are cooked at low temperatures, for softer cheeses. Small curds are cooked at higher temperatures, for harder cheeses.





Pressing shapes the cheese and completes curd formation.



Curing ages the cheese to develop flavor and texture.



# Sausage and Pepperoni Farms?



Date Creek Ranch  
Wickenburg, AZ

\*W-Dart Ranch\*  
Cottonwood, AZ





# \*Groseta Ranches W Dart Ranch\*

Cottonwood, AZ





All cattle are in the Bovine family; this is their scientific name, but...

Babies are called... calves

Young females that haven't had any babies yet are called... heifers

Females that have had babies are called... cows

Males that will not produce offspring are called... steers

Males that will produce offspring are called... bulls



(c) George Hall



# \*Heiden Land and Cattle\*

Buckeye, AZ



# \*Perkinsville Meat Processing Plant\*

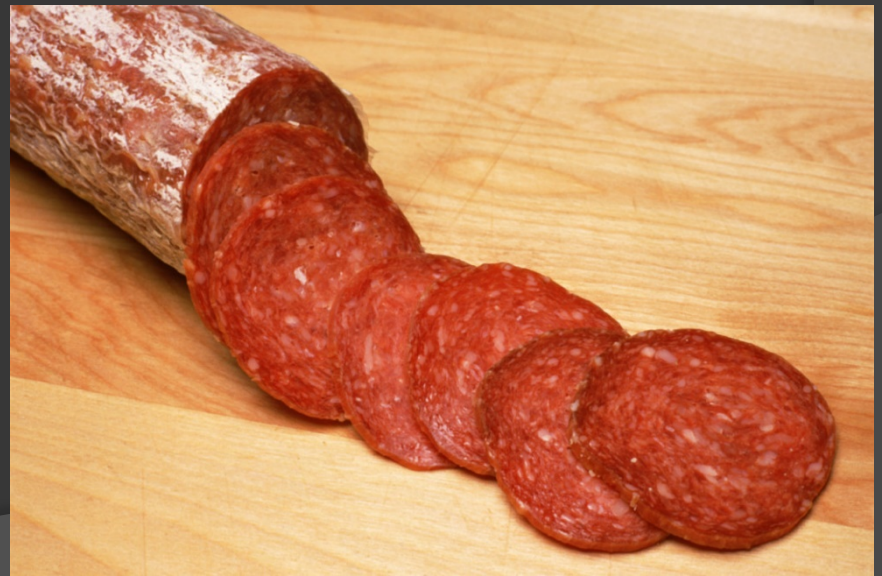
Chino Valley, AZ



Strict government guidelines

USDA Inspectors oversee operational safety, quality and animal welfare standards.







# Mushroom Farm?



[Inside a Mushroom Farm Video](#)

# Pepper Farm?



Seed, fruit, flower,  
stem, leaf or root?



**Fruit** - A seed-bearing structure that develops from the ovary of a flowering plant.



# \*Knorr Farms – Maricopa, AZ\*



Sub-surface Drip Irrigation

No-Heat Jalapenos  
For Pace Salsa

# Pizza Ingredients?







# Pizza Ingredients!



# \*Queen Creek Olive Mill\*

Queen Creek, Arizona

Over 7,000 trees; 16 varieties

Eatery

Tours

Marketplace





# Onions







*Hawaiian (?)*

## Pizza

1962

Sam Panopoulos  
Chatham, Ontario  
Satellite Restaurant



# Pickled Pepperoncini Peppers





# Artichokes





# Anchovies



# Pizza Comes From Farms!!!!



What other foods come from farms?

# Student Activity

**My favorite food comes from farms.**

**It is made from the following ingredients which come from farms.**

## **Ingredients:**

*Flour / Dough* \_\_\_\_\_

*Ricotta and Mozzarella Cheese* \_\_\_\_\_

*Basil* \_\_\_\_\_

*Olive Oil* \_\_\_\_\_

*Garlic* \_\_\_\_\_

## **Sources:**

*Wheat* \_\_\_\_\_

*Milk / Dairy Cows* \_\_\_\_\_

*Basil Plant* \_\_\_\_\_

*Olive Trees* \_\_\_\_\_

*Garlic Plant* \_\_\_\_\_

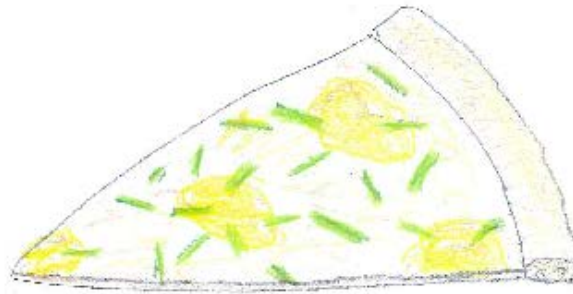
**Can you guess my favorite food? Open for answer 😊**



# Student Activity

**My favorite food is:** Carol's White Pizza from Bill's Pizza in Prescott !

Draw and color a picture of your favorite food.





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