



Fresh from the Garden

TOMATOES

This lesson may be presented as part of a general overview of warm season vegetables, or as a stand-alone lesson.

The material is suitable for both beginning gardeners and gardeners with established productive vegetable gardens.

Use the lesson to:

- Teach about the health benefits of tomatoes.
- Demonstrate how to properly harvest, store, handle, preserve, and healthfully prepare tomatoes.
- Introduce new and/or unfamiliar vegetables to gardeners in order to encourage gardeners to include them in their warm weather gardens and their diets.
- Provide more healthful alternatives to traditional cooking techniques or recipes.
- Instruct gardeners how to deal with an overabundant crop.

With minor adaptation, the lesson can be used to introduce the concept of growing vegetables at home to non-gardeners. For example, a container gardening section could be added to demonstrate how to grow tomatoes in a container.

Key presentation points:

1. Nutrition and health benefits associated with vegetables
2. Importance of eating fruits and vegetables daily.
3. Simple cultivation recommendations
4. Harvesting techniques
5. Washing and storing
6. Healthful cooking/preparation techniques
7. Freezing techniques
8. Recipe demonstration (1 or 2)
9. Recipe

Additional (optional) points:

- History or origin
- Cultural information
- Interesting or fun facts

Additional (optional) Activities:

- Compare vegetable name in English with another language appropriate for your audience.
- Taste and compare flavor of different varieties of tomatoes.
- Test audiences' knowledge regarding the difference between a fruit and a vegetable, and into which category selected produce falls.
- Distribute plants or seeds for immediate planting in the garden.

Tomato Facts:

- The tomato is native to South America, probably Peru, and Ecuador, and was first cultivated by the Mayas, Incas, and Aztecs.
- The Aztec name for the tomato, Xitomatl, means “plump thing with a naval.”
- Spanish explorers renamed it tomate.
- Returning Spanish explorers brought the tomato to Europe in the 1500’s.
- The Italians were the first Europeans to eat tomatoes. They began growing them about 1550.
- The tomato arrived in the United States in 1710.
- Thomas Jefferson was one of the first Americans to cultivate tomatoes in 1781.
- Tomatoes were once thought to be poisonous and were grown as ornamental garden plants.
- Tomatoes were not recognized as a useful vegetable until the 1800’s.
- Tomatoes were once used as a remedy for indigestion, diarrhea, liver disease, and as a cholera preventive.
- In 1893, the Supreme Court declared the tomato a vegetable. It is actually a fruit. (A copy of the original ruling can be found at http://www.lawyersweeklyusa.com/nix_hedden.cfm).
- The vitamin A content of tomatoes is determined by the color; orange varieties have the most, then yellow and red. White tomatoes have the least.
- Each American eats about 18 pounds of fresh tomatoes annually, plus about 70 pounds of processed tomatoes in products, such as ketchup, bbq sauce, and salsa.

Preparation:

- Review lesson material
- Review presentation guidelines.
- Review demonstration checklist.
- Review resources for additional presentation information or activities.
- Select seasonal vegetables for demonstration.
- Prepare vegetables for demonstrations, as necessary.
- Prepare recipes or parts of recipes for demonstration and sampling, as necessary.

The following is a suggested script with step-by-step demonstration activities:

PRESENTATION PART I: TOMATOES

Introduce yourself and review what you will be presenting with the audience. Discuss the recipe(s) that you will demonstrate.

“Because there is nothing better than a ripe, fresh-from-the-garden tomato, they are considered the most popular home-grown “vegetable” in the United States, and are cultivated by more than 90% of home gardeners. No other vegetable comes close in popularity.

Note: If you plan to demonstrate 2 recipes, select 1 that requires cooking and 1 that is served raw. Start the recipe that requires cooking at the beginning of the presentation to allow adequate cooking time. The 2nd recipe may be prepared at or towards the end of the presentation.

Tomatoes are usually easy to grow, but can be affected by several plant diseases and pests.

They are heat-loving plants that develop the best flavor during the warmest months—usually June through September. When space is limited, tomato plants can be grown in large containers. A few plants can usually provide enough tomatoes for most families.”

☞ Display photographs of tomato plants growing in containers

“Over 500 different varieties, both as seeds and transplants, are available to the home gardener. Tomatoes come in a wide range of sizes and shapes, and a rainbow of colors – yellow, orange, pink, red, and even striped.”

☞ Display a variety of tomatoes. If unavailable, display photographs

“Tomatoes generally fall into three categories:

Cherry Tomatoes: Small, bite-sized fruits that contain a lot of seeds and juice. They are usually eaten whole, and frequently used in salads. One standard cherry tomato plant is usually sufficient for a family, since they generally produce abundantly.

Round/Slicing Tomatoes: Round varieties can be used in a variety of ways, but are perfect for slicing and eating raw.

Plum/Paste Tomatoes: Pear or egg-shaped fruits with very meaty interiors, thick skins, and few seeds. They are less juicy than standard tomatoes. These tomatoes can be eaten raw, but are also excellent for making sauces and for canning and drying.”

☞ Point out the color, shape and size differences of the displayed tomatoes or photographs

“Fresh from the Garden tomatoes not only taste good, but are very nutritious. One medium tomato or 1 cup of chopped tomato contains only 25 calories.”

☞ Display a medium sized tomato

☞ Measure two ½ cup portions of chopped tomatoes and place on a small plate

☞ Discuss daily vegetable recommendation (see “*Nutrition – the basics*” handout, in general 2 ½ to 3 cups per day for adults)

☞ Discuss serving size recommendation

“Tomatoes are packed with vitamins C and A (beta-carotene). In fact, two medium tomatoes can supply a full day's requirement for Vitamin C. Raw tomatoes contain more vitamin C than cooked or canned tomatoes. Most of the vitamin C in a tomato is concentrated in the clear jelly that surrounds the seeds.”

☞ Display a sliced tomato and point out the jelly surrounding the seeds

“Tomatoes also contain the protective plant chemical lycopene, which may prevent heart

attacks and some cancers. Cooking tomatoes makes the lycopene more useable by our bodies.”

☞ Define phytochemicals and discuss health benefits, if time allows (see “*Nutrition – the basics*” handout for information on phytochemicals)

“So, to get the maximum nutritional benefit from your *Fresh from the Garden* tomatoes, eat some raw and some cooked.

For the best flavor, allow tomatoes to ripen on the vine, and harvest while they are still firm.

If for some reason, the tomatoes cannot be vine ripened, they can be ripened at room temperature—but not in the refrigerator. Refrigeration slows the ripening of tomatoes.

Put green tomatoes in a brown paper bag, with some holes punched in it, and fold the top over. Put the bag in a dark spot – never in the sun – for 1 to 5 days, depending on how green they are. Be sure to check on them everyday.”

- ☞ Display green tomato and a paper bag
- ☞ Fold bag 3 times lengthwise
- ☞ Snip (with scissors) or tear on folds in several areas
- ☞ Open bag and display holes
- ☞ Put green tomato in bag and fold top

“When storing tomatoes, put them in a cool, dry, dark place for about 2 to 3 days. However, note that temperatures above 80°F cause tomatoes to spoil quickly. Therefore, it is necessary to store very ripe tomatoes in the refrigerator.

Always wash tomatoes well with plenty of water before eating, cooking or cutting. To wash the tomato, rinse with running water, rub its surface and dry with a paper towel. Cut away the area where the stem was before slicing or chopping the tomato.”

☞ Demonstrate washing technique

It is not necessary to peel fresh tomatoes, but if you must, submerge them in boiling water for about 30 seconds. Transfer to ice water. When cool enough to handle, just slip the skins off.”

☞ Demonstrate peeling technique

“Avoid seeding tomatoes whenever possible, since nutrients are concentrated in the jell surrounding the seeds.”

☞ Demonstrate seeding technique

“Tomatoes are delicious raw or cooked. Serve tomatoes raw, sautéed, grilled, stuffed, stewed, or baked. Add them to salads, salsa, soups, and sauces.”

COOKING TOMATOES:

Broil: Cut tomatoes in half, sprinkle with a few drops of oil and season. Cook 4 to 5 minutes, until heated through.

Bake: Bake tomato halves (plain, stuffed or with toppings) in a 400° F oven for 8 to 15 minutes, depending on the size.

Stew: Place whole or cut-up tomatoes in a saucepan without water. Season with salt, pepper and a pinch of sugar; add diced onion or green pepper, if desired. Simmer, tightly covered, over low heat until done, 10 to 15 minutes, stirring occasionally.

Microwave: Cook on high (100% power) in a covered dish. One pound, about 3 medium tomatoes, will take three to four minutes. Use in casseroles, stews and soups.

Tomato Equivalents:

1 pound = 2 large, 3 medium or 4 small tomatoes

1 pound = 20 to 24 small cherry tomatoes

1 pound = 1 ½ cups chopped

2 1/2 pounds = 3 cups chopped

3 pounds = 1 28-ounces can

☞ Introduce summer veggie pasta sauce recipe

☞ Demonstrate recipe

☞ When recipe is finished cooking and before portioning samples, measure a ½ cup serving and place on a small plate

☞ Point out the portion size

☞ Distribute a small portion of the recipe for tasting

☞ Ask the audience how they like the recipe

NOTE: IF PRESENTATION IS ENDING HERE, SAY:

“Don't "undo" all the nutritional benefits of eating tomatoes by cooking them with large amounts of fat and salt. Sauces, dressings, and other ingredients will add calories, fat, and cholesterol.”

☞ Conclude presentation

“For good health, it is important to eat a variety of vegetables including tomatoes. Eat vegetables every day – at least 3 servings, but more is better. The more you eat the better chance you have for a healthy life.

Scientists have found that people who eat cabbage and other vegetables, have a lower risk of developing some of the more common cancers.”

☞ Ask for questions

☞ Thank audience for their participation

NOTE: IF PRESENTATION IS CONTINUING, DO NOT CONCLUDE. PRESENT FREEZING MATERIAL.

PRESENTATION PART 2: FREEZING TOMATOES

“Freezing is a quick and easy way to preserve an abundance of tomatoes, until you have the time to prepare your tomato specialties.”

☞ Display bag or container of frozen tomatoes

“Tomatoes may be frozen raw, cooked, or prepared in the recipe of your choice. Thawed raw tomatoes may be used in any cooked recipe. They may not be substituted for fresh, since the freezing process causes their texture to become mushy.”

☞ Display thawed frozen tomato

☞ Point out liquid and mushy texture

“The freezing process is simple. For whole tomatoes, wash thoroughly and dry them. Place the tomatoes on a tray or cookie sheet and freeze. They do not need to be blanched, peeled, or cored.”

☞ Display cookie sheet

☞ Demonstrate freezing technique

“When they are frozen, just store them in a tightly sealed freezer bag or container. You can now remove them from the freezer a few at a time, or if you like, all at once for cooking.

It is best to use the frozen tomatoes within a month or two, since they can develop an off flavor with prolonged storage.

For safety and the best quality, thaw frozen tomatoes in the refrigerator. For quick defrosting, run the tomatoes under warm water. When defrosted the skins just slide off.”

☞ Display a defrosted tomato

☞ Demonstrate how easily the peel slips off

“Frozen tomatoes can be added to soups, stews, and sauces without being thawed.

Don't "undo" all the nutritional benefits of eating tomatoes by cooking them with large amounts of fat and salt. Sauces, dressings, and other ingredients will add calories, fat, and cholesterol.”

☞ Conclude presentation

“For good health, it is important to eat a variety of vegetables including tomatoes. Eat vegetables every day – at least 2 ½ to 3 cups, but more is better. The more you eat the better chance you have for a healthy life.

Scientists have found that people who eat tomatoes and other vegetables, have a lower risk of developing some of the more common cancers.”

☞ Ask for questions

☞ Thank the audience for their participation

Recipe

SUMMER VEGGIE PASTA SAUCE

4-6 servings

Make this sauce with whatever fresh vegetables you have in your garden. If it is not moist enough, add some water.

3 – 4 large tomatoes, chopped
3 cloves garlic, crushed
2 medium zucchini, chopped
1 small eggplant, chopped
1 medium green pepper, chopped
1 medium small onion, chopped
1/4—1/2 cup chopped fresh basil
2 tablespoons oil
Salt and black pepper to taste

Heat oil in a large pan over medium heat. Add onion, green pepper, and garlic. Cook for 3 to 4 minutes, stirring often.

Add the zucchini and eggplant. Cook for 5 minutes.

Add the tomatoes and basil. Simmer about 20 minutes over low heat, uncovered, until slightly thick.
Add salt and pepper to taste.

**This recipe can be doubled or tripled and frozen in individual or family size servings.*

GAZPACHO (COLD TOMATO SOUP) 6 - 8 servings

8 ripe tomatoes, chopped (save the juice)
1 medium cucumber
1 small Jalapeno or Serrano chile (seeded)
Handful of cilantro
2 cloves garlic, crushed
2 tablespoons red wine vinegar
1/4 cup olive oil
1 teaspoon salt or salt to taste
1/4 teaspoon black pepper

Put all the ingredients into a blender and puree until the mixture is completely smooth. Check for seasoning. Refrigerate and serve very cold.

TOMATO VEGETABLE SAUCE 4 – 6 servings

4 large tomatoes, chopped
4 cloves garlic, crushed
1 small zucchini, chopped
1 small eggplant, peeled and chopped
1 small green pepper, chopped
1 small onion, chopped
Handful chopped fresh basil
2 tablespoons oil
Salt and black pepper to taste

Heat the oil in a large pan over medium heat. Add onion, green pepper, and garlic. Cook for 3 to 4 minutes, stirring often. Add the zucchini and eggplant. Cook for another 3 minutes. Add the tomatoes and basil; simmer for about 15 minutes over low heat, uncovered, until slightly thick. Add salt and pepper to taste.

**This recipe can be doubled or tripled and frozen in individual or family size servings.*

The University of California prohibits discrimination or harassment of any person on the basis of race, color, national origin, religion, sex, gender identity, pregnancy (including childbirth, and medical conditions related to pregnancy or childbirth), physical or mental disability, medical condition (cancer-related or genetic characteristics), ancestry, marital status, age, sexual orientation, citizenship, or service in the uniformed services (as defined by the Uniformed Services Employment and Reemployment Rights Act of 1994: service in the uniformed services includes membership, application for membership, performance of service, application for service, or obligation for service in the uniformed services) in any of its programs or activities.

University policy also prohibits reprisal or retaliation against any person in any of its programs or activities for making a complaint of discrimination or sexual harassment or for using or participating in the investigation or resolution process of any such complaint.

University policy is intended to be consistent with the provisions of applicable State and Federal laws.

Inquiries regarding the University's nondiscrimination policies may be directed to the Affirmative Action/Equal Opportunity Director, University of California, Agriculture and Natural Resources, 1111 Franklin Street, 6th Floor, Oakland, CA 94607, (510) 987-0096.