Growing Giant Pumpkins In Pahrump, Nevada

Richard Lowe, Master Gardener
Mikki Bixler, Extension Educator

Every year Pahrump, Nevada holds a Fall Festival filled with all the traditional events, critters and charm of any county fair. In 2006, University of Nevada Cooperative Extension’s Pahrump Master Gardeners introduced a new event - a Giant Pumpkin Contest. The contest was open to all and judged according to age group. This new event proved to be a very popular and educational addition to the festival. After the event, several of the contestants were interviewed and shared their growing techniques with the authors. Additional research provided suggestions that can be used by any grower whether it’s for the next “giant pumpkin contest” or just for the growers own personal satisfaction.

BEFORE YOU START:

Growing pumpkins…or any fruit or vegetable in the Pahrump Valley…isn’t easy. Of the 37 growers who entered the first Giant Pumpkin Contest, only seven presented their entry for weigh-in at the Fall Festival. That’s roughly an 80% dropout rate. Here are some of the problems they say they faced:

1. Their entry split open before the weigh-in date.
2. Squash bugs and borers attacked the fruit and vines.
3. High heat and lack of shade made their pumpkin shrivel and die.
4. Family pets destroyed the vines.

WHAT THE GROWERS SAY:

The successful growers said these six areas were critical to their success:

1. Preparing the mounds or rows with care. Use aged manure. That’s important!
2. Fencing the plot to keep out pets and other unwanted visitors.
4. Shading the pumpkins, especially in the afternoon.
5. Checking your plot daily for bugs. If you spot them, act immediately!
6. Fertilizing on a regular basis.
SOIL PREPARATION

How you prepare your planting bed and what you include (or don’t include) is one of the keys to growing giant pumpkins. The champion growers all used: Equal parts of native soil, aged manure (usually horse) and compost. Fertilizer was added in different amounts and composition. One grower added commercial potting soil and another grower, who raises animals, experimented with mixes of horse, sheep, goat and rabbit manure. Rabbit manure worked best, she said. Another added organic matter from his yard and garden. One grower prepared his mounds in untouched soil; the others said their soil had previously been cultivated. It didn’t seem to matter. **Experiment.** If you plant multiple mounds or rows, try various mixes of native soil, manure, compost and fertilizer. Keep notes and repeat your successes the next growing season.

SEED CHOICE

Only one grower bought a named seed "Big Moon." The other growers said the packages simply described the contents as “pumpkins.” Seeds were purchased locally at nurseries, hardware stores and other retail outlets. Seed and nursery catalogs all feature “giant” pumpkin selections hinting at blue-ribbon winners and sporting names like Atlantic Giant, Big Max, Mammoth King, Prizewinner and so on. As you can see, the names are pitched to appeal to pumpkin growers chasing a blue ribbon…like you. Again, **experiment.** Buy and plant several varieties and see which ones do best. No matter where you buy your seeds, always check the packages to make sure you are getting fresh seeds. Look for wording like “Packed for 2007.” Pumpkin seeds have about a 75% germination rate¹ and will probably germinate after three to four years if stored properly, but why take chances? Buy and plant fresh seeds.

MOUNDS OR ROWS?

This is largely a personal preference but remember…pumpkins need LOTS of room. A single vine may grow 15 to 20 feet long. Growers suggested spacing mounds 12-15 feet apart. Rows should be 8-10 feet apart. The growers who preferred mounds said they usually dug a hole 12-14 inches deep and then back filled it with the soil/compost/manure/fertilizer mix and mounded it about six inches high. One grower built an earthen dike around each mound to contain water and fertilizer. He filled a 28 oz. can with 21-0-0 fertilizer and sprinkled it 24 inches around the base of each plant.

WHEN TO PLANT

Pumpkins are a warm weather crop so it’s better to plant a little later, than too early. As a general rule, in the Pahrump Valley, plant after May 1 when the frost danger has passed. If the soil temperature is not warm enough, the seeds may rot in the ground before they germinate. Pumpkin seeds germinate best when the soil temperature, not the air temperature, is between 70 and 75 degrees. You can check this with a soil thermometer or, if you want to rely on the old-timer’s rule of thumb, wait until the mesquite trees begin budding out. Avoid planting when nighttime temperatures dip below 65 degrees. If you intend to enter the Giant Pumpkin Contest, be sure to allow plenty of growing time because pumpkins take between 95 and 120 days to reach maturity, depending on the variety.
STARTING SEEDS INDOORS

You can get a head start on the season by starting your pumpkins indoors and then transplanting them when it’s warm enough outside. To start pumpkins indoors, use peat pellets, found at any garden center, or use 3-inch peat pots filled with a quality potting soil. You can custom mix your own potting soil using perlite or vermiculite, peat moss, compost or sand. Avoid native soil to prevent damping off, a condition driven by a variety of soil-borne fungi that causes seeds and seedlings to rot in the ground. Place one seed in each peat pellet or two to three seeds in each 3-inch peat pot. Cover with about 1/8-inch of potting mixture and gently tamp the soil. Moisten but don’t drown the seeds. Keep them in an area that has a temperature of between 70 and 75 degrees but avoid direct sunlight because this will “cook” the germinating seeds and kill them. Later, you can harden off the plants by exposing them to increasing amounts of time outdoors to minimize transplanting shock before moving them into the garden. Peat pots are ideal for this task because they can be set directly into the ground.

GROWING CONDITIONS

Shade your pumpkins, especially in the late afternoon when the summer sun is the fiercest. Only one grower grew his pumpkins in open sun. Another let weeds grow up around his crop while others relied on buildings or trees for shade. Many growers simply plant their pumpkins in cornfields.

FERTILIZERS

In the world of the contest pumpkin-grower, secret formulas abound and there is probably no topic that creates more discussion and opinions among giant pumpkin growers than fertilizers.

In a nutshell, fertilizers are either organic or inorganic. Organic fertilizers occur naturally and are derived from animal manures including bat and bird guano, dead organisms including fish emulsion and meals made from blood, bone and cottonseed. Inorganic fertilizers are manufactured and are chemical-based. Unless you obtain your manure (an organic fertilizer) from the barnyard, the product you buy will have its ingredients and analysis listed somewhere on the package. Nitrogen, phosphorous and potassium are the basic components of any fertilizer and are referred to by their chemical symbol: N (nitrogen) P (phosphorus) and K (potassium). To anyone growing pumpkins, fruits, flowers, trees or vegetables, it is critical to understand the function of each. Nitrogen is present in almost all fertilizers and gives plants their rich, green color. Nitrogen stimulates leaf growth. Phosphorus encourages strong root development that is necessary if plants are to absorb water and nutrients. It also stimulates blooms in flowering plants. Potassium (potash) is necessary for overall plant vigor and helps plants better stand extreme weather conditions.

WATERING

Drip lines were the preferred watering method for our growers. To prevent powdery mildew and leaf fungus, keep water off the leaves. Watering times varied from ½ hour to 6-8 hours daily. Soil is a factor here. Sandy soil will require more water due to a greater absorption rate. Consider increasing watering times as the vines and pumpkins get bigger. Again, experiment. If you have used a fertilizer rich in phosphates to aid root growth, you'll probably want to water slowly and longer so the water reaches deeply to the root tips. You can check this by probing the earth with a sharp instrument. You should feel resistance when you hit drier soil.

PESTS AND DISEASES

Three insect pests have a particular fondness for pumpkins:
- Squash bugs
- Squash vine borers
- Cucumber beetles

Squash bugs and borers were a particular problem in the Pahrump Valley for almost all the growers. These pests did not respond to traditional organic insecticides like neem, hot pepper spray or insecticidal soap. *Sevin®
dust, the growers said, was the only product that was effective against these two pests. Check your pumpkins daily for signs of infestation (dying, dead and curly leaves and wilting vines) and treat the area quickly. Borers cause the vines to suddenly wilt. Holes in the stem are filled with a green or tan material resembling sawdust and this material often spills out of the holes. The growing area can be treated with traditional insecticides during the egg-laying period, shortly after the seeds germinate, but insecticides are not effective after the borer is inside the vine. The vine must be split open and the white worm removed and destroyed. The vine may recover if the hole is covered with dirt.

If you have four-legged pests, rabbits or the family pet for instance, fence in the plot with 24- or 36-inch chicken wire and extend it 6 inches into the soil to prevent rabbits from digging under it.

Pumpkin diseases are minimal in the Pahrump Valley owing to the high heat and low humidity. The most likely disease will be leaf spot, a form of fungus. You can minimize this by watering with a drip system and keeping water off the vines and foliage.

OTHER CONSIDERATIONS

Since gardening carries the risk that your prize-winner may not make it to the weigh-in owing to the whims of Mother Nature, consider staggering planting times to overcome splitting, disease and insect problems.

Pumpkins mature in 95-120 days. You may have a better chance of growing a contest winner if you make successive plantings one or two weeks apart until mid-summer.

The Pahrump contestants let their pumpkins develop “naturally” but there is another school of thought that suggests picking selected blossoms or fruit to encourage growth.

“Remove all but the two biggest fruits from each vine,” one source suggests “…to grow the biggest pumpkins in town.” Another encourages selectively removing blossoms until late summer to force runner growth. Again, if you have the space and the inclination, you may want to try several methods.

If you grow a real prizewinner and want to save the seeds for next year, be aware of cross pollination. This occurs when pollen from one plant crosses with pollen from another plant of the same family. To keep the strain pure, be mindful of wind direction and separate the blooming cultivars by at least 200 feet. For pumpkins, this separation also includes squash and gourds, all members of the cucurbits family.

To minimize wind damage, consider anchoring the vines with U-shaped coat hangers or landscaping staples. Another suggestion is to locate your growing area behind a natural or constructed windscreen.

REFERENCES

*Sevin® is a registered trademark of Bayer Crop Science, Research Triangle Park, NC

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1 Knott’s Handbook for Vegetable Growers, Donald N. Maynard and George J. Hockmuth, p. 460
2 Ortho’s Home Garden Problem Solver, Various, p. 368
3 Terrific Garden Tonics, Jerry Baker, p. 277
4 How to Grow Record-Breaking Pumpkins, fact sheet, Gurney’s Seed & Nursery, Lawrenceburg, IN 47025

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