

Consider Pumpkins and Gourds for Fall Harvest Crop Options

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Pumpkins and gourds can be grown in areas all across Virginia. As fall-harvest crops, they offer growers the opportunity to further diversify.

It is important with pumpkins and gourds as with any crop, to consider your marketing options before planting. Opportunities exist for direct marketing pumpkins and gourds through an on the farm experience if you live near a significant population base. Other options include wholesaling and direct marketing through farmers markets or roadside stands. Specialty gourds can be cleaned and painted and sold at craft shows or farmers markets. Keep in mind that if you'll be offering a come to the farm and select your pumpkin experience, the pumpkins will need to be not much more than 10 pounds for kids to carry. Something in the 5-10 pound range would be desirable.

Once deciding on your marketing strategies you can then select the appropriate pumpkins for your market. There are numerous varieties of pumpkins that can be produced with size ranges from less than one pound per pumpkin to greater than 30-40 pounds per pumpkin. As listed in the 2004 Commercial Vegetable Production Recommendations for Virginia (VCE Publication 456-420), varieties include by size:

Miniatures - Munchkin, Wee-B-Little, Baby Pam

Less than 5 pounds - Ironsides, Baby Boo, Baby Bear, Touch of Autumn, Pik A Pie

5-10 pounds - Small Sugar, Casper, Mystic Plus

10-20 pounds - Wizard, Merlin, Magic Lantern, Gold Strike, Pro Gold 510, Sorcerer

more than 25 pounds - Gold Rush, Autumn Gold, Howden Biggie, Atlantic Giant, Prize Winner

Seeds should be acquired in time for planting pumpkins between June 15th - July 5th in cooler areas of the state and between June 15th - July 15th in warmer areas of the state. Proper planting and harvesting time is essential. Pumpkins must be harvested and marketed prior to Halloween or their value diminishes significantly. Pumpkin varieties range in maturity time from 100-125 days so mid-June to early July planting allows enough time to produce and harvest the crop by mid-October.

Row and plant spacing varies depending on the size and type of pumpkins being grown. Keep in mind that if the plants are spaced too closely fruit size may be decreased. For large vine types with fruit over 30 pounds, the rows should be 10-12 feet apart with in row spacing of 5-6 feet. For large vine varieties with fruit 12-25 pounds, the rows should be 7.5-9 feet apart with 4 feet between plants in the row. For large to medium vine varieties with 8-15 pound fruit, the rows should be 6-7.5 feet apart and 3-4 feet between plants in the row. Finally for smaller vines with

fruit less than 8 pounds, the rows should be 5-6 feet apart with plants spaced 2 feet apart in the row.

Pumpkins can be grown on bare ground but the fruit would greatly benefit from their being some mulch on the ground using a no-till approach. Limiting direct contact of the pumpkin fruit with the soil will assist in preventing fruit rot. This is one reason no-till pumpkin production works well. Planting into a small grain cover crop can work too. Another system that works well is to use the plastic mulch left over from strawberries for pumpkins. The strawberry plants can be killed with Gramoxone after the second or third strawberry year and the pumpkins seeded into the mulch. This allows another crop to be grown in the plastic mulch already paid for with the strawberry crop.

Fertilizer applications should be made based on soil test results. Overall, 50-100 pounds of nitrogen will be needed per acre, 50-150 pounds of phosphorus and 100-200 pounds of potassium based on existing soil levels. Pumpkins prefer a soil pH of 6.0 to 6.5.

Pest management practices for weeds, insects and diseases are essential for good pumpkin production. Without weed management the crop will be out-competed early in production for water and nutrients. Later in the season, weeds pose little competition. Some major insect pests include cucumber beetles, squash vine borer, aphids and squash bugs. Cucumber beetles and aphids are of particular concern because they can spread detrimental viruses throughout a pumpkin crop. Diseases such as powdery mildew, bacterial wilt, and viruses are a few that can destroy pumpkins. Other diseases like black rot and *Plectosporium* Blight can destroy the stems or "handles".

A strong disease management program will help to keep sturdy handles on the pumpkins, which is also important when marketing the crop. Judicious insecticide and fungicide programs are essential. Specific pesticide recommendations can be obtained from the Commercial Vegetable Production Recommendations.

Like so many other cucurbits, honeybees are important for proper pollination and fruit set. Depending on the location, colony strength and the competitive plants in the area, somewhere around 1-2 hives of bees per acre should provide adequate pollination. The bees should be brought in at the beginning of flowering.

Pumpkins should be harvested before frost, and care taken to prevent injury to the fruit. Any nicks or injury sites can provide a direct opening for decay organisms to invade the fruit. They can be cleaned to remove the soil and dipped in a 1:4 bleach solution to help eliminate decaying organisms from the surface. Any pumpkins showing signs of disease, even a small spot should be culled out and not stored. The pumpkins should be placed in a 80-85 degree environment with a relative humidity of 70 to 80 percent for 10 days to cure.

In terms of returns per acre with pumpkins, this will vary somewhat with the type grown. As many as 30,000 miniature pumpkins like Wee-B-Little can be harvested or 2,000-2,500 larger pumpkins like Autumn King or Aladdin can be harvested per acre. No-till production is estimated at costing about \$2,000 per acre with a potential return of \$3,000 if the market allows

\$1.50 per pumpkin, or \$4,100 if they are sold for \$2.00 each. Production costs with other systems could be as much as \$3,000 per acre. This is another reason the crop works well following strawberries to utilize the inputs already expended for the strawberry crop and to keep the expenses down. It is also helpful to compute your own expenses based on a sample budget. The production costs estimates are from Selected Costs and Return Budgets for Horticultural Crops, VCE publication 438-898, 2000.

In addition to pumpkins, an assortment of unique and unusual gourds can be grown across Virginia. These include Cucurbita, Lagenaria and Luffa gourd species. Cucurbitas are gourds with yellow flowers and thicker skin. They generally only last one season and are utilized extensively for decorative purposes. Lagenaria gourds are thinner skinned and once dried can last for many years. They serve numerous utilitarian purposes. Luffa gourds are used as luffa sponges.

Gourds prefer a soil pH of 6.5 - 7.0. They have a relatively long growing season ranging from 100 to 180 days depending on the variety. Like pumpkins, row and plant spacing is dependent upon the type of gourd planted. Some types like the bi-color pear can be spaced as close as 18-24 inches if they are vertically trellised. Other types like the dipper gourds will need wider spacing and a weight bearing trellis to hold the weight of the fruit. Gourds prefer a fertile soil with ample nutrients. They need around 100 to 150 pounds each of nitrogen, phosphorus and potassium prior to planting, and then a side-dressing of 20 to 30 pounds per acre of nitrogen every 2 to 3 weeks to keep the plants growing through the summer. By the end of summer, both nutrients and water can be reduced to slow plant growth and allow the gourd fruit to harden off. One to two inches of water are needed per week during the growing season.

Gourds are susceptible to many of the same pests as pumpkins. Diseases include anthracnose, downy mildew, powdery mildew and Alternaria. Potential insect pests include striped and spotted cucumber beetles, vine borer and aphids. These can be controlled through fungicide and insecticide applications. Some gourds such as the luffa gourds are fairly tolerant of insects and diseases so few controls would be needed.

Pollination, as with pumpkins, is essential for adequate fruit production. If you're planning to save seeds then hand pollination will prevent cross-pollination from occurring although this can be time consuming.

Gourds differ in their ability to withstand cold and frost. Cucurbita type gourds are very subject to frost with their fleshy fruit. They should be harvested and cured prior to frost.

They should be kept in a cool dry place for at least several weeks. Lagenaria gourds are not damaged by light frost and can be harvested late in the fall. Luffa gourds can be harvested anytime their fruits turn brown. When harvesting all gourds cut the fruit with a bit of the stem remaining by using sharp shears. This results in a clean cut less likely to suffer decay.

While a market exists for gourds, it should be researched beforehand and growers should not expect to sell large acreage. In terms of returns for ornamental gourds, wholesale prices might range from \$0.125 to \$0.25/gourd or retail of \$0.25 to \$0.50 per gourd. Utilitarian gourds can

sell wholesale for \$1500/acre for a good crop or for small to medium size \$0.50 - \$2.00/gourd. Retail prices could be such as \$3.00-\$7.00/gourd and even more for gourds sold cleaned, scraped, and painted. Luffas range from up to \$0.40/sponge wholesale and \$1.00 - \$5.00/sponge retail.

Other resources:

<http://www.ext.vt.edu/resources/> Select Fruits and Vegetables, then Vegetables - Commercial Production, and pumpkins/gourds

VIRGINIA PUMPKIN GROWERS ASSOCIATION, 497 Farmers Market Drive, Hillsville, VA 24343, Contact: Kevin Semones, Bus: (276)728-5540, Fax: (276)728-5236 E-mail: farmersmarket@aisva.net

The Pumpkin Guide, (pub # NRAES-123), is available from NRAES for \$39.00 plus \$6.00 S&H (within the continental U.S; website www.NRAES.org.

Good stems are essential – Clean (L) and Plectosporium Blight (R)



Decorative gourds can be sold at craft shows and farmers markets for greater profits.

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