

THE VEGETABLE GAZETTE

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Saying for the Month: “Success is not a destination it is a journey”

Comments from the Editor

Bill Lamont, Department of Horticulture

The month of October is a time when the fall foliage reaches its zenith and the pumpkin is king of the marketplace but in short supply this year. It is a time of apple cider, bundled corn stalks, and piles of orange and some white pumpkins of all shapes and sizes that magically appear at every store and roadside market. We are in the “Halloween Mode of Operation” when families trek out to their favorite pumpkin patch and search for just the right pumpkin or pumpkins to grace the front porch or be part of a fall floral arrangement. It is a time to sell a wide range of accessories for the pumpkins such as, ornamental corn, bundles of corn stalks, a wide variety of little ornamental gourds etc. It is also the chance to sell a line of fall vegetables, such as broccoli, cauliflower, cabbage and a host of leafy greens to the throngs of people that visit your operations. This is truly the season for growers to really let their creative juices flow on the farm. Large gourds which have had flowers or other objects painted on them can command a very substantial price in many markets across Pennsylvania.

As always, the Vegetable Gazette Team encourages your feedback so that we can better serve your needs and address your concerns. Be sure to check the educational opportunities listed in the upcoming meetings at the end of the gazette.

Update on the High Tunnel Project

Bill Lamont, Department of Horticulture

The last of the 24 high tunnels are almost all completed with the final end-walls being erected this month and then the top, side-walls and end-walls will be covered with several different formulations of plastic materials. The first eight tunnels currently have a late planted tomato crop, variety Sunchaser, that has tomatoes the size of silver dollars on them at this time. We have applied different rates of nutrients to the crop via fertigation. Knowing there was a chance of some cold nights last week, we covered the crop with a lightweight, thermal blanket that would retain the heat generated during the daytime. It worked very well and the tomatoes showed no signs of injury even though we experienced below freezing temperatures. For those that know the valley where the Horticulture Research Farm is located know that it can be quite cold.

The very intensive, around the clock, monitoring of environmental conditions (soil and air temperatures at different levels and locations inside the tunnels; relative humidity at different levels; wind speed and direction both outside and inside the tunnels; measurement of the temperature and carbon dioxide levels of the thermal plumes resulting from the planting holes in the soil applied plastic mulch; light measurements both quantity and quality; soil moisture at different levels and fertilizer movement in the applied water stream) will be a major objective in all future research.

We are really excited about the tremendous interest in this project and already have some of our colleagues in the department involved in planting cut flowers in several tunnels this fall. As time permits we want to update our web page with new pictures, results of our current projects, what are our future projects, graduate student projects, and listing of companies that are supporting our efforts. Will continue to keep you posted in upcoming issues of the gazette.

Organic matter and Cover Crops

Michael D. Orzolek, Department of Horticulture

1993 Ohio Vegetable Production Guide

Organic matter affects the growth of plants and frequently is referred to as the "glue" that holds soil particles together. It also promotes development of soil aggregates, thus improving drainage, soil tilth and soil structure. With sandy and sandy loam soils, the organic matter improves the water-holding capacity. The addition of organic matter to the soil is important to maintain soil structure, but it is not possible to increase the organic matter content to any appreciable extent.

Organic matter can be added to the soil by various methods using green manure crops, cover crops, crop residues, animal manures, mulches and composts. Some examples of green manure crops are sweet clover, alfalfa, thickly sown field corn and summer seedings of soybeans. These crops generally are plowed under before they are mature. At this stage, the plants usually contain the greatest amount of nitrogen and other nutrients plus an adequate amount of moisture for rapid decay. However, these green manure crops also can be plowed under in the mature dry stage. At this stage of

maturity, they do not decompose as readily and additional nitrogen may be needed to aid decomposition.

Cover crops are planted after harvest to protect the soil against erosion and usually are turned in the following spring. Additional nitrogen may be needed to hasten the decomposition of the cover crop. This is especially important with rye. Rye should be plowed under before it is 18 inches tall.

Different cover crops frequently require special soil conditions for optimum growth. For example, alfalfa requires well-drained soils, while Ladino clover grows on poorly drained soils. Some crops, such as rye, have fibrous root systems, whereas others (sweet clover) have a large tap root that can penetrate the soil to considerable depths. Whenever it is possible to use a mixture of these crops, the combination results in more organic matter to plow under.

Green Manure Crops for Vegetable Farms

Seeding Crop Number	Pounds/ Bushel	Quantity of Seed per Acre (pounds)	Desirable Seeding Dates
Non-Legumes			
1. Rye	60	90-120 (alone) 90 (mixture)	Sept. 1-Nov. 10
2. Perennial or common ryegrass	24	15-20 (alone)	Aug. 1-Sept. 15
3. Sudan grass	40	20-30	May 15-July 1
4. Field corn	56	50-60	May 15-July 1
5. Winter barley	48	80-100	2-3 weeks before fly-safe date
6. Wheat	60	90-120	After fly-safe date
Legumes			
7. Sweet clover	60	16-20 (alone) 10-12 (mixture)	March 1-April 15 July 15-Aug. 20
8. Red clover	60	10-15 (alone)	Feb. 1-April 1
9. Soybeans	60	90-100	May 15-July 1
10. Alfalfa	60	12-18	March-April
11. Hairy vetch	60	15-20 (mixture)	Sept. 1-Nov. 1
Mixtures			
12. Rye/vetch		90/15-20	Sept. 1-Oct. 1
13. Rye grass/sweet clover		5-8	July 15-Aug. 20

14. Sweet clover/
orchard grass

6-8 March 1-April 15

*Seeding 1, rye: this crop is one of the most widely used non- legume cover crops on Ohio vegetable farms. It usually germinates easily in the fall and survives severe winter. Rye should be plowed under by the time it is knee-high, or not later than May 1 if a crop is to be planted that spring. Nitrogen plowed under with rye hastens decomposition and reduces the chances of nitrogen deficiency for the following vegetable crop.

*Seeding 2, ryegrass; Seeding 13, ryegrass and sweet clover: ryegrass is established without much difficulty. It can be seeded at the last cultivation of sweet corn, peppers, eggplant or similar crops. Sweet clover can be mixed with ryegrass, but the ryegrass usually grows faster and crowds out the sweet clover. Use yellow sweet clover varieties for summer sowing. Plow down nitrogen with the ryegrass sod, because the sod is heavy and additional nitrogen is needed to decompose it.

*Seeding 3, sudan grass; Seeding 4, field corn: field corn can be drilled solid with a grain drill. Both sudan grass and field corn make abundant growth in a short time. They can be used as a summer cover crop following early harvested spring vegetable crops. Plow under nitrogen with these crops.

*Seeding 5, winter barley: use only in southern Ohio where winter killing is not as severe. Handle as in the same manner as rye. Root growth is not as extensive as rye or ryegrass.

*Seeding 6, wheat: this is a good crop in which to make clover and grass seedings if a vegetable/small grain/sod rotation is being followed. It is popular with potato growers who make clover seedings into wheat.

*Seeding 7, sweet clover; Seeding 14, sweet clover and orchard grass: use yellow sweet clover for summer seedings. Lime soils to pH 6.5-7.0 for successful growth. Do not sow later than August 20. Be sure to make spring seedings in a small grain, preferable oats. The sweet clover/orchard grass mixture is an excellent soil-improving combination when seeded in the spring and allowed to remain for 2 years. This combines a deep-rooted legume (sweet clover) and fibrous-rooted grass (orchard grass). This practice may be too costly because land may be out of production.

*Seeding 8, medium or mammoth red clover: use this crop in rotation with a small grain. Red clover can be established in soils with a lower pH than required for sweet clover or alfalfa, but it responds with higher yields to a pH of 6.5-7.0.

*Seeding 9, soybeans: use this as a summer cover crop. It makes rapid growth but has a limited root system in comparison with other legumes.

*Seeding 10, alfalfa: use this crop in rotation where it can stand more than 1 year. Many new strains are available, consult county Extension offices for the latest recommendations. Alfalfa needs lime and other minerals for good growth.

*Seeding 12, rye and vetch: hairy vetch fixes most of its nitrogen late in the spring, after May 1. Plowing should be delayed until mid-May or later.

This will interfere with spring and early summer vegetables. Vetch seed is somewhat expensive and is suggested for growers planning to allow the rye and vetch to reseed themselves. This mixture currently is not is wide use.

Section 18 for Goal 2XL on Strawberries Approved

Kathy Demchak, Department of Horticulture

The EPA has granted an exemption under the Section 18 provisions of FIFRA for the use of Goal 2XL (oxyfluorfen, 22% a.i., Rohm and Haas) to control broadleaf weeds in strawberries in Pennsylvania. The maximum application rate is 0.5 lb ai per acre. (This translates to 2 pt of product/acre). Only one application may be made per crop season. The material should be applied postemergence between October 15 and December 15, 1999. Strawberry plants must be dormant at the time of application. Wait until at least one hard frost has occurred. Applications can be made with ground equipment only. Applications may be made to the entire field as a broadcast spray or as a spot treatment to target areas. Application through any type of irrigation equipment is prohibited. A 123-day preharvest interval must be observed. All applicable directions, restrictions, and precautions on the product label must be followed. It is requested that all growers who use this product in this manner fill out and send to PDA a form documenting the usage. Copies of this form, as well as copies of the Section 18 will be available through County Extension offices. The usage form will also be made available in the Small Fruit sessions of the Mid-Atlantic Fruit and Vegetable Conference.

The Potato Section

Bill Lamont, Department of Horticulture

Potato Musings

We have been working hard to harvest our potato trials and should have them all in by the end of the week. I appreciate the rain we have been receiving to re-charge the deficit caused by the drought this past summer but wouldn't have minded if it waited until the end of October. Oh well, I am glad that we do not control the weather-what a mess that would be.

Marketing Round White Potatoes Mini-workshop

Bill Lamont, Department of Horticulture

An evening session of the Potato Association of America Meeting in Somerset, New Jersey during the first week in August dealt with the marketing round white potatoes. The session was precipitated by comments made at the NE-184 Meeting, an eastern potato variety development meeting of researchers, industry personnel and extension specialists. Many of those present indicated that growers were reducing acreage in their areas. The primary reason for this was the lack of market and/or prices that generate profits for their businesses. That discussion led to the development of the workshop at the Potato Association of America Meeting.

Joe Sieczka from Cornell University made introductory comments and led the discussion. Potato production in nine eastern states, producing primarily round white potatoes, has decreased steadily since the mid 1970's and beyond. The average annual production for those states from 1976 to 80 was approximately 60 million cwt . That dropped to less than 50 million cwt between 1991 and 1995. The workshop was developed to see how the trend could be reversed.

Keith and Helen Masser, Pennsylvania potato growers and packers, described their operation and their marketing approaches. Keith indicated that the farm operation is in its 8th generation. They have recently installed sophisticated packing equipment and have refrigeration capacity to store 200,000 cwt. They pack all types of potatoes and sizes. All potatoes are pre-cooled to package temperatures of 50° before bagging. They pack primarily low specific gravity potatoes. All potatoes are sorted twice prior to packaging. The packs range from creamer potatoes in plastic trays to an 80-count pack of round white potatoes in poly bags.

Chris Voight and Tim O'Connor from The Potato Board presented information regarding marketing of potatoes in US. The data show that the primary use of fresh potatoes is approximately 23% mashed, and 20% baked, 16% specially types, 12% French fries, 9% fried, 6% boiled. Of the 265 meals that consumers have at home, 65 include potatoes, and only 13% of the 154 quick, casual meals include potatoes. Potatoes account for 25% of the market share of the carbohydrate type foods. Pasta's share is 18% and rice is 7%. There needs to be more innovation to improve purchasing of potatoes. Survey results show that 45% of restaurant meals include potatoes. Seventy percent of the fresh potatoes are russets, 17% whites and 12% reds. Yellows are increasing. Russet market has a 3% growth rate at the present time and whites are fairly static at 0.7%.

Steve Belyea from the Maine Dept. of Agriculture presented a report from the Maine Potato Commission. A pilot study with cooperators in the Northeast looked at packaging of 2 3/4" to 3 1/4" potatoes in an 8 lb package to determine if consumers would pay a premium price for this package. The results indicate a positive response to sized potatoes and that consumers would purchase the premium pack again.

Following the formal presentation there was considerable discussion. Some of the discussion centered on packaging by variety. While the ultimate goal is to inform consumers of the culinary quality of the potatoes they buy, varietal identification is a difficult task because of the many round white varieties grown. Discussion followed on how to best present the consumer with information about the culinary quality of the potatoes they purchase. Since most consumers feel that round white potatoes are primarily used for boiling/mashing, some individuals felt that high gravity potatoes should be excluded from round white packs. There may be a need to identify varieties that have dry baking consistency and that they are not specially suited for boiling. Color coding bags or another kinds of identification could be used for varieties that do have high, intermediate, and low specific gravity. Low specific gravity potatoes could be identified as excellent boilers and well suited for whole potatoes in soups or potato salads and also as moist bakers. Tubers with intermediate dry matter are suited for boiling, mashing, and as a slightly moist baker. High gravity potatoes would be identified as dry mealy bakers and suited for frying.

The importance of proper sizing was emphasized. The mix of very small potatoes and large potatoes in the same bag has a negative effect on how people view potatoes. By

packing a premium pack of potatoes with a 2 1/4" minimum, growers have the dilemma of what to do with the smaller potatoes. Small potatoes less than 2" could be sold as B size potatoes for processing, but 2" to 2 1/4" tend to be too large for this particular purpose. One approach is to pack potatoes into creamers, small, medium and large sizes, all of which would be saleable. The creamer pack would bring premium prices, as would other sizes. The possibility of count packing round white potatoes was also discussed.

Product consistency and quality was also discussed. Many growers in the eastern production areas do not have sophisticated sizing equipment and/or packaging equipment that make packs consistent from one producer to another. Centralized packing and/or cooperative packing with more strict standards would help in improving the image of the round white potatoes. There was some discussion about the suitability of new varieties for specific packaging. Some discussion of Canadian approach of releasing varieties with an exclusive agreement for production and marketing was given to individuals and cooperatives took place.

Some concern was expressed about the trend for more chain store mergers, which will call for category management and synergy bids; private label packaging; and a standard 2 1/4" minimum size grade. There has to be a place for off- grade utilization. That is difficult where without a processing outlet.

New varieties must have good internal and external appearance. It is important to keep chip stock potatoes off the table market.

The Passing of George W. Tallman

Bill Lamont, Department of Horticulture

The potato industry recently lost a leader, a man of tremendous insight and enthusiasm for life and for the well-being of his fellow man. Although, I only had the pleasure to know George Tallman for a brief few years, he made a lasting impression on me that I will remember for the rest of my life. He was, as they use to say in the popular Reader's Digest article "An Unforgettable Character".

George was known throughout the United States as a potato farmer and a leader in the farm community. He was a self-made man who purchase his original 88-acre farm from his father, developing a 1300-acre thriving potato business known as "Tallman Potatoes". He served as President of the Pennsylvania Cooperative Potato Growers and was designated as a Pennsylvania Master Farmer in 1953.

He was also involved in the early establishment of the National Potato Council. In 1975, Mr. Tallman became a director of the Federal Land Bank, serving for fourteen years helping other farmers get their start in agriculture. In addition, George and his brother Robert, established a successful farm machinery dealership marketing Oliver tractors and other farm equipment throughout Pennsylvania.

In addition to his love of farming, Mr. Tallman had an intense interest in the anthracite coal business, and he and his sons operated coal mines on Stoney Mountain and in Bear Valley.

He was a staunch member of the St. Peter's Evangelical Luthern Church, in Reinerton, Pennsylvania.

Mr. Tallman is survived by five sons, George, William, John, Joseph and Richard and three daughters Virginia Morton, Helen Masser, and Nancy Schlegel and one brother Robert and 10 grandchildren.

I will always remember Mr. Tallman for his firm handshake, the twinkle in his eyes, his direct conversational style, and his keen sense of humor. Although brief, I am glad that I had the chance to meet, talk to and learn from George Tallman.

Mid-Atlantic Fruit and Vegetable Growers Convention-Meeting the Challenges of the New Millennium

Bill Lamont, Department of Horticulture

The Mid-Atlantic Fruit and Vegetable Growers Convention will be held January 25-27, 2000. What a great way to welcome in the "New Millennium". The educational program will be packed full of interesting topics and speakers from around the region that will address production and marketing of fruit, vegetable and flowers. Make sure to mark the dates on your calendars and tell your friends that Hershey is the place.. Let kick off the "New Millennium" by having 2000 participants at the 2000 meeting!! More info on the meeting in upcoming issues of the gazette.

Upcoming Meetings

Bill Lamont, Department of Horticulture

Local

Regional

January 18-20, 2000: New Jersey Vegetable Growers Association Meeting and Trade Show, Taj Mahal, Atlantic City, NJ. Contact: Phil Traino at 609-985-4382.

January 25-27, 2000: Mid-Atlantic Fruit and Vegetable Growers Convention, Hershey, PA. Contact: Bill Troxell (717) 694-3596.

National

September 23-26, 2000: 15th International Agricultural Plastics Congress and the 29th National Agricultural Plastics Congress, Hershey, PA. Contact: Pat Heuser, Executive Secretary, American Society for Plastics (814) 238-7045.