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That's a Berry Good Question!!!

Kathy Demchak, Department of Horticulture

Q. Last winter at Mid-Atlantic Fruit and Vegetable Convention in Hershey, I heard a grower mention that he was thinking of using slug bait in the fall to decrease the slug population in strawberries the following spring. Does this work? If I apply slug bait this fall, what timing is best? (Ernie Mast, Mast Farms, Morgantown, PA)

A. Yes, this was something Ed Weaver mentioned on the grower panel on strawberry plasticulture. Most slug species over-winter as eggs which hatch in the spring. A few adults may also survive the winter. So, it makes sense that if you treat the field for slugs in early fall, thereby decreasing the number of adults before they lay eggs, you should have fewer slugs in the spring. A second benefit is that you may be able to avoid the need for slug bait use in the spring when the fruit and harvesters are in the vicinity. So, take a look, especially after dark, and see if you can find slugs now (they don't necessarily have to be full size to lay eggs). If you find slugs, you may want to consider treating. Early fall (mid-October or earlier) is best. Once the eggs are laid, it's too late. As always, follow label directions and restrictions. If you also want to check for eggs at some point, they are clear and small - about 1/8 inch in diameter - and laid in clusters of about 20-30, though the number can vary widely. The eggs may be on the soil, just under the straw mulch, or the slugs may cover them with soil to protect them.

P.S. If you want to figure out which slug(s) you have, the Carnegie Museum of Natural History has an excellent slug key at <http://www.carnegiemnh.org/mollusks/palandsnails/key.htm> and the Pacific Northwest Nursery IPM site has a gallery of slug photos at http://oregonstate.edu/Dept/nurspest/slug_taxonomy.htm.

Got a question? Chances are that someone else has the same question, but isn't asking! Send your question to Kathy Demchak, at 102 Tyson Bldg., University Park, PA 16802, or via email to kdemchak@psu.edu. You will be credited with the question, or can remain anonymous, as you wish.

Biodegradable Plastic Mulch

[Mike Orzolek](#), Department of Horticulture

Vegetable growers in the Mid-Atlantic and the Northeast regions of the U.S. grow almost all of their warm season vegetable crops on plastic mulch to enhance early growth and total yield as well as minimize/ eliminate weed problems in the row. Use of plastic mulch with raised beds and drip irrigation (environmental modification) enables growers in these regions to extend their marketing seasons when commodity prices are higher or grow vegetables in their plasticulture system that otherwise would not produce a crop when grown on bare ground/conventional production. If we examine plasticulture on the larger scale, the use of plastic film (mulch) in North America has increased approximately 5% per year since 2000. The increase in mulch film in part has been due to the dry to droughty weather in North America over the last 5 years. The plastic film reduces evapotranspiration rates and the total amount of water required to grow the crop. Use of plastic film will also increase the marketable fruit yield at harvest with a concurrent reduction in cull fruit from crops growing on plastic film, raised beds with drip irrigation. The introduction of new colors of mulch by most of the manufacturers in North America has also contributed to the increase in mulch film use in the last 5 years. Many growers are now trying various colors with their vegetable crops including: red, blue, metallized silver, green IRT and brown IRT. Current use of plastic film for the production of horticultural crops in North America is estimated at 600,000 acres per year. Unfortunately, after the growing season is over, the plastic film has to be disposed of after being retrieved from the field. Some plastic film can be recycled, but because much of the plastic film mulch used in vegetable crop production after retrieval is dirty, wet and with possible pesticide residues, much of the film is not recycled, but eliminated (not visible to the general public) on the farm's sink holes or private landfills. Biodegradable plastic mulches offer the potential of rototilling the film into the soil after crop harvest and saving at least \$100 in plastic mulch pick up and disposal. Based on the crop yield of both cantaloupe/honeydew and bell pepper, the black biodegradable mulch film performed as effectively as the non-degradable mulch films in 2005 and 2006. The only problem with the use of biodegradable plastic film is that if the plastic degrades before crops growing on the mulch mature, weed competition may significantly reduce either yield or quality of the harvested crop. Biodegradable mulch will also cost about 50% more than current non-degradable plastic mulch. The biodegradable film is manufactured in Italy and sold by several North American distributors.

New Publication – The “Midwest Strawberry Production Guide”

[Kathy Demchak](#), Department of Horticulture

Here’s another great addition to your small fruit library! The “Midwest Strawberry Production Guide”, Bulletin 926, is now available. Though the word “Midwest” appears in the title, and most of the authors are from the region, nearly all of the information is equally applicable to PA. The price is only \$9.75 plus shipping. At 138 pages long, with numerous color photos, and detailed information on diseases and insects, this price is a bargain. Copies can be purchased from Media Distribution, Communications and Technology, The Ohio State University, 216 Kottman Hall, 2021 Coffey Road, Columbus, OH 43210-1004. Phone: 614-292-1607. Fax: 614-292-1248. E-mail: pubs@ag.osu.edu. Visa and MasterCard accepted.

The Organic Way – Yellow Nutsedge - Part I

[Elsa Sánchez](#), Department of Horticulture

Yellow nutsedge (*Cyperus esculentus*) is a problem for a number of growers in the northeast. It’s a difficult weed to manage and is considered one of the worst weeds on the planet because of its perennial life-cycle and ability to reproduce by nutlets and seeds. Understanding the biology of yellow nutsedge is important in developing management strategies (<http://cropsoil.psu.edu/extension/facts/uc187.pdf>).

Yellow nutsedge is a perennial weed belonging to the Sedge family (Cyperaceae). It looks very similar to grasses except that it has triangular stems (this is why the saying “sedges have edges” originated) whereas grasses generally have round stems. If you cut a cross-section of a stem it will be solid and triangular. Each plant can grow 6 – 30 inches tall and produces seed heads in late summer. The seed heads are straw yellow in color and are produced from a flower cluster called an umbel, which resembles an umbrella. Several million seeds can be produced per acre each year. Of those seeds, 5 to 40% are viable and seedling survival only occurs when environmental conditions are favorable. Because of this seeds are not the primary strategy for spreading yellow nutsedge in a field; although, they are important for spreading the plant larger distances.

Underground storage stems, botanically termed tubers and commonly called nutlets, are the primary strategy for yellow nutsedge reproduction. In the spring, nutlets germinate and stems emerge from the soil. A few weeks after stem emergence, rhizomes (another type of underground storage stem) begin to develop. In about late July, as nights get longer, nutlets begin to develop at the tips of rhizomes and continue to develop until a hard frost. A single plant can produce hundreds to thousands of nutlets each year. According to the book “Applied Weed Science” (Ross and Lembi, 1985), a single nutlet produced over 1900 plants and about 7000 tubers in one year in one study. Nutlets most often germinate the following spring, but can be viable for several years.

Next month’s Organic Way article will cover management options for yellow nutsedge.

References:

1. Curran. 2004. Weed Management in Organic Cropping Systems. Penn State Cooperative Extension Agronomy Facts 64. <http://cropsoil.psu.edu/extension/facts/uc187.pdf>.
2. Kemble, Patterson and Everest. 2004. Alabama Cooperative Extension System Bulletin ANR-1073. <http://www.aces.edu/pubs/docs/A/ANR-1073/ANR-1073.pdf?PHPSESSID=dfc40e7670ad964a5f12b7b2d00ec908>.
3. Lingenfelter and Curran. 1995. Controlling Yellow Nutsedge in Agronomic Crops (An Integrated Approach. Penn State Cooperative Extension Agronomy Facts 47. <http://cropsoil.psu.edu/Extension/Facts/agfact47.pdf>.
4. Ross & Lembi. 1985. Applied Weed Science.
5. Yellow Nutsedge. http://www.nwcb.wa.gov/weed_info/Cyperus_esculentus.html. Viewed 9/5/2006.

Upcoming Meetings

If you have a meeting you would like to announce, please send the meeting title, date, location and contact information to esanchez@psu.edu.

Local

September 7, 2006. Twilight Vegetable Pest Walk in Northampton County, starting at 4:30 pm. Pesticide update credits will be offered. Contact Emelie Swackhamer, Lehigh and Northampton County Cooperative Extension for more information at 610-391-9840 or 610-746-1970.

Regional

October 26 & 27, 2006. Greenhouse Design & Operation, Cook College Office of Continuing Professional Education, New Brunswick, NJ. For more information contact Karen Tizzano at ktizzano@rci.rutgers.edu.

National

International

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The newsletter is also posted within three days on the Department of Horticulture Vegetable program website at: <http://hortweb.cas.psu.edu/extension/veg crops/newsletterlist.html>.

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