



Washington County
 415 Lower Main Street
 Hudson Falls NY 12839-2629

Tel: 518 746-2560
 800 548-0881
 Fax: 518 746-2419
 E-mail: washington@cornell.edu
www.cce.cornell.edu/washington

Washington County Ag Report July 19, 2005

Contributors are Sandy Buxton, Aaron Gabriel, and Laura McDermott. Thanks to Connie Havens for compilation and formatting.

Quote

“The important thing is this: to be able at any moment to sacrifice what we are, for what we could become.” -- Charles Dubois

Announcements

Saturday, July 30, 10:00 a.m. – 2:30 p.m. Beef Producer Field Day and Summer Picnic at Golden Acres Charolais, 756 Star Route 143, Westerlo, NY for more info or to register call Billie-Jo at 765-3512.

Wednesday, August 3, 1:00-3:00 p.m. Tillage Field Day at Allenwaite Farm, Waite Rd. in Easton. Comparison of tillage in corn using a parabolic subsoiler, straight-shank soil builder, and moldboard plow. Tom Kilcer (CCE Rensselaer Co.) will lead the discussion.

Thursday, August 4, 10:00 a.m. -12:30 p.m. Dairy Tour for Local Dairy Farmers at Chambers Valley Farm in Salem. Various expansion projects (barns and new parlor) have been completed. Discussion topics will also include cow comfort, internal herd growth, the Salem Manure Project, crops and conservation projects. Please call to pre-register, call 1-800-548-0881.

Weather Data – 2005 and average of 1999 - 2004

	Argyle		Easton		Whitehall		Jackson	
	2005	Average '99 – '04	2005	Average '99 – '04	2005	Average '99 – '04	2005	Average '03 – '04
Rain Past Week	0.51	1.47	0.80	1.23	0.48	0.85	0.08	1.32
So far this month	2.88	3.16	4.40	2.96	2.72	3.05	3.91	2.59
Total since April 1 st	14.97	13.00	14.37	13.64	14.84	13.29	15.56	8.38
GDD Base 41 Growing Degree Days = [hi temp + low temp]/2 – 41								
Past Week	263	209	257	210	275	217	263	208
Since April 1 st	2109	1998	2158	2074	2503	2243	2194	2061
GDD 86/50 [hi temp + low temp]/2 - 50 High's >86°F are set to 86°F, low's <50°F are set to 50°F								
Past Week	164	141	185	143	202	150	185	146
Since April 1 st	1437	1352	1516	1428	1697	1523	1557	1421

Midwest Commodity Prices - from the Wall Street Journal

Corn per bushel	\$2.40/bu	Cotton Seed Meal per ton	\$152/ton
Soybean per bushel	7.15/bu	Corn Gluten Feed	52/ton
Hominy Feed per ton	44/ton	Wheat, soft white	3.72/bu
48% Soybean meal per ton	223/ton	Tallow per pound	.17/lb

These prices are provided only to show where the general market trends are moving and to help you determine appropriate ration ingredients. Local prices will vary due to shipping, processing, and discounts.

TRADING POST

For Sale: Purebred Nubian goat buckling. Bottle raised – A.I. offspring from ‘Star’ milking lines, \$100. **Buskirk, 686-0879**

DAIRY NOTES: Hello everyone! My name is Sandy Ferry and I am the new Dairy Educator for Washington County. I am looking forward to meeting all of you very soon. The hot and humid weather seems to be here to stay. There are a few things that can be done to help keep the cows eating in this weather. First make sure feed is pushed up often and especially during the late night and early morning hours. Another possibility to help keep them eating is to feed smaller feedings more often. Cleaning your fans and making sure that they are all working properly is also important. Make sure that you have enough fans so that you have a wind speed of 3-5 miles an hour over the cows. Making sure that there is plenty of clean, cool water is critical. Cleaning your waterers more frequently in this weather will help to keep the cows drinking.

FARM BUSINESS MANAGEMENT: The continuing hot weather had me thinking about unseen economic costs that sometimes we experience but we may not even realize it. The care and storage of all of the different supplies that are used on farms is something that I think often we take for granted. We try to store stuff in the refrigerator that is supposed to be cold and keep some stuff from freezing in the winter, and keep the liquid nitrogen level up. But it is just as important to make sure that when you are using supplies, like vaccines or antibiotics, that you are aware of how long they have been out of the fridge or how you are handling them. The price for using something poorly cared for could be very high – no effectiveness to the vaccine or drug, infertile semen, etc. Future outbreaks may be blamed on lots of other things since the problem doesn’t show up right away, but sick cows or calves, long lactations and other problems can take a big bite out of the bottom line!

LIVESTOCK PEST MANAGEMENT: You probably have a rest between hay cuttings right now. But that does not mean you can rest. Now is a good time to clean up calf bedding and other fly breeding areas around the farm. Any moist decomposing organic matter (manure, feed, bedding) is suitable habitat for fly maggots to grow.

CROPS

Soil Health: Here is some irrigation information from a bulletin by David Wolfe (Cornell). Call me if you want a copy of this 8-page bulletin.

Table 1. Approximate rooting depth* of various crops.

Very Shallow (1 – 1.5 ft.)	Shallow (1 – 2 ft.)	Intermediate (2 – 4 ft.)	Deep (3 – 6 ft.)
Celery	Broccoli	Beans	Tomato, seeded
Lettuce	Cabbage	Beet	Winter Squash
Onion	Cauliflower	Carrot	Pumpkin
Radish	Cucumber, Muskmelon	Sweet Corn	Watermelon
Strawberry	Potato	Pea	Alfalfa
	Pepper, transplanted	Pepper, seeded	Asparagus
	Spinach	Rutabaga	Fruit trees
	Tomato, transplanted	Summer Squash	
	Blueberry		

*These values represent depths to which the roots of mature crops will exhaust the available water supply when grown in a deep, permeable, well-drained soil. It is important to realize that many farm soils in New York have serious compaction problems, restricting rooting to the upper 1-2 feet regardless of the crop being grown.

Table 2. Total Available Water of Various Soils (At “Field Capacity”)

Soil Class	Available water storage capacity in acre-inches of water per foot depth of soil
Gravelly sandy loams	0.8 – 1.3
Sandy loams	1.2 – 1.5
Gravelly loams and gravelly silt loams	1.5 – 2.0
Loams and silt loams	1.75 – 2.25
Silty clay loams	1.8 – 2.0
Organic soils (“muck”)	2.0 – 4.0

NOTES: One “acre-inch” = 27,150 gal/acre. As a general rule, *irrigation should occur before 50% of the available water is depleted in the root zone*. So, for example, a crop with a 3-foot rooting depth on a silt loam soil might have 3 feet x 2 inches/foot = 6 inches total available water, but should be irrigated before 3 inches (50% of available water) is depleted.

Beneficial Insects: Beneficial insects are in full swing. Select and use insecticides carefully to minimize the impact on these good bugs.

Alfalfa: Potato leafhoppers are hard to find this week. Some second cutting has looked good, and some other intensively managed fields looked only fair. We have had rain, so I am not sure why all the alfalfa doesn’t look really good. In one field, I noticed potassium deficiency symptoms – not something I would expect on a dairy farm field. Often I will see one or two plants in an area with K deficiency symptoms, during dry weather (when K is less available to the plants). However, in



this field there were some deficient plants over a wide area. This picture shows K deficiency symptoms (courtesy Bob Thompsen, IMC Agrico) After bugs are ruled out as the cause of “sickly” looking fields, you can consult your soil and forage test analysis. For alfalfa, you should test for boron periodically. Remember that soil nutrients need to be in balance. Manganese deficiency can occur when soils are above pH 7 and are very high in phosphorus. Soils very high in potassium can cause deficiencies in magnesium and calcium. Zinc can be deficient in soils, which have high pH and high phosphorus. As a very general rule of thumb, your forage samples should show the following content of minerals on a percent dry matter basis:

<u>Nutrient</u>	<u>% of DM by wt.</u>
Phosphorus	0.20 – 1.0
Potassium	1.50 – 5.0
Calcium	0.30 – 3.0
Magnesium	0.15 – 1.0
Sulfur	0.15 – 0.5

From: “Plant Nutrition Manual”, by J. Benton Jones Jr.

Other issues can cause sickly alfalfa, including soil compaction and root diseases. It just seems to me that we can not tolerate mediocre yields for our time and investment.

Field Corn: Overall corn is looking good. I found my first **western and northern corn rootworms this week**. European corn borer larvae are medium to large in size. Infestations are spotty. I did notice what looks like anthracnose leaf spot on some corn. This disease occurs early in the season during hot humid weather. In his newsletter, Don Specker (Pioneer) mentions research that shows narrow-row corn has higher yields because the canopy intercepts sunlight better (5 – 15% more on clear days); the root systems were more uniformly distributed in the soil (so they could take up water and nutrients better); and that the leaf canopy kept the soil cooler so that it lost less water during vegetative growth.

Grasses: I have noticed lots of grasshoppers, but no damage to grasses. Damage by insects increases rapidly once they molt a couple of times and get larger. Keep an eye on grasses for insect damage and for diseases.

Pasture: Talking with a couple of graziers, they have had the same experience of cows avoiding pasture that is fertilized too heavily with urea, especially is if there is too little rain to wash it into the soil. Research has shown (I do not remember the source) that animals perform better on pastures of mixed legumes and grasses (60% legumes if I remember correctly). So, when we fertilize pastures, we may be able to use just phosphorus and potassium to promote the legumes. Clovers, trefoil, and alfalfa remove about the same amount of P & K per ton of dry matter, 15 lbs of P and 40 – 50 lbs. of K. One hundred pounds of 0-10-40/ac for every ton of DM removed per acre (minus the manure from the cows) should maintain nutrient levels.

FYI:

DEC ANNOUNCES NEW PLANT ATLAS: Website Allows Botanists, Residents to Learn About More Than 4,000 Plant Species. New York State Department of Environmental Conservation (DEC) Acting Commissioner Denise M. Sheehan today announced that the New York Natural Heritage Program, in collaboration with the New York Flora Association and the

New York State Museum, has finalized the New York Flora Atlas, a web-based atlas that details the distribution of the more than 4,000 plant species that grow in the State.

“From researchers at our many academic institutions to weekend amateurs who explore our State’s rich diversity, New York has a proud tradition of botanical research and appreciation,” Commissioner Sheehan said. “All plants contribute to New York’s natural heritage and the information that we can gather from the Flora Atlas will help us learn about the plants that live in our neighborhood and develop a deeper respect and understanding for their importance in the ecosystem.”

The Flora Atlas can be found on the Internet at <http://atlas.nyflora.org>. It is the most sophisticated and detailed online flora atlas available in New York State. It maps the distribution of all plant types across New York State, gives information on how rare or common they are, the habitats they prefer and details whether they are native, non-native or invasive among other things. The atlas can also generate county-specific lists of rare species, or those that only grow in wetlands to help target conservation efforts.

Information on Plant Protection Product: There have been many requests for information about *Messenger*, a plant protection product that is getting a lot of attention from home gardeners and landscapers alike. *Messenger* (and its derivative *ProAct*) are offered for sale as biochemical pesticides or plant growth regulators, plant health regulators or organic pesticides.

In the late 80's and early 90's, Cornell's Department of Plant Pathology did research on the product, a harpin protein based material, which is now sold as *Messenger*. Dr. Steven Beer and his graduate students reported in *Science Magazine* (American Association for the Advancement of Science, July 3, 1992, Vol. 257, pp 1-32) on their early findings. The Cornell Research Foundation was awarded 10 plus patents covering the harpin technology. The technology was LICENSED (not sold) to Eden Bioscience Corporation. Thus, Cornell has a continuing financial interest in the technology through royalties' payable by Eden Bioscience.

The active ingredient in *Messenger* is a natural protein produced by *Erwinia amylovora*, the bacterium that causes fire blight of apple, pear and related plants. When the protein was isolated and sprayed on the foliage of plants, or seeds were treated with it, beneficial effects were noted. These include induction of "systemic acquired resistance" to a variety of pathogens (bacteria, oomycetes, viruses and fungi), some resistance to insect colonization and enhanced plant growth.

ProAct is a chimeric protein comprised of the active portions of the harpins produced by several different plant pathogenic bacteria. It has been 5 to 10-fold more active than *Messenger* (on an equal weight basis) in tests conducted by Eden Bioscience. *ProAct* was registered by the US EPA in February. Registration also has been secured in most states. Registration for use in NEW YORK, CA and FL has been applied for. However, these states have their own special registration procedures. New York DEC is required to act on Eden's application by October 28, 2005. Thus, *ProAct* cannot be used in NY, except for special experimental use, which is being done on soybeans at Cornell.

Dr. Beer refers us to detailed information on the product descriptions, product labels, and their use via a website that he says is kept up to date and contains good information. It is <http://www.edenbio.com>.

VEGETABLES:

A specific emergency exemption has been granted by EPA to New York State for the use of quinoxyfen (Quintec) on melons, winter squash, gourds, and pumpkin (non-edible-peel cucurbits) for control of powdery mildew (*Podosphaera xanthii*) for the 2005 growing season. A copy of the use directions and label can be accessed from the PMEP website at <http://pmep.cce.cornell.edu/regulation/sec18/2005/index.html>.

European Corn Borer is being monitored in the region by the Northeast IPM program. John Mishenac reports that there are still plenty of evidence of new damage and more eggs being laid, but the peak flight has passed. For great detailed information about scouting for this pest, subscribe to the FREE newsletter by sending an email to jjm27@cornell.edu. **Corn Ear Worm** (CEW) were caught for the first time this week outside Eden, NY, and John Mishanec reports catching 5 in a trap in Orange County in eastern NY. CEW catches are being caught in low numbers in Pennsylvania at this time so if the CEW migration has started, numbers shouldn't be high right away. CEW traps will be set up at additional locations this week. To monitor trap catches in the states to our south go to the PestWatch web site: http://www.pestwatch.psu.edu/sweet_corn.htm.

BLUEBERRY CANE DEATH – written by Gary Pavlis, Rutgers Extension
Source: Vermont e-Newsletter, Vern Grubinger editor

Farm visits have turned up a number of canes dying from what used to be called winter damage. We now recognize that this wilting and death of individual canes during the summer can also be due to **Phomopsis**. Under severe disease conditions, several canes may be affected on a single bush. This fungus overwinters in infected twigs and canes, and produces infective spores. The greatest number of spores are released during bloom and petal fall and enter twigs or canes through injury sites, particularly those caused by winter damage, mechanical harvesters or early spring frosts. Samples taken from canes confirmed Phomopsis at several farms, however, stem blight, **Botryosphaeria**, was also confirmed. Like Phomopsis, this fungus enters the plant through wounds and causes rapid death of individual canes and entire bushes. This disease is especially severe on 1 and 2 year old plants of susceptible cultivars. In the field, the most obvious symptom is called 'flagging', where stems recently killed by the fungus do not drop their leaves. Stem blight has recently been found most often in the 'Duke' variety.

Control of Phomopsis and Botryosphaeria depends largely on cultural methods. It is important to discourage late-season growth and promote early hardening off thus late-season fertilization, late-season weed cleanup and late-season irrigation should be avoided. Pruning to remove infected stems is the best method of reducing disease in established fields. Pruning serves two functions: 1) removes infections from bushes, preventing eventual death of the plant, and 2) reduces the number of spores released in the field by removing dead, spore bearing stems. Pruning can be done at any time infected stems are observed, but care should be taken to cut well below the infected area. After a stem is removed, examine the cut end

of the remaining stem. If any brown areas are visible in this cross-section, a cut must be made further down the stem until all infected tissue is removed.

Laura's Note – This has been a problem in the past in this county and I have seen two instance this late spring that could have been either disease. It's worth considering.

Potato leafhoppers were seen in the southern part of the county this week. These insects cause yellowing and stunting that resembles virus infection on some plants. If you brush the plant they will form a cloud, similar to how whitefly acts in a severe infestation. The damage is done by the nymphs that are very small and light green. They usually hang out on the underside of the leaf. If you see them, take control if you can. These insects are also attracted to alfalfa, so if your fields border alfalfa, be especially vigilant about checking. We have done some trials in the county that examined the differences in resistance to this pest, and differences do exist. Late maturing potato varieties including Katahdin, Elba, Green Mountain, Kennebec, and Blossom have some resistance, and likely will not need spraying. Yukon Gold, Red Norland, and most other varieties, are very susceptible.

Sincerely,

Aaron D. Gabriel
Extension Resource Educator
Crops and Soils