

Excessive Rainfall Causing You Problems?
Prepared by Matt Kleinhenz

Frequent and occasionally heavy rainfall has disrupted farm operations in a number of locations throughout Ohio. Standing water is seen in many fields. A crop weather report from the National Agricultural Statistics Service of Tuesday May 30 indicates that rainfall for the preceding week was above-average in all ten regions of the state. Not surprisingly, growing degree-day accumulation was also well below-average for the same period. Continued rainfall and below-average temperatures may have large implications to this season's vegetable crop. Below are some rainfall figures for different locations. Challenges associated with excessive rainfall and tips on how to deal with them are also presented.

Rainfall Amounts May 10 - May 29, 2000 as compared to Normal

Location	Total rainfall (in.)	Historical Average (in.)
Mansfield Airport	4.21	not applicable
Muck Crops Branch (Celeryville)	6.07	not applicable
Waterman Research Farm (Columbus)	2.98	3.0
Vegetable Crops Research Branch (Fremont)	3.81	2.5
Piketon Research and Extension Center (Piketon)	3.20	2.8
OARDC (Wooster)	2.22	2.7

Challenges Associated with Excessive Early-Season Rainfall

1. Fertility ... nutrient deficiencies due to leaching of fertilizer, excessive denitrification

2. Weed Management ... few opportunities to cultivate or apply pre-emergent herbicides, leaching or inactivation of herbicides
3. Disease Management ... few opportunities to apply crop protectants, high rates of seed and seedling death due to decay and damping-off
4. Stand Establishment and Soil Quality ... soil compaction (due to rainfall and working ground when wet), erosion/runoff, delayed planting, slow and staggered emergence, slow crop growth
5. Insect Management ... few opportunities to apply crop protectants

What can be done to Deal with these Challenges?

1. Fertility ... Growers may replenish fertilizer lost to excessive soil moisture in several ways. Often a combination of these methods is best. First, nutrients may be applied to the soil in "side-dress" applications. There may be a delay between application and availability but a complete fertilizer may be used. Second, nutrients may be applied to the foliage ("foliar feeding") alone or in combination with crop protectants. This approach is best suited for nitrogen and some micronutrients. Third, nutrients (nitrogen, potassium) may be injected into irrigation water. Clearly, this method works best when soil moisture warrants irrigation. Which method(s) growers choose will depend on crop, soil condition, available equipment, and other factors.

2. Weed Management ... More aggressive cultivation and application of post-emergent herbicides may be needed if early season weed control is insufficient. Cultivation should be attempted only when soil moisture permits, otherwise declines in soil quality (e.g., compaction) may offset potential gains in weed control. Pay close attention to crop tolerance, application timing, plant-back restrictions, and other label details when using post-emergent herbicides. Applying some herbicides during periods when growing conditions are poor (e.g., when there is excessive soil moisture or little sun and low temperatures) may damage some crops. Do not use tank mixes unless they are specified on the label or cleared by a crop advisor or other trained personnel, due to potential antagonism or synergism.

3. Disease Management ... The use of fungicide-treated seed assists in reducing seed and seedling diseases. When weather does not permit the application of crop protectants using ground equipment, little can be done to manage many of the diseases associated with cool, wet conditions. If crop values warrant, growers may want to consider aerial applications.

4. Stand Establishment and Soil Quality ... High rainfall, especially when it happens quickly as it has in several cases this spring, compacts bare soil and promotes erosion/runoff. These negative aspects of high rainfall can be minimized by using plant residue mulches or other minimum-tillage practices. Root channels and above-ground debris permit rapid infiltration, shield the soil from the impact of rain drops, and absorb some moisture. Taking care to not work soil when it is wet is perhaps the single most important step a grower can take in managing the soil's physical quality. Working the soil when it is wet will lead to compaction, which is damaging in the current and future seasons. If replanting, using high vigor and short- or medium-season varieties is important. Tiling fields to speed drainage is a long-term solution.

5. Insect Management ... The use of insecticide-treated seed assists in reducing seed and seedling insect pests. When weather does not permit the application of crop protectants using ground equipment, little can be done to manage many of the insect pests associated with cool, wet conditions. If crop values warrant, growers may want to consider aerial applications.

For Further Information, contact your County Extension office or:

Dr. Matt Kleinhenz,
Extension Vegetable Specialist,
phone: 330-263-3810,
Email: kleinhenz.1@osu.edu

Dr. Doug Doohan,
Weed Science Extension Specialist,
phone: 330-202-3594,
Email: doohan.1@osu.edu

Dr. Sally Miller,
Plant Pathology Extension Specialist,
phone: 330-263-3678,
Email: miller.769@osu.edu

Dr. Celeste Welty,
Entomology Extension Specialist,
phone: 614-292-2803,
Email: welty.1@osu.edu

Crop Reports

W. Evans and H. Kneen

SouthEast:

Tomato staking and suckering continues. Tomatoes are making rapid growth and good fruit set. Some fields are already getting sidedress applications of fertilizer. There is some Colorado potato beetle damage showing up on some tomatoes. Sweet corn is knee high. Four corn earworms and zero European corn borers were caught last week. Cabbage harvest continues and shipping has begun to traditional markets.

NorthCentral,

At Celeryville, three inches of rain have fallen in the last week, almost 5 in the last two weeks. Some yellowing has been seen but so far damage is only moderate. Summer crop (peppers, tomatoes, squashes) planting has been delayed. Some flea beetle and cutworm damage is present. Aster leafhoppers and carrot weevils continue to be trapped. Weed pressure is increasing but cool weather has made that somewhat manageable so far. Crop quality continues to be good. Greens, radishes, herbs, and the first lettuces are being harvested. At the branch, radish cultivars are being harvested and more than 80 lettuces have been planted in those cultivar trials. Remember, Muck Crops Day is early this year, June 29, 2000 from 10-12 at the Muck Crops Branch. www.oardc.ohio-state.edu/muck

What's New At The VegNet Web Site

Pumpkin Production Chart

Originally available only in the print version of the 2000 Ohio Vegetable Production Guide, this WEB version can be found in "The Pumpkin Patch" The chart is a quick guide and timeline to key factors necessary for a successful pumpkin crop.

Another NEW! VegWeb Fact Sheet.

Table on Susceptibility of sweet corn hybrids to Stewart's Bacterial Wilt as rated by Jerald Pataky (Univ. of Illinois). Adapted by Dr. Celeste Welty, Extension Entomology, OSU Columbus. This table was published in last week's VegNet Newsletter. A WEB edition is now available from the VegNet homepage. More information on Stewart's wilt and its history in Ohio will be available soon.

Vegetable Faculty WEB Pages.

Dr Matt Kleinhenz has recently posted his faculty webpage. At the site you can find his research projects, results and review his presentations made this past winter. A link from VegNet will be provided soon. To visit Matt's homepage, go to:

<http://www.oardc.ohio-state.edu/kleinhenz/>

From Dr. Brent Rowell, Univ of KY,

email: browell@ca.uky.edu

Our new KY Vegetable Recommendations book is on the web now. A print version is also available. The introductory section on marketing might be of interest to southern OH tobacco growers.

<http://www.ca.uky.edu/agc/pubs/id/id36/id36.htm>

The marketing section is also available as a separate publication.

<http://www.ca.uky.edu/agc/pubs/id/id134/id134.htm>

Visit: "The Library, Online Edition of the 2000 OH Vegetable Production Guide, NOW AVAILABLE.

The OH Vegetables Production Guide ranks #22 in top downloads from OSU Extension Ohioline with over 1,000 downloads. Most of the new features are available in the online edition including the New Insecticide Efficacy tables. The new Pumpkin Production Chart is not there but I hope to have it posted soon in "The Pumpkin Patch" section of the VegNet website.

NEW! VegWeb Fact Sheets.

This new feature offers some valuable information on certain aspects of vegetable production that you can print out directly in your home or office. The first two are by Dr. Mac Riedel, OSU Plant Pathology, and are available from the VegNet homepage.

Fungicides Labeled for Pumpkins

Confused by the many new fungicides now available for pumpkins. Check out this fact sheet to see how to use these fungicides.

Fungicide Activity For Control of Tomato Diseases Which fungicide is best for a particular tomato disease.

Available from the Vegetable Crops Homepage, [Click Here!](#)

The 1999 Pumpkin Review and Slide Show.

Yield Data plus pictures of pumpkin cultivars from this year's trials. Also, see pumpkin varieties rated for powdery mildew resistance. There are many new and interesting pumpkin varieties in all size categories.

Visit: 'The Pumpkin Patch' for pictures and yield data.

The 1999 Green Pepper Evaluation and Slide Show.

Yield Data Slide Show From The Muck Crops Branch at Celeryville,

From The Enterprise Center

Comparison of Disease Control on Fresh Tomatoes using TOMCAST and SKYBIT to Time Fungicide Applications.

Evaluation of WaterMelon Cultivars for Southern Ohio, 1999

1999 Ornamental Corn Evaluation

Evaluation of Eastern Style Muskmelons for Southern Ohio, 1999

Link To Research Summaries From The Enterprise Center at Piketon.

[Return to Vegetable Crops Homepage | Ohio State University Extension](#)

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Where trade names are used, no discrimination is intended and no endorsement by Ohio State University Extension is implied. Although every attempt is made to produce information that is complete, timely and accurate, the pesticide user bears the responsibility of consulting the pesticide label and adhering to those directions.

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