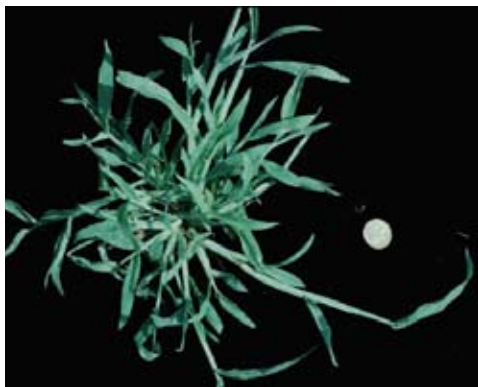


PLANT & PEST ADVISORY

A RUTGERS COOPERATIVE EXTENSION PUBLICATION



Postemergence Crabgrass Herbicides: Acclaim Extra and Drive

Stephen E. Hart, Ph.D., Specialist in Weeds

With the heavy rains and cool weather conditions this spring I'm expecting that a significant number of pre-emergence herbicide applications will fail. Above average rainfall will result in an increased dissipation of preemergence herbicide out of the crabgrass germination zone while the cool temperatures are prolonging the crabgrass germination cycle. As always, maintaining a dense and healthy turfgrass stand throughout the summer is our first and best line of defense to prevent preemergence crabgrass herbicide failures. However, if summer stresses which thin and weaken the turfgrass stand occur; postemergence herbicides may need to be utilized to control crabgrass that germinates later in the season.

Both herbicides are most effective when applied to young actively growing crabgrass in good soil moisture conditions. Applying either herbicide to sites under drought and/or heat stress may result in reduced control of crabgrass and other summer annual grasses as well as increased potential for turfgrass injury. Weed control with both herbicides is most effective when applied with flat fan nozzles producing a fine spray droplet. I do not recommended the use of flood jets with either herbicide. Both herbicides may be applied in combination with residual preemergence herbicides. However, applying residual herbicides late in the season may interfere with overseeding operations in late summer/fall.

Acclaim Extra: The recommended use rate of Acclaim Extra is highly dependent on turf grass species and growth stage of crabgrass. Consult the label carefully, especially for use on bentgrasses. Although the label states that 28 oz/A may be used on well established Kentucky bluegrass, I generally do not recommend exceeding 20 oz/A. Tall and fine fescue as well as perennial ryegrass are very tolerant to Acclaim Extra. At 20 oz/A Acclaim Extra is effective on crabgrass up to 2 tillers. However, under favorable environmental conditions, I have observed that this rate can control crabgrass up to 3-4 tillers. Tank-mixing or applying Acclaim Extra prior to or following a broadleaf weed herbicide application (especially herbicides containing 2,4-D and/or MCPP) may reduce weed control. Although the formulation contains a built in spray adjuvant system, depending on application equipment the addition of non-ionic surfactant (NIS) may be recommended.

SEE HERBICIDES ON PAGE 2

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Drive: Safe on Kentucky bluegrass, perennial ryegrass and tall fescue. Consult the label carefully for use on bentgrasses and fine fescue. Drive can be effective on 2-4 tillered crabgrass but for the most consistent control Drive should be applied to crabgrass prior to two tillers. **Drive is also highly active on large multi-tillered crabgrass but only when it has entered its reproductive phase (visible seedheads). Drive will not control goosegrass.** Drive is tank-mix compatible with broadleaf weed herbicides. For optimum activity Drive must be applied with methylated seed oil (MSO). Two formulations are available: Drive 75 DF and a new liquid formulation Drive XLR8 1.5 L. In some studies we have observed more consistent crabgrass control with Drive XLR8 compared to Drive 75 DF.

Combination Products: A number of combination products are currently being marketed such as Q4, Quincept, and Onetime, which contain Drive in combination with broadleaf weed herbicides or in the case of Q4 also contain sulfentrazone for suppression of yellow nutsedge. Consult labels carefully to determine if a spray adjuvant is recommended. Also determine the use rate of quinclorac (the active ingredient in Drive) you will be applying. Applying quinclorac at less than 0.75 lbs ai/A and/or without a spray adjuvant such as methylated seed oil may reduce the consistency of crabgrass control especially if the growth stage has exceeded one-tiller.

Solitare: A combination product recently registered containing quinclorac and sulfentrazone (the active in Dismiss) to control/suppress crabgrass and sedges as well as some broadleaf weeds. While this combination looks promising due to potential synergy on crabgrass by using both herbicides together, we are only in our second year of testing. Sulfentrazone also shows potential to control small (1-4 leaf) goosegrass. □

Diseases of Turfgrass

Bruce B. Clarke, Ph.D., Specialist in Turfgrass Pathology

General

Anthracnose, dollar spot, slime mold and **yellow tuft** are all present on golf course turf at this time. **Red thread** has become much less severe on landscape turf due to the warmer and dryer weather over the last 10 days. Expect to see **summer patch** on annual bluegrass, Kentucky bluegrass and fine fescue turf within the next few weeks, particularly on compacted or poorly drained sites or areas with high (> 6.5) soil pH.

Anthracnose

Anthracnose, caused by the fungus *Colletotrichum cereale* (formerly *C. graminicola*) is apparent on annual bluegrass greens at this time. This disease has been much less severe than in 2008 due to the exceptionally cool wet weather in June. Expect to see increased disease severity, however, as hot, dry weather returns in July and August. The fungus typically attacks turf growing under low fertility and/or heat or drought stress. Low cutting height and extensive seedhead production can weaken turf and enhance disease development. To identify this disease in the field, look for small black fruiting bodies with protruding black spines.

To control **anthracnose**, increase turf vigor with frequent, light applications of nitrogen, raise the cutting height (> 0.125 inches whenever possible), provide adequate irrigation and maintain acceptable ball-roll distances (i.e., putting speed) through increased mowing frequency and/or rolling. The use of mefluidide (Embark) or ethephon (Proxy) in April to reduce seedheads followed by sequential applications of trinexapepethyl (Primo) every 7 to 14 days throughout the growing season will not increase, and may help reduce, anthracnose severity on golf course greens. Additional control can be obtained with preventive applications of Armada, Banner, chlorothalonil, Compass, ConSyst, Disarm, Eagle, Endorse, Headway, Heritage, Insignia, Spectro, Tartan, thiophanate-methyl, or Trinity. Recent research conducted at Rutgers has shown that Chipco Signature, Medallion, the phosphites and Chipco 26GT can also effectively suppress anthracnose when used in tank mixtures with the previously mentioned fungicides. In areas with a prior history of this disease, apply fungicides on a preventive basis. For best results, tank mix or alternate fungicides with different modes of action every 14 days when conditions are conducive for disease development to improve efficacy and reduce the potential for fungicide resistance. Since Prostar may enhance the severity of this disease, restrict the use of this fungicide to sites that do not exhibit symptoms of anthracnose.

Slime Mold

Although slime mold is not actually a disease, inquiries have been received recently about the appearance of yellowish tan to black colored clumps on turf, flowerbeds and home gardens. In many cases, this material has been reported to occur virtually overnight on plant stems, grass blades, soil mounds or other vertical objects and is easily removed with light pressure. Leaf tissue underneath these clumps is typically green and healthy. Upon close examination, these mysterious structures are actually clumps of the common **slime mold** fungus *Fuligo*. *Fuligo* is not injurious to plants and will soon disappear on its own. However, it can be easily dispersed with a rake or steady stream of water. No fungicides are labeled or recommended for slime molds on turf.

SEE TURF DISEASES ON PAGE 3

Plant Diagnostic Laboratory Highlights

Richard J. Buckley, Director, Soil Testing and Plant Diagnostic Services

Turf

As the weather turns, so goes the turfgrass. Beautiful fall-like weather (I know it's July) over the July 4th weekend really changed the dynamics on golf course putting greens in our region. Endless days of rain and overcast skies through May and June have been replaced with low humidity, high skies, cool breezes and moderate temperatures. Superintendents have been talking about super-saturated root zones and poor root mass for several weeks now and worrying about an abrupt change to summer heat. At least I can say it is not hot. None-the-less, those plants compromised by the wet spring were suddenly faced with a significant increase in transpiration demand. Over the last few weeks, we have seen plenty of poorly performing turfgrass on tough sites, but now we are starting to see plants that simply couldn't keep up with the change in the weather. Putting green samples of both annual bluegrass and bentgrass are being submitted to the laboratory at a vigorous pace (25 this week). All of them have the same symptoms – slight thinning, poor growth and leaf tip scorch. The submissions came from Rehoboth Beach, Delaware to the south and out to the tip of Long Island to the north. Some samples, of course, look worse than others. Those where we find slight fungal insults - like *Pythium* root dysfunction or *Curvularia* fading out - or site related issues - like shade, compaction, or thatch - have more severe symptom expression. All of the samples; however, regardless of the source have the leaf tip scorch symptom in common. Pay close attention to the moisture needs of your turf areas moving forward and keep a careful eye towards stress related disease. There was a long period of wet and cloudy weather this spring and I think our turf may need to feel a little pain before it overcomes it.

On the real disease front – those problems actually caused by a pathogen – we had **summer patch** on local Kentucky bluegrass lawns; a sample of **bentgrass dead spot** from a golf course in West Chester, New York; a **pink snow mold** from Maine; a **dollar spot** from Connecticut; and a couple of spectacular cases of **brown blight** (*Drechslera siccans*) from perennial ryegrass fairways at a Long Island golf course.

Ornamentals

Rusts, leaf spots, and anthracnose diseases on woody ornamentals are still being submitted to the laboratory in relatively high volume, but are definitely starting to slow down a bit. In the nursery **downy mildew** was detected in buddleia. Downy mildew in buddleia is caused by the fungus *Peronospora hariotii*. And last, but not least, **Black root rot**, which is caused by the fungus *Thielaviopsis basicola*, was identified on petunia. □

TURF DISEASES FROM PAGE 2

Yellow Tuft

This disease, caused by the fungus *Sclerophthora macrospora*, has started to appear on greens and irrigated landscape turf. **Yellow tuft** (=Downy Mildew) occurs on almost all cool-season turfgrasses; however, it is usually only a serious problem on turf maintained at a low cutting height. Poorly drained or heavily irrigated sites are often associated with enhanced disease development. Infected turf appears stunted, off color (yellow to light green), and may exhibit slightly broadened leaf blades and dense clusters of shoots. Patches ranges in size from 0.25 to 1 inch in diameter for bentgrass and red fescue turfs, and 0.5 to 3 inches for Kentucky bluegrass and perennial ryegrass areas. Tufts are easily removed from the soil due to the absence of adventitious roots. To control this disease, improve drainage, avoid overwatering, mow only when the grass is dry, apply iron sulfate to mask symptom expression and spray turf with Chipco Signature, Insignia, Prodigy or Subdue MAXX now or on a preventive basis next year from late March to early June.

Turf Field Day

Mark your calendars now for this year's Rutgers Turfgrass Research Field Days which will be held on August 4, 2009 (Golf and Fine Turf Research Field Day at Horticultural Farm II, New Brunswick, NJ) and August 5, 2009 (Landscape and Sports Turf Research Field Day and Equipment Demonstrations at Adelpia Research Farm, Freehold, NJ). Registration information and directions to each location can be found at <http://www.njturfgrass.org>. □

Landscape IPM Pest Notes

Steven K. Rettke, Ornamental IPM Program Associate

✓ OBSCURE SCALE (1500-2500 GDD = Crawlers):

An armored scale that is an important landscape pest of oaks (especially pin oaks or other red oak group species). This scale should be listed as a key pest of oaks. It will also be found on dogwood, willow, chestnut, maple, hickory, and beech. As the common name of this pest implies, it is *not* easy to observe obscure scales. Even highly experienced arborists often do not recognize the symptoms or signs of this scale species.

Initially inspect 3 to 4 year old wood when scouting for the presence of obscure scales. When grouped together in large numbers, they often cause sunken areas on branches or trunks similar to cankers. The scale covers are circular (1/10 to 1/8 inches in diameter) and its silvery gray to dirty gray coloration often blend in well on bark. This species does not feed on foliage. Although there is only one generation per year, the crawler emergence period extends for 2 months or longer. Early egg hatch begins in July, but crawlers can continue to emerge into the middle of September. The early season crawlers typically settle beneath old, dead scale covers to feed. The later season crawlers will usually settle within non-infested bark areas.

Controls: The extended crawler period, waxy cover, and settling behavior under the protection of old, dead scale covers all complicate the control of obscure scales. They over-winter as yellow, immature nymphs. The use of dormant horticultural oils will not provide satisfactory suppression, because of the protective waxy cover. As a result, it is important to target the vulnerable crawlers with insecticides during the July, August, September months. Summer oil sprays applied to infested branches and trunk will provide good controls if adequate coverage is achieved. However, because of the long crawler emergence, multiple applications will be required (usually 2 or more sprays). To reduce applications the addition of a pyrethroid may be suggested. However, if many holes in covers are observed, then this indicates the presence of beneficial parasitoid wasps. Pyrethroids are highly detrimental to parasitoids/predators and will eliminate them from the area for many weeks. Consider not using pyrethroids if beneficials are numerous.

✓ PITCH MASS BORERS and LACBALSUM

WOUND DRESSING: Pitch Mass Borers are wood boring caterpillars. As adults they are called clearwing moths and are in the same family with lilac borers, rhododendron borers, peachtree borers, banded ash borers, dogwood borers, as well as others. Pitch mass borer adults are "on the wing" during the months of June and July and typically deposit eggs near wounds on several different pine and spruce species. The usual pine trees

attacked include Austrian, Scotch, and eastern white. The common spruce trees attacked include Norway, white, and Colorado blue.

The pitch mass borer is primarily a nuisance in home landscapes or public park areas. Rarely do these borers create a plant health concern by girdling trunks or branches. They will take 2 to 3 years to mature and feed within the inner bark and outer sapwood. However, these shallow tunneling caterpillars do produce copious amounts of pitch. This pitch can potentially rain down on picnic tables, backyard decks or parked cars.

The pitch mass borer, as well as all clearwing moths, requires a wound to successfully penetrate and bore into a tree. Therefore, pitch mass borer attacks will often increase after pruning wounds are made (proper pruning cuts included). Several years ago, some studies performed by Cornell University researchers unintentionally showed that pitch mass borer attacks could be reduced on recently pruned pines or spruces by applying a wound dressing. They applied a new generation wound dressing called Lacbalsum (has a flat gray color) over the fresh pruning cuts. The conifers receiving the wound dressing showed no evidence of pitch mass borer infestations after 2 years. Apparently the Lacbalsum acted as a protective barrier and/or did not attract egg deposition. On the other hand, 30% of the conifers not receiving the wound dressing showed evidence of pitch mass borer activity one or two years later (Note: proper experimental protocol was not followed in determining these results).

Actually the goal of the Cornell research was to determine the health affects on conifers after applying the new Lacbalsum wound dressing. A couple of decades ago, the late Dr. Alex Shigo had made a strong case against the use of some tested wound dressings, demonstrating that they increased wood decay. Although the Lacbalsum wound dressing did not decrease wood decay in the pruning cut areas, the study also showed it did not increase wood decay either. Therefore, the Cornell research indicated that this new generation wound dressing could be safely used to improve the aesthetics after pruning without harming conifer trees.

✓ **IPM & NURSERY SALES:** Over a decade ago the IPM approach resulted in a 40% reduction in insecticide sprays at the University of California/Davis Arboretum Nursery. Five widely used landscape plants were rated according to insect damage, density and treatment efficacy. And then damaged vs. undamaged plants were compared to sales.

Although heavily damaged plants sold more slowly than those with little or no damage, certain types of damage had little or no influence on customer preference. For example, leafminer mines and katydid chewing damage did not significantly reduce marketability. Plants in flower with lace bug damage sold faster than undamaged plants not in bloom. Customers also did not discriminate

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between undamaged plants from plants with several partially dead leaves.

The researchers concluded, "Complete control of certain pests is not required to sell some plants and some nursery pest control practices may be unnecessary. Even in the absence of quantitative thresholds, regular monitoring and decision making by a trained IPM scout can significantly reduce pesticide use in the nursery without reducing plant marketability." (Source: Flint et al, Cal. Ag. 47(4): 1993, pp 4-7)

✓ **ELONGATE HEMLOCK SCALE:** An armored scale found on the underside of hemlock foliage, and sometimes on spruce, Douglas fir and yew. Female covers are oval, flat, tan/translucent; males are white. There may be six or more scales per needle. Yellow spots appear on needles under light feeding and foliage appears thin; in heavy infestations, needle drop occurs and trees may be killed. Adult females have a very long egg-laying period (lasting throughout the summer) with three overlapping generations. Crawlers (immatures) are noticeable in late May, in conjunction with new growth. Look for the tiny crawlers using a hand-lens. Although oil, soap, and other insecticides are labeled, control may be mixed because all life stages are active at any one time. A systemic such as acephate (Orthene) that is translaminar in foliage can provide some suppression. Imidacloprid (Merit) is very effective controlling the hemlock woolly adelgid, but will NOT provide satisfactory control of elongate hemlock scales.

✓ **SAFARI (Dinotefuran)= New Armored Scale Control:** Unlike Merit, the relatively new neonicotinoid insecticide named Safari (dinotefuran) has shown promise as an effective control against armored scales. Although both Safari and Merit (imidacloprid) have systemic capabilities with the same general mode of action, Safari is significantly more water-soluble. The high water solubility is thought to be the reason for the increased armored scale controls.

Armored scales primarily feed by inserting their piercing-sucking mouthparts into parenchyma cells containing chlorophyll. Since Merit predominately moves through plants by vascular tissues (phloem and xylem), it does not readily enter into cells where armored scales feed. Consequently, Merit has not shown good efficacy against pests that feed within plant cells (typically less than 30-40% control).

Recent University efficacy trials have shown dramatically improved results against armored scales with soil injection or drench applications of Safari insecticide. Although this material continues to be translocated by vascular tissues, it also appears to have the ability to permeate through cell walls and membranes. Some efficacy trials have shown controls exceeding 80%!

✓ **TWO-BANDED JAPANESE WEEVIL (1644-2271 GDD = 1st adult emergence):** This flightless weevil

prefers shrubs such as privet, azalea, rhododendron, mountain laurel, euonymus, and many others. Adults chew notches in leaf margins similar to the black vine weevil, except the two-banded Japanese weevil typically feed deeper toward the mid-rib. Another difference is that they feed during the day (the black vine weevil feeds at night, especially during dusk).

Adults are about 3/16 inch long, round, and are brown to gray with two darker bands across the wing covers. Look for leaf notching damage on lower leaves beginning in late July. Control with acephate (Orthene) when the adults are actively feeding, and/or handpick or trap by laying a white sheet under the affected shrub and shaking the shrub.

✓ **ERIOPHYID MITES ON PINES:** Very small, light cream colored eriophyid mites that feed at the base of pines (e.g. Scots Pine) can cause an abnormal growth typically called "short needle syndrome." The mites are sometimes only discovered after separating the needles from their bundle sheath and observing the needle base with a magnifying hand-lens. With high populations, the infested needles are often significantly shorter than other needles on the same branch not infested. Furthermore, these shorter needles can usually be pulled off the new twig growth very easily. The feedings from these eriophyid mites can soften-up the needle to twig attachment.

A cynical client may jump to the conclusion that the "short needle syndrome" was caused from a spray application. Be aware of the possible effects from these tiny mites and look for them if incorrect assumptions are made. Controls with dormant oil applications can be attempted, but may be unsatisfactory since adequate coverage will be difficult.

✓ **OAK SPIDER MITES:** The infestation and damage levels by most of our "warm season" spider mites do not appear to be as severe as they have been in recent years. The relatively rainy weather we have been experiencing this season have reduced the populations of such mites as the oak spider mite. When monitoring, look for the characteristic bronze discoloration on the upper leaf surfaces of mostly red oak group species (can also occasionally be found feeding on birch, chestnut, beech, elm and hickory). Eggs are generally deposited on upper leaf surfaces, along the mid-vein. Multiple generations occur with peak populations in mid to late summer. After egg hatch in the late spring (e.g., June), controls should be applied before large populations build-up by mid-summer. Over-wintering eggs can be controlled with dormant horticultural oil. Elongated silk webbing may protect over-wintering egg masses during very heavy infestations. Areas of the trunk and branches can have the appearance of rusty fiberglass. This silk webbing may be difficult to penetrate with horticultural oils.

✓ **MID-SEASON LEAF DROP:** When the leaves of large shade trees drop during mid-season, it typically

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causes alarm to concerned homeowners/clients. With the ground littered with spent foliage, the conclusion often is that "their favorite shade tree is dying!" Linden, birch, and sycamore trees are often most susceptible to mid-season leaf drop. In a majority of cases, this is a normal physiological growth habit for these species. The trees commonly drop foliage in mid-season in order to reduce leaf surface area and subsequent water loss. This leaf shedding ability is especially important during typical summer droughts or when water availability in soils is limited. Neither tree health nor tree growth is usually affected.

✓ **WHITE, WAXY LADY BEETLES:** Occasionally during monitoring observations, white, waxy, "mealy-

bug-like" creatures may be noticed. The typical response is to assume they are insect pests that require controls. Do not jump to quick conclusions! Chances are good that these are beneficial lady beetles, and they are providing free pest control. *Chilocorus* species (twice-stabbed lady beetle) larvae can occasionally form white, waxy filaments around its body, which make them less recognizable to many landscapers. These "disguised" lady beetles seem to most commonly be found feeding on soft scales/eggs, such as magnolia/tulip-tree scales and cottony camellia scales. If not needlessly destroyed by pesticides, they can often be seen voraciously consuming many of these "bad guys." Learn what these disguised lady beetle larvae look like. Don't destroy them when they are trying to help. ☐

Weekly Weather Summary

Keith Arnesen, Ph.D., Agricultural Meteorologist

Temperatures averaged near normal central and south and below normal north, averaging 69 degrees north, 72 degrees central and 73 degrees south. Extremes were 89 degrees at Canoe Brook and Downtown on the 1st, and 51 degrees at Canoe Brook on the 3rd. Weekly rainfall averaged 1.40 inches north, 0.39 inches central, and 0.34 inches south. The heaviest 24 hour total reported was 1.46 inches at Newton on the 2nd to 3rd. Estimated soil moisture, in percent of field capacity, this past week averaged 80 percent north, 66 percent central and 41 percent south. Four inch soil temperatures averaged 70 degrees north, 72 degrees central and 73 degrees south.

Weather Summary for the Week Ending 8 am Monday 7/ 6/ 9

WEATHER STATIONS	RAINFALL			TEMPERATURE				GDD BASE50		MON %FC
	WEEK	TOTAL	DEP	MX	MN	AVG	DEP	TOT	DEP	
BELVIDERE BRIDGE	1.69	16.50	.41	81	53	69.	-2	1035	61	86
CANOE BROOK*	.49	13.54	-3.66	89	51	71.	-1	1005	38	65
CHARLOTTEBURG	1.12	14.97	-2.43	82	52	68.	-1	947	181	70
FLEMINGTON	1.63	18.25	1.76	84	53	70.	-2	1146	146	82
NEWTON	2.07	16.38	.63	81	52	68.	-2	1010	157	91
FREEHOLD	.28	18.13	2.00	87	56	72.	-1	1194	97	61
LONG BRANCH	.47	19.28	3.15	84	59	72.	0	1038	14	52
NEW BRUNSWICK	.17	17.71	1.89	88	55	72.	-2	1202	34	72
TOMS RIVER	MISSING									
TRENTON	.64	17.20	2.35	88	57	73.	-1	1288	71	58
CAPE MAY COURT HOUSE	.26	17.23	2.99	85	62	73.	0	1214	107	29
DOWNTOWN	.29	13.53	-1.11	89	58	73.	-1	1286	52	38
GLASSBORO	.33	19.16	3.39	86	60	74.	0	1361	148	37
HAMMONTON	.24	14.58	-.88	89	60	74.	0	1390	184	30
POMONA	.15	18.65	4.67	85	61	74.	1	1323	213	30
SEABROOK	.78	15.66	1.55	85	57	72.	-2	1281	40	50
SOUTH HARRISON *	.17	7.85	-7.97	86	62	73	NA	NA	NA	NA
* missing several weeks of data										
WES KLINE -- GDD BASE 40 PINEY HOLLOW LAST WEEK 232 (Ending 6/29/09) THIS WEEK 230 (Ending 7/6/09)										
TOTAL UNITS BASE 40 FOR FEBRUARY=55										

Never Ending Spring: June 2009

David A. Robinson, Ph.D., New Jersey State Climatologist, NJAES

In many a year, people complain that we “never have a spring anymore”, claiming conditions go right from winter to summer weather. Such words certainly were not heard this year, as for the past month those of us in the state climate office have been asked repeatedly when spring will end or if summer will ever arrive. It was a rather dismal June, though not a total washout; more on this below. Looking back, May got off to a wet start, there was a mid-month freeze in some areas, and a lack of any appreciable heat. There were four days of plus 90° F weather in late April, and earlier than that, short-lived +70° temperatures arrived within days of the early March snowstorm. Yes, it has been a lengthy spring roller coaster ride!

June clouds were plentiful, statewide precipitation was generous and temperatures were cooler than average. While, at times, this interfered with agriculture, construction, lawn mowing and sports schedules, the good news is that we enter the core of summer without concerns of drought and not having spent much on air conditioning. January-March was the 2nd driest such interval across the Garden State since records commenced in 1895, thus we needed spring rain. Southern and coastal regions were wettest in April, the central areas in May and the northeast in June. While some flooding occurred as a result of local downpours, no significant river flooding was observed and ground water and river flows rebounded to close to average quantities. So too are the state’s reservoirs at average capacities. It took a while for the northwest corner to join in on the rain, but of late area rainfall has been plentiful.

As June draws to a close, preliminary statewide rainfall totals 6.61”, which is 2.82” above the 1971-2000 average of 3.79”. This makes this the 6th wettest June since 1895, yet only the 3rd wettest June this decade. Surprised? Well, 2003 was the wettest June on record (8.61”) and 2006 the third wettest (7.43”). Of course local conditions vary, with a June total (through mid day June 29) as high as 9.92” in Harrison (Hudson County) and as low as 3.42” in Bridgeton (Cumberland). Measureable rain (0.01” or more) fell somewhere in NJ on every day of June (through the 28th) except the 1st. An inch or more fell at one or more locations on 9 days, and 8 other days had between 0.50” and 0.99”. Looking at a few stations, Woodbine (Cape May) had rain on 15 days, Cream Ridge (Monmouth) on 20 days, Basking Ridge (Somerset) on 19 days and Haworth (Bergen) on 18 days.

The clouds helped to keep June temperatures between 1°-2° below average in south Jersey and 2°-

3° cooler than average in the north. The preliminary statewide average temperature of 67.5 ° is 1.9 ° below average. This ranks June 2009 as the 24th coolest of the past 115 years. High temperatures for the first 29 days of June were 80° or warmer on 11 days at Woodbine, 12 at Sicklerville (Camden), 4 at Sea Girt (Monmouth), 11 at Pequest (Warren), and 11 at Haworth. Highs at these stations never reached 70° on 3 to 7 June days, except at coastal Sea Girt, where they did not reach this mark on 14 days.

Blame the less-than-ideal weather of this past month on the delayed seasonal retreat of the jet stream into Canada. This resulted in the frequent passage of waves of low pressure through the Mid Atlantic states. This stubborn pattern resulted in frequent cloudy, rainy days or partly sunny days with frontal passages accompanied by showers and thunderstorms during the first two weeks of the month. A stalled low pressure system off the coast in the third week contributed cool, showery conditions. During the last week of June, more seasonable conditions began to emerge, with warmth, humidity and occasional showers interspersed with sunny skies.

The National Weather Service forecast for the first few days of July (as of June 29) calls for showers, with some drying out for the holiday weekend. The NWS outlook through the 12th suggests temperatures and precipitation will be somewhat below average. Overall, the NWS considers there to be equal chances of NJ precipitation and temperatures being above, close to or below average during July and from July through September.

You are invited to view detailed information on hourly and daily conditions by visiting the Office of the NJ State Climatologist’s NJ Weather and Climate Network: <http://climate.rutgers.edu/njwxnet>. Additional daily precipitation can be obtained for 100 or more NJ locations through the volunteer NJ Community Collaborative Rain, Hail and Snow Network (CoCoRaHS) <http://www.cocorahs.org>. In fact, you are invited and encouraged to become a NJ CoCoRaHS observer. For more information, visit the website or write me at drobins@rci.rutgers.edu.

Finally, any feedback you may have concerning our data-gathering and information-generating efforts is valued. This includes products you might wish to see on an agriculture/horticulture focused web portal, one we hope to establish as sufficient funding for the effort becomes available. ☐

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PLANT & PEST ADVISORY

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