



Feeling the Heat

This summer, so far, has been characterized by record-breaking heat and close-to-record-breaking rainfall. Hurricane Beryl, strengthened by warm oceans, was the earliest-ever Category 4 hurricane, now up to Category 5. Closer to home, suffocatingly hot afternoons give way to nights filled with thunderstorms and cloudbursts, and in the morning I can almost see steam rising from the sodden earth. Occasionally, as today, the air clears, the sky cools, and there is some welcome respite for a few days, until the heat returns. But what does it all mean for the plants?

As summer began, these conditions favored vegetative growth. Foxgloves meant to reach my waist towered over seven feet, almost as tall as the yucca, while pyracanthus, like Jack's beanstalk, seemed to stretch another six inches skyward every day. The supposedly dwarf peach tree threatens to block my view of the pond, ground covers took their name as a challenge, and outrageously aggressive twenty-foot-long snakes of bittersweet sprout leaves as large as my palm. (I can't possibly dig them all up this year, or even in five years, but I'll try to at least keep cutting them back before they set berries.) The progress of perennial plants for the first three years after planting is often described as "sleep, creep, leap," but there was no sleeping or creeping this spring. Everything—including, of course, poison ivy, mugwort, and barberry—reveled in the almost-tropical heat and rain, crowding every inch of garden space.

But there is a price to be paid for all this exuberance. Height came at the expense of sturdiness. The overly tall foxgloves leaned precariously, finally toppling with the rain. The yuccas stems have always stood straight and proud, almost as thick as broomsticks, but this year they've tipped almost to the ground, and drop their flowers before they're fully open. Throughout the beds, almost every plant is taller than I've ever seen it, but the stems are splayed and messy. Peonies and roses bloomed early, but finished too quickly. And of course, all this soft foliage, jostling with extra-vigorous weeds that stifle airflow, creates ideal conditions for mildew and fungal diseases.

What's ahead? All the summer annuals we favor, like zinnias and marigolds, originated in warmer parts of the world, and should still thrive. But the combination of too-high temperatures and too-abundant rainfall will create challenges for temperate-climate perennials and vegetables.

Plants have a vascular system, which pulls water and nutrients from the soil, distributing them throughout the plant, and expelling the rest through leaf pores (“transpiration”). As the soil overheats, root development is reduced. The plant becomes less able to take up water and nutrients, especially nitrogen. At the same time, heat stress and excess humidity make transpiration more difficult. Just as a wet towel won’t dry on a very humid day, the plant can’t rid itself of water at the leaves. It can’t take in water and nutrients at the roots, because its vascular system is stymied.

Adding insult to injury, too much rain can leach oxygen, nitrogen, and nutrients from the soil, or cause it to become compacted. Your plants may wilt during periods of drought because they’re getting too little water, but, equally, they may wilt after a heavy rain because compacted or waterlogged soil deprives them of oxygen.

Don’t despair: a thick layer of mulch will go a long way to even out the soil temperature or slow down evaporation. It will be your plants’ best friend in extreme weather, all the while suppressing weeds and reducing your workload.

It will not, however, cure every weather-related problem. High temperatures can increase the rate of reproductive development, which leaves less time for photosynthesis to contribute to fruit or seed production. In extended heat waves, vegetable plants conserve their energy: squashes produce only male flowers, while tomatoes simply refuse to set fruit. Doesn’t make much difference to me; the family of woodchucks resident in my hillside takes everything anyway. My neighbor is resorting to his BB gun, but I’m hopeful of finding a gentler solution. Wire mesh barriers, high-pitched sound, and most recently, used cat litter are suggested deterrents. What with cat litter for woodchucks and putrid meat for paw paws, my dreams of bucolic gardens are dying a rather distasteful death.

But I don’t want to leave you with only bad news. What about those hydrangeas?! Every gardener I know is gleefully bragging of mophead hydrangeas barely able to support bushels of bright blue blooms. Their outstanding display this year is also due to warmer temperatures—but winter temperatures, not summer heat. Most hydrangeas bloom on last year’s wood. The very mild winter meant that far fewer buds suffered frost damage than usual. They survived, to give us at least one magnificent win in a challenging summer.