

# IS IT CLIMATE CHANGE? WHAT DOES IT MEAN TO GARDENERS?

Amos Pettingill – White Flower Farm  
9/16/07

Zone 2	-50°F	to	-40°F
Zone 3	-40°F	to	-30°F
Zone 4	-30°F	to	-20°F
Zone 5	-20°F	to	-10°F
Zone 6	-10°F	to	0°F
Zone 7	0°F	to	10°F
Zone 8	10°F	to	20°F
Zone 9	20°F	to	30°F
Zone 10	30°F	to	40°F

**The USDA hardiness zones  
we grew up with.**

We think the answer is yes. In the 1970s we normally had 3-5 day periods in winter when the daytime high temperature was below zero and the night-time lows were often minus 20F. Between Thanksgiving and Easter, we counted on 12-15 weeks of frozen ground and many weeks of uninterrupted snow cover.

It's clear to us that the winters are shorter and milder and others must agree since we hear that hardiness zone maps are now being redrawn by professionals that raise most temperate areas by one full zone, reflecting an upward change of 20 degrees in the average annual minimum temperature.

At our nursery in the hills of northwest Connecticut, there seem also to be secondary patterns emerging that are relevant to those whose life is, like ours, mainly outdoors. Spring, and most especially April, is no longer the charming and changeable season of hope, but more often a protracted ice cold shower followed quickly by the beginning of summer. Fall, on the other hand, gets longer and lovelier every year with first frost often not seen here until mid-November.

Because gardening is more about light levels and soil temperatures than about air temperature, the net result of these changes is, for us, a longer and more attractive gardening season PLUS an enormous expansion in the palette of plants we can treat as being hardy, or at least worth taking a chance with. In many genera of **perennials**, **shrubs**, and **vines**, you will find perhaps twice as many species rated Zone 6-7 versus Zones 4-5, and the opportunities are almost unimaginably diverse.



**We wish more Crocosmia  
could be perennial in our  
gardens.**





In Litchfield, soon to be officially Zone 6, we are looking longingly at list of new plants for inclusions in our trials and gardens and proposing to revisit *Helianthemum* (Rock Rose), *Ilex aquifolium* (English Holly), and *Crococsmia*, are even considering tests of Camellias, Jasmines, and Amaryllis in protected positions with plenty of mulch. Will they all work? Of course not, but plants are cheap and gardening years are precious, so a little experimentation is, from our perspective, all reward and very little risk.

**Might Amaryllis 'Sunrise' survive outside if planted deeply?**

#### HOW TO PUSH YOUR LUCK

If you buy into this notion, and would prefer to take action this fall, you can improve your odds with new plants enormously by following a few simple practices which are, in fact, equally appropriate to your established plantings.

FIRST - Healthy plants overwinter better, so it makes little sense to buy tired sale items offered locally. Pick top-quality stock prepared for fall planting (we, of course, have plenty). Established plants should be watered well, cleaned up, with weak stems and spent flowers removed. Crowding is common both in new plantings (for instant effect) and in old plantings that have outgrown their space. It's bad for plants because they starve, dry out, and heave more readily when packed too close together. Perennials: you can lift and divide, lift and displace, or lift and dispose, generally with a light trim of tops and roots on the former two. Late-blooming shrubs can be pruned in fall without loss of bloom and the early flowering genera that make up the majority should get your attention after bloom next spring. Point is NOT to base next spring on weaklings, either existing or acquired.

SECOND - No fertilizing in the fall (bulbs excepted). Plants that get a sudden shot of nutrients in the fall produce tender new growth just when they should be going dormant and enter winter like a drunk, in the worst possible condition.

THIRD - Improve the soil with rich, well-composted organic material and/or use an organic mulch, both of which will retain moisture, deter the sudden freezing and thawing that causes heaving, and encourage bacterial action in \_\_\_\_\_

the soil. Compost should be scratched in around the plants while they are still growing, mulch applied after the ground freezes. The process is easy, and forces you to take a close look at every corner of your garden, thus demonstrating the old principle that the best fertilizer is the farmer's shadow.

FOURTH - Protect the plants you think may be at risk, either because they are a little tender or because they are newly planted. Your enemies in this context are below:

Hard cold to a temperature low enough to destroy the tissue of the plant either above or below ground. Root-kill temperatures vary by genus but can almost always be avoided by a generous layer of mulch applied after a killing frost. Plants tops do NOT, in our experience, get much extreme cold protection from wrappings or other forms of "shelter." However, it's not unusual for shrubs such as Buddleia to be killed to the ground most winters and bounce back with a splendid show the following summer. There is a related question as to whether shrubs, and especially Roses, do better if pruned hard in the fall, notionally reducing snow load and exposure to wind. We think new cuts tend to wick moisture out the plant and heal poorly as dormancy begins. So, our preference is to leave the pruning to spring, even late spring, so that you can cut back only as needed or wanted. If that means putting a webbing of support ties or some structure over a well-developed Rose or Wisteria standard, take the time and tell yourself "This is good for me, too."

Changes in temperature are usually more damaging than hard cold because alternate freezing and thawing breaks up the soil surface, exposing the plant roots, which then dry out and die. In extreme cases, protracted warm spells such as we had last January may cause dormant plants to start growing and once the tissue is filled with sap, plants are easily killed by sudden hard cold. Equally dangerous is the behavior of the enthusiastic gardener who is disposed to start removing mulch and scratching around the base of plants on the first warm day in March. This activity can only do harm and the urges should be controlled, using strong drink if necessary.

Excess moisture is in many respects the most difficult enemy because it is not always obvious. You doubtless realize that plant roots will rot if they are submerged in water for any length of time, and they will also suffocate if enclosed in ice. Accordingly standing water is deadly. In winter, even small amounts of water can become a problem because swings in temperature often create a situation in which the surface soil is thawed while the sub-soil remains frozen. If it rains, or the snow cover melts quickly, in these conditions, your plants may be sitting in a sub-surface pool that you can't see, and the damage won't make itself known until spring. The only solution is to create improved drainage if your soil is small grained and tends to pack into hardpan. The addition of coarse sand or even gravel dug well down into open spots will help

and we know folks who drill holes in iron pipes and drive them deeply into the ground before freeze-up to create a sort of winter drain for known bad spots. If you have been paying attention, you know where these spots are, which is half or more of the battle.

Sounds like a lot of advice, but it's all common sense and consumes far less time than you happily spend working on your backhand. More to the point, you can use these techniques, and some imagination, to produce a garden next spring that is better than anything you have done before. What could be more rewarding?

Sincerely,

*Amos Pottin*