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Soybean Freeze Injury?

Each spring there's at least one cold snap when temperatures drop *just* to the point of being potentially damaging. Seldom is it big issue, but if you *do* notice a few plants with odd looking injury, cold temperatures could be to blame.

Germinated soybeans still below ground won't likely see much injury, either. If plants have begun to emerge, damage potential increases. As soon as a soybean emerges, growing points are exposed, meaning damaging temperatures (typically 28-30 degrees F for several hours) *could* be an issue.

Will we see damage? If plants are just emerging, with the hypocotyl hook (area of the stem below the cotyledons) exposed at or just below ground level, the risk for damage is highest and of greatest concern. Because they are mostly water and fairly thick, emerged cotyledons actually have more frost tolerance than you might expect. Unifoliate leaves exposed? All of the growing points are now exposed, but even if low temperatures damage the stem tip, there are still two more growing points where the cotyledons attach from which growth could occur.

Because temperatures – and duration of exposure, topography, etc... - are variable, it will take three to five days of good growing conditions before you'll know too much. At that point, look for water-soaked lesions on cotyledons or brown/dried leaves/hypocotyl tissues.

Fruit Tree Frost/Freeze Injury to Fruit Trees

How cold did it get over the weekend? Tis the season when we start worrying about fruit tree damage from late spring cold snaps.

As flower buds begin to swell and open, temperatures below 24 degrees can cause damage or kill buds. If at full bloom, flower buds will start to suffer damage as temperatures approach 28 degrees F. Injured flowers may appear normal, but the pistil (center part of the flower) could be damaged, and trees will not bear fruit.

It takes several hours after a freeze event for any type of damage symptom to develop. Frozen tissues will turn brown or black as they thaw, giving you an idea of the extent of the damage. Make sure you look the tree over thoroughly. Sometimes one bloom will be injured, but another will not. Give some time for recovery before looking too hard. While we do lose fruit production if temperatures drop too much, the trees as a whole shouldn't be damaged.