
OBSERVATIONS FROM THE CROWS NEST NOTES ON WINTER PROTECTION OF STRAWBERRY CROWNS

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Editors note: Recently during the cold snap we had in January I had a few eastern Piedmont growers inquire as to the need for covering their strawberries, I posed the question to Charlie O'Dell regarding his past experiences with strawberry crown damage in an uncovered, unprotected situation: Below is his response:

On strawberry crown temps, a lot depends on varieties and how far buds may be developed on/in the crowns. With Chandlers, Dr. Barclay Poling thinks crown temps below about 15 degrees F begin to kill fruit buds in that variety. However, crowns are somewhat protected down in plastic mulch planting holes, at least from winds. A dab of snow can really help too, the finest mulch! I did some temperature measurements at Kentland several years ago in January with a long-reach thermometer, when we had a big snow over the region. Above the snow, I measured 8 degrees above zero F. At crown level under the snow (several inches deep), the temperature was 29 degrees F.

According to our temperature recording station at Kentland Farm, 29 degrees F was also the temperature at which the snow began to fall. Every winter that we have had good snow cover, we have had our best crops the following spring here in this restrictively cold area for plasticulture strawberry production, likely due to less freezing crown damage and plant stress.

Many years ago, in the 1970's I heard of a small company that developed a tractor-mounted, multi-row, foam-making machine that allowed fast placement of foam over low growing crops like strawberries just before a frost or freeze event was expected.

After brief drying, it stuck to ground (or plastic mulch in our case) and to plants, even in heavy winds, then the foam biodegraded away after 3 days, and gave very similar mulching protection to snow. This foam was also white in color to reflect sun heat. It was never, to my knowledge, commercialized and the developer gave up on it. I cannot find any reference to whom that was, but I remember their literature. This is what growers need!

Why cannot someone develop and patent a portable, 3-pt. hitch mounted snow-making or foam-making machine to apply over strawberries that would last about 72 hours during a cold snap such as this? If this tractor-mounted biodegradable stable foam generation and application technology could be revived for our SE Strawberry Industry, growers would have an efficient, fast, labor-and energy-saving method for both winter crop protection freeze events; And for spring frost/freeze protection! I read in today's newspaper that Florida strawberry growers had hoped to use sprinklers for the current freeze extending even down there, they had no snow cover.

However, the high winds prevented successful use of this system. They are also in great need of such a freeze and frost protection system!

Maybe some of the NC Strawberry Association members and/or Research/Extension folks can remember who the foam and field application inventor was, are they still alive? Someone NEEDS to run with this idea, it was 30 years ahead of our current winter and spring freeze and frost protection needs, way before we had a growing SE Plasticulture Strawberry Industry! Our Ag. Engineering Departments at our Land-Grant Universities over this region have good folks that could help re-develop this mulch-making idea, if we could interest them.

On crop covers, we think the 1.25 oz. weight covers provide great winter crown protection, but no temperature measurements work has been reported to my thinking. While this snow cover exists, I hope you and growers over the region can or have verified their crown temps beneath the snow.

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