

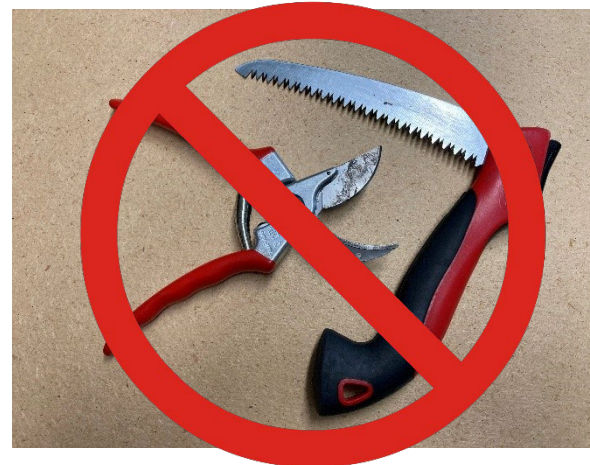
## Help Us with Planning For 2024

I'd like to ask you to complete [a brief survey](https://tiny.utk.edu/24survey) that will aid our office in program planning in 2024. This is your opportunity to give suggestions on what topics you'd most like to see us cover in classes next year.

<https://tiny.utk.edu/24survey>

## It's NOT Pruning Season for Woody Plants

The rule of thumb for our area is to stop pruning August 1st. One plant response to pruning is the initiation of new growth. If that happens too late in the season, that new growth will not harden off and is killed by frosts and freezes. It's best to wait until plants are dormant during late winter for any pruning with one exception. In the case of spring bloomers, pruning before bloom means that you are removing floral buds. We wait until immediately after bloom to prune these.



## Sanitation in the Garden, Vineyard & Orchard

It's time to tidy up the garden, vineyard and orchard to limit opportunities for diseases to overwinter. Removing our spent vegetables, fallen fruits, and fallen leaves removes overwintering diseases. If you've had disease problems, trash or burn these materials rather than compost. Make a specific point to remove mummy fruits that hang on to trees or vines.



Mummy grapes: image from Dave Lockwood

## Consider Next Year's Vegetable Garden

Our warm season vegetables are wrapping up. A few may hang on past this weekend's low temperatures, but the shorter days are rapidly taking their toll. Even our cool season fall crops will begin to slow down. Now is a great time to consider what did well and what didn't in the garden.

Variety selection is an underutilized tool in the integrated pest management. My priority for next season is sourcing the most disease resistant varieties possible. We can have fewer disease problems by following best practices in the garden (irrigation, fertility, scouting and judicious controls), but the ace up our sleeve are resistant varieties. It's not that resistant plants can't get a specific disease, but they will be less affected than non-resistant varieties.

We know there are diseases that are both devastating and expected almost every year. We have resistant varieties available for many of these diseases. For instance, downy mildew on cucurbits and basil, and early blight on tomatoes can be managed in part by using resistant varieties. Other diseases and even environmental

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stressors can also be mitigated through variety selection. Growing resistant varieties can help our gardens have the best yield and quality of produce.

So, what are the most disease resistant varieties? Stay tuned. I'm compiling a source list for the most disease resistant varieties that I'll publish in the December Trusty Trowel.

### **Should We Use Cardboard in the Garden?**

There is a significant amount of interest in using cardboard in the garden as part of a mulching system. Many no-till and minimum till gardeners use cardboard as a base layer when establishing beds. The USDA organic certification regulations permit newspaper or other recycled paper without glossy or colored inks, including cardboard boxes, as a mulch or compost feedstocks. Yet, with all that acceptance, there have also been questions about what cardboard and paper mulches might bring with them to the garden.



Research has previously established that there can be any number of chemicals found in recycled cardboard. These include brominated and chlorinated dioxins and biphenyls, PBDEs, HBCDDs, PCNs and PFAS. These come from the inks, flame retardants, grease repelling coatings, or deinking materials used in the recycling process. These chemicals are regarded as contaminants and there is some concern on environmental and human impacts. PFAS for instance have been dubbed “forever chemicals” due to their persistence in the environment and are of particular interest currently with the [EPA and drinking water](#).

[A recent research publication](#) examined the use of various materials as poultry bedding including recycled cardboard. It focused on the potential transfer of chemicals from bedding to chickens and their resultant products. The paper also reported on the measured quantity of the above-mentioned chemicals present in various bedding products. For all quantified chemicals, shredded cardboard bedding material contained levels that were higher than those in wood shavings (the control) by a factor that ranged from 2.3 to 518 times.

So, what is the takeaway? Extrapolating from the findings, there is the potential for recycled cardboard to bring chemicals that are considered environmental contaminants into our gardens. This research did not, in any way, evaluate the use of cardboard in the garden or the potential of any risk associated with such use. So, our conclusions based on this research are limited. At least some of these chemicals are extremely resistant to degradation in the environment-meaning they will be present for a very long time. Gardeners might want to reevaluate the use of cardboard in the garden given this information.

For questions about your home and garden please feel free to contact me, Adam Watson, Agriculture Extension Agent [watson@utk.edu](mailto:watson@utk.edu) or by cell 423-430-6711. [Emailing pictures is a great way to get questions answered.](#)

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