## COMPILED FROM "TREE PEST ALERT", APRIL 17, 2023, DR JOHN BALL

Apples and crabapples buds are beginning to swell in parts of the state, so the treatment time is very soon. The first application of fungicide should be applied as the buds begin to open. The most common fungicides used for preventative treatments of apple scab have Captan or Myclobutanil listed as the active ingredient. If the apple scab treatment is for an ornamental crabapple Chlorothalonil, may also be used. Applications of the fungicide are made about 7 to 10 days apart from the green tip stage until after petal fall. The weather usually turns a little drier by then and a 10- to-14-day interval can be used until the end of June when applications stop.

Every apple tree has stamens and pistils in each flower. They just have a mechanism to prevent fertilizing themselves. This means a 'Sweet Sixteen' apple will not produce fruit if it is only apple tree in the yard (and there are no nearby apple trees). This also means if you have two 'Sweet Sixteen' apple trees you still do not have fruit. Apple cultivars are clones. All the trees within a cultivar are genetically identical.

Apple trees require pollen transfer between two different cultivars; a 'Sweet Sixteen' and a 'Zestar!' for example. Since there is no botanical difference between an apple and a crabapple (just the size of the fruit), an apple and crabapple can pollinate one another, and no, having a crabapple for a pollinator will not make the apple taste "crabby."

There are a few considerations to keep in mind when choosing apple cultivars for pollination. First, it is best to have the two cultivars flowering at the same time. There is quite an overlap in bloom periods for cultivars but to be sure it is best to plant early-season cultivars with one other or mix with mid-season but not early and late fruiting cultivars. The bloom periods might not match. For example, 'Haralson', a late-season apple, is not an acceptable pollinator choice for 'Zestar!', an early season apple.

'Honeycrisp' sometimes has poor fruit set depending on the pollinator. The problem may be the length of the pollen tubes created by the pollinator. Some apple cultivars do serve as good pollinators for 'Honeycrisp', such as 'McIntosh', while many crabapples will not.

Finally, some apple cultivars are too closely related and will not pollinate one another. 'Haralson' and 'Haralred' are too close as well as 'Fireside' and 'Connell Red'. The same is true with 'Frostbite' and 'Sweet sixteen'. They are too closely related to adequately pollinate each other.

We also have a few trees such as the 'Dolgo' crabapple, a great cider apple from South Dakota, that sometimes is self-fruitful. It is also a good pollinator for many apple cultivars. 'Cortland' is an apple that sometimes is self-fertile and may produce fruit without a pollinator.

The best pollination is either having the two cultivars within the same ripening season (early, mid, late) though midseason will be acceptable for either an early or a late season apple. Cortland – Early/midseason<sup>1</sup>

Fireside – Late season<sup>2</sup>
Frostbite – Late season<sup>1</sup>
Haralson – Late season<sup>1</sup>
Honeycrisp – Mid/late-season<sup>2</sup>
McIntosh – Early/mid-season<sup>3</sup>
Regent – Late season<sup>3</sup>
State Fair – Early season<sup>1</sup>
Sweet Sixteen – Mid-season<sup>1</sup>
Zestar! – Early season<sup>2</sup>

<sup>&</sup>lt;sup>1</sup> adapted to the entire state.

<sup>&</sup>lt;sup>2</sup> adapted to southern two-third of state.

<sup>&</sup>lt;sup>3</sup> best adapted to the southeastern part of the state.