

## Maxwell Norton – Sun Star Column for week of June 5, 2006

Multiple pathogens implicated in lower branch death  
Maxwell Norton, UC Cooperative Extension

Many almond farmers in the Central Valley have observed a significant number of spurs and branches on the lower parts of trees dying. On the ground, many leaves can be observed as they fall off the dying branches.

Some blocks have significant numbers of nuts falling also but this is probably unrelated. It is normal to have nuts drop in late spring and the drop is a little heavier than normal this year. The dropped nuts probably were pollinated but fertilization of the ovary was not complete or for some reason it aborted.

Examination by a UC pathologist shows that three organisms are associated with the dead spurs and branches. In many we find the fungal organism *Colletotrichum*. This is the cause of Anthracnose disease which is a common cause of spur and branch dieback. It also causes a blossom blight similar to brown rot disease. Leaves on infected spurs will have marginal burning and will stay attached after dying.

Two other organisms we are finding are *Phomopsis* and *Botryosphaeria*. We do not know much about the relationship between these two organisms and how much damage they do to almonds. They are not considered new nor exotic organisms as they are reported in the literature.

For a few years now the growers of the varieties Butte and Padre have noticed a persistent problem with lower branch death. This also is a mystery but UC Cooperative Extension researchers are studying the problem and suspect a couple organisms. There is no spray recommendation at this time. I suspect that the popularity of micro jet irrigation may play a role in this because they increase humidity in the orchard and must be run for long periods to deliver enough water to satisfy the needs of the tree.

Another disease I suspect has been active this year is green fruit rot (or jacket rot) which is caused by the pathogens: *Botrytis*, *Sclerotinia* or *Monilinia*. Green fruit rot begins during the latter part of the bloom period when the fungus infects senescing petals and anthers. As fruit sets and starts to grow, a brown spot develops. Frequently this leads to rot of the entire fruit.

My preliminary recommendation for branch dieback at this time is to prune out the infected branches and remove them from the orchard. Any thing you can do during the year to reduce humidity may help. Dormant pruning to assure some sunlight is reaching the lower limbs will help. Next spring – an aggressive fungicide program that targets anthracnose and jacket rot diseases is probably warranted. Contact your pest control advisor to discuss this.

More information can be found at our web site **[ucipm.ucdavis.edu](http://ucipm.ucdavis.edu)** and also by picking up a copy of Integrated Pest Management for Almonds #3308 at the Cooperative Extension office at 2145 Wardrobe, corner of Wardrobe and Grogan in west Merced.