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NEWS RELEASE

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The 2002 Grape Season Well On Its Way, Start The Season Off With A Proper Disease Control Program

As I look out my window, I see the perfect portrait of spring. The trees are in bloom and budbreak in grape is occurring in early varieties throughout Arvin and Lamont. Today, the temperature is predicted to reach a high of 73°F but springtime weather can be unpredictable and when the forecast predicts rain, fungal disease control is at the forefront of grower's minds. Lately, I've received several questions regarding Phomopsis Cane and Leaf Spot, caused by the fungus *Phomopsis viticola*. The obvious bleached appearance of the bark in several varieties, including Thompson Seedless and Red Globe is likely the root of these questions. It is thought that the growth of Phomopsis in the wood is what causes the bleached look, however, it is the pycnidia, or the small, black pimple spots in the infected wood which are the spore producing bodies that provide the inoculum for spring infections. **It is important to note that rain is required for infection.** The sooner it rains after budbreak the higher the infection rate. After budbreak, spring rains splash these spores onto tender, young developing shoots and infection occurs when free moisture remains on unprotected tissue for several hours. The number of nodes infected varies according to the duration of the weather favorable for infection. According to George Leavitt, Farm Advisor in Madera County, economic loss from Phomopsis in Kern County is rare because we don't generally have extensive spring rains, which makes for ideal infection conditions.

Symptoms of Phomopsis begin appearing 2-3 weeks after rains and can occur on leaves, shoots, clusters and canes. The first symptom, small black spots with yellow margins, appear on the lower shoot, nodes and leaves. Where shoot infections are heavy, these spots may coalesce and crack creating a dark, scabbed over lesions. Shoots may appear stunted and often the buds fail to push due to bud death or death of the tissue below the bud (common in Red Globe). After shoots have developed 12-24 inches, shoot breakage may occur during strong winds in the heavily scarred areas. The stems of clusters may also become infected,

causing the cluster to wither. During the dormant season, infected wood appears bleached with dark brown or black specks.

Pruning out heavily infected wood and fungicide applications offer the best control of Phomopsis. There are several materials registered for control, however, **they must be applied before a rain event occurs and reapplied before subsequent rains occur**. Current recommendations call for applications to be made at budbreak to 1” in shoot length and repeated as necessary when shoots are 5-7” in length or 7-14 days later. Small growers can wait until rain threatens to apply materials, while larger growers must incorporate control strategies into their seasonal routine, as complete coverage just before rains is often difficult to accomplish. In an experiment conducted by Leavitt in 2000, greatest disease control was achieved by **foliar** treatments of Cabrio (BASF 500), Ziram, Flint (Trifloxystrobin), Sovran (Kresoxim-methyl), Dithane RF (Mancozeb) and Abound (Azoxystrobin). However, these treatments were not significantly different from **dormant** applications of lime sulfur (15 and 20 gal) or copper-sulfate-pentahydrate (10 gal). The take home message is that all of these materials are only effective when applied before a rain occurs. Any applications made after a rain event will only protect the tissue for the next rain.

Finally, it should be noted that last spring symptoms similar to Phomopsis were observed in many Red Globe vineyards throughout Kern County. Symptoms were described as dark black streaks in the epidermal layers of the lower shoot and in some cases, the streaks scabbed over. The symptoms observed did not respond to the normal fungicide control program. This phenomenon was last observed during the El Niño season of 1998. Samples were sent to the UC Davis Plant Pathology lab for culture and returned devoid of any disease. At this time the cause of the symptom is unknown, but it is thought to be a physiological response rather than a pathogenic response.

