



UNIVERSITY of CALIFORNIA
Agriculture & Natural Resources
Cooperative Extension - Kings County



680 N. Campus Drive, Suite A
Hanford, CA 93230

(559) 582-3211, ext. 2730
Fax (559) 582-5166

e-mail: ceking@ucdavis.edu
web: <http://ceking.ucdavis.edu>

November 2009 PNP Task List
By Bob Beede

All things considered, the 2009 pistachio crop turned out pretty good. Water availability and quality replaced navel orangeworm (NOW) as the single greatest factor affecting nut quality this season. The need to shake twice due to uneven maturity continued to plague many growers, and its cause is open for discussion. I still believe much of it is due to erratic winter temperatures reducing effective chilling, coupled with temperature fluctuations during bloom which extend the fruit set period. I have tried to encourage growers to make written observations on these factors, and have even provided a data sheet on my website for such purposes. However, few, if any, do it, and we therefore always wind up at this time of the season doing the “What if” scenario, which get us absolutely nowhere.

Reports from the field indicate crop quality looks good this year. The industry’s efforts to reduce NOW levels paid off this season, making it much easier for processors to put up a high quality package. Average nut size was lower than last year, but about normal for an “on” year. Crop size worldwide is less than expected (ours is around 350 million pounds), but its value is strong, due to supply, currency values, promotions, and greater interest from countries with large populations, such as China, Russia, and India. Andy Anzaldo, grower relations with Paramount Farms, said the 2009 crop they received was the second lowest in rejects in the past ten years. With that said, the potential quality problems associated with second shaking requires discussion of the “added value” of this practice with your processor. As an industry, we must, I repeat, MUST keep aflatoxin management ever-present in our cultural and harvest practices, if we wish to maintain a quality edge on other world producers. Insect pressure was generally light this year, with the exception of mealy bug, which is reported by crop consultants to have spread rapidly in certain production areas. The impact of rain in May on *Botryosphaeria* infection was much greater than many of us, including me, expected. This disease will be a target of increased education and monitoring for next season, now that the overwintering inoculum levels are potentially greater.

Besides uneven maturity, blanking was dramatically higher in many orchards this season. I saw one large orchard with an estimated 700 pounds per acre left in the trees after the first shake. Almost all of it was blanks. This orchard had extremely high levels of boron, causing the entire canopy to turn brown from leaf burn. Other growers reported equally high blank percentages, and the consensus was that the Westside was worse than the East. Orchards without salinity problems or insufficient water were also affected. The widespread nature of this suggests an environmental component to this phenomenon. A recent meeting with Dr. Ted DeJong, Plant Sciences Professor and tree fruit physiologist at UC Davis, raises the possibility of it being a “transport limitation” problem associated with injury to the tree’s vascular tissue from freezes occurring prior to and during bloom. His work in peach shows partial limitations in utilization of stored carbohydrates during bloom and fruit set due to slow vascular development. It is possible the hard freeze received March 10, during the time pistachios were emerging from dormancy, injured the vascular tissue sufficiently to prevent normal nut development. Such a hypothesis might explain why entire clusters of blank nuts could be found on branches with full sun exposure. The second freeze, April 16, could have also contributed. I hope to pursue this a bit, and would welcome any comments and observations from industry members.

What’s Next? It is time to think about winter weed management. **Prowl H₂O, preemergence grass herbicide** is very similar to **Oryzalin 4AS** in its weed spectrum and residual. Prowl remains stable on the soil without rainfall for 21 days. **Apply it at the higher label rates (4-6 quarts per sprayed acre)** for extended weed control. Oryzalin 4AS also controls annual grasses and a select number of broadleaves such as chickweed, lambquarters, purslane and

the pigweeds. Its drawbacks are cost and limited residual. It is also stable on the soil prior to a rain. One gallon per **treated** acre in the fall usually runs out before the end of the season, especially under drip irrigation. Hence, many growers elect to treat early season “winter weeds” with a low rate of glyphosate (Roundup, Touchdown) and Goal (each at about one quart per sprayed acre) and then wait to apply the Oryzalin 4AS later in January or February to achieve season-long grass control. **Devrinol** is no longer registered for use on pistachio.

Chateau, is a relatively new preemergence herbicide (Valent) available for bearing and non-bearing pistachios. Applied at 12 oz. per treated acre, Chateau enhances burndown of existing weeds (similar to Goal) and controls difficult weeds such as fleabane and horseweed (mare’s tail). Because of its postemergence characteristics, be careful using it in young trees. Avoid injury with tree wraps and use a shielded sprayer to reduce drift. Apply Chateau only during the dormant period to avoid phytotoxicity to emerging bud tissue in the early spring. Kurt Hembree, UC Farm Advisor, Fresno County, for weeds, also advises split applications in November and January for heavy fleabane control, since this noxious weed germinates early in the fall. A single application in January may result in “escapes” which make one think the product is ineffective. The addition of two quarts Gramoxone helps in controlling emerged fleabane. **NOTE: Before using Chateau, check with your Valent representative for any use restrictions applicable to your area or soil type.**

Matrix FNV is another relatively new Dupont preemergence herbicide active on fleabane, malva, yellow nutsedge, and mare’s tail. Due to its contact activity on selected grasses and several broadleaves (when newly emerged, not a foot tall!), it appears to have a good fit for fall applications where management of the mentioned noxious weeds is required. It is a dry flowable formulation applied at 4 ounces product per broadcast acre. A second application or use of another preemergence product would be needed in the spring for extended weed control.

Visor is registered for non-bearing preemergence use and has a grass control spectrum similar to Oryzalin 4AS. In addition, Visor controls several broadleaf weeds common in pistachio orchards. The higher label rates also suppress purple and yellow nutsedge and emerged field bindweed. **Gallery**, a broadleaf preemergence herbicide registered only for non-bearing use, provides similar weed control as Goal. Tests indicate Gallery provides better control of chickweed, fleabane, horseweed, Russian thistle and spurge than Goal. It is less effective than Goal on clovers and nightshade.

Growers electing to dispense with a preemergence herbicide this winter and apply multiple postemergence treatments throughout the season have a good selection of herbicides available, including Roundup, Touchdown, Sandea, Gramoxone, Shark, Fusilade, Rely Goal, and 2,4-D. Postemergence application frequency, product selection and cost will vary greatly depending upon weed species and pressure. Sandea provides better control of both yellow and purple nutsedge than glyphosate (Roundup, Touchdown). Glyphosate is moderately effective on purple nutsedge with repeated applications prior to the six-leaf growth stage. Read the Sandea label carefully and consult your crop advisor before applying to sandy soils. Those electing not to apply a preemergence herbicide should tune up their application equipment to insure optimal coverage. Low rates of Goal in combination with glyphosate have been documented as more effective in burning down existing weeds than if used alone.

What’s better? Repeated postemergence applications or a good preemergence program? I would strongly advise you to use the preemergence program. Weeds have a way of getting away from you. Wet weather makes this even more likely. Cost comparisons between pre and postemergence programs often show that the expense of repeated contact application equals or exceeds the onetime cost of the preemergence treatment. This is especially true if you have noxious weeds like fleabane which are best controlled with the newer preemergence materials.

NOTE: Herbicide application equipment should NEVER be used for treating tree foliage!! You are begging for big trouble, if you do. This is especially true with Chateau, so please be wise and avoid injury to your trees.

Manufacturer labels providing essential information about the proper use and application rate for all pesticides can be accessed at <http://www.agrian.com> or <http://www.cdms.net>.

Happy farming!