Table 1. Examples of general effective timing, resistance risk, relative efficacy, and target diseases of different FRAC group fungicides (alone or as mixtures) available to prune growers in California at the beginning of bloom, 2012. Letter color indicates relative resistance risk of the different fungicide classes – red is high risk, yellow is medium risk, and green is low risk. Stars after each mixture indicate relative efficacy of the product(s) – limited and erratic (\*),moderate and variable (\*\*), good and reliable (\*\*\*), and excellent and consistent (\*\*\*\*). See Table 2 for product names to match with FRAC numbers listed here. Consult with your PCA for specific fungicide application rates and timing(s) for disease control in your orchard. The information in this table is drawn from [Efficacy and Timing of Fungicides, Bactericides and Biologicals for Deciduous Tree Fruit, Nut, Strawberry and Vine Crops, 2011](http://ipm.ucdavis.edu/PDF/PMG/fungicideefficacytiming.pdf).

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| --- | --- | --- | --- | --- | --- | --- |
| **Disease** | **Green bud** | **White bud** | **Full bloom** | **May** | **June** | **July** |
| **Brown rot** | **2(+oil)\*\*\*\*****3\*\*\*\*****3/9\*\*\*\*****3/11\*\*\*\*****7/11\*\*\*\*****9\*\*\*\*****11\*\*****17\*\*\*****M4\*\*****M5\*\*** | **2(+oil)\*\*\*\*****3\*\*\*\*****3/9\*\*\*\*****3/11\*\*\*\*****7/11\*\*\*\*****9\*\*\*\*****11\*\*****17\*\*\*****M4\*\*****M5\*\*** | **2(+oil)\*\*\*\*****3\*\*\*\*****3/9\*\*\*\*****3/11\*\*\*\*****7/11\*\*\*\*****9\*\*\*\*****11\*\*****17\*\*\*****M4\*\*****M5\*\*** |  | 3\*\*\*\***3/11\*\*\*\*****3/9\*\*\*\*****7/11\*\*\*\*****9\*\*\*****11\*****17\*\*\*** | 3\*\*\*\***3/11\*\*\*\*****3/9\*\*\*\*****7/11\*\*\*\*****9\*\*\*****11\*****17\*\*\*** |
| **Lacy scab** |  |  | **M4\*\*\*****M5\*\*** |  |  |  |
| **Rust** |  |  |  | **3\*\*\*****3/9\*\*\*****3/11\*\*\*\*****11\*\*\*****M2\*\*** | **3\*\*\*****3/9\*\*\*****3/11\*\*\*\*****11\*\*\*****M2\*\*** | **3\*\*\*****3/9\*\*\*****3/11\*\*\*\*****11\*\*\*****M2\*\*** |

Table 2. Examples of FRAC groups (2, 2, 9, etc.) and FRAC group combinations (3/9, 3/11, etc.) available to prune growers in California at bloom, 2012. Always read the label before applying pesticides. Consult with your PCA regarding spray timing, rates, etc. Not all generic products available in the market are listed in this table.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **2** | **3** | **3/9** | **3/11** | **7/11** | **9** | **11** | **17** | **M2** | **M4** | **M5** |
| Rovral | Tilt/Bumper | Inspire Super | Adament | Pristine | Scala | Gem | Elevate | Sulfur | captan | chlorothanil |
|  | Elite/Tebuzol |  | Quadris Top |  | Vangard | Abound |  |  |  |  |
|  | Indar |  | Quilt Xcel |  |  |  |  |  |  |  |
|  | Quash |  |  |  |  |  |  |  |  |  |