

After 25 Years of Mulching in Orchards, What Do We Know?

Ben Faber, UCCE, Ventura and Santa Barbara Counties

Mulch Benefits

1. Soil moisture is conserved, by both reduced evaporation and reduced weeds (requiring 3-6 inches depth). Soil infiltration is improved due to reduced surface sealing from rain and irrigation impact.
2. Soil erosion significantly reduced due to reduced overland flow and improved infiltration
3. Soil fertility improved due to decomposition and leaching of the mulch.
4. Weed competition is reduced
5. Soil structure is improved from increased biological activity
6. Soil compaction is reduced with less puddling and vehicle weights are dispersed. Provides for an improved traffic surface in wet weather.
7. Moderates soil temperatures so that summer temperatures are cooler and winter warmer.
8. Some diseases are reduced, such as Phytophthora, due to increased biological activity
9. Snail activity is reduced

Mulch disadvantages

1. Nitrogen deficiency may develop if mulches are incorporated or early in the process
2. Excess moisture may occur in fine-textured materials or if the irrigation cycle is not reduced to reflect reduced evaporative loss
3. Air temperatures are colder above a mulch due to their low heat capacity
4. Mulched trees may be delayed in developing hardiness due to late fall vigor
5. Weeds and disease can be introduced with the mulch
6. Fire can potentially be a problem with newly applied mulches
7. Rodent damage can be increased