

# LIMONEIRA COMPANY

Santa Paula, CA



MULCH & COMPOST  
LOW-FLOW MICRO-SPRINKLERS  
NO-TILL FARMING METHODS

**Gus Gunderson (left) and Ely Key (right)**

Sustainability is a high priority to Limoneira Company, as the Ventura County based company's 115-year history can attest. They grow a variety of fruit and nut crops on 7,000 acres in Southern California, including approximately 3,000 acres of lemons and avocados grown in Santa Paula, CA. Part of Limoneira's success lies in their dedication to building partnerships with the community and other companies that share their vision.

In response to the Integrated Waste Management Act of 1989, Limoneira Company formed a partnership with Agromin Corporation to help Ventura County meet required reductions in waste delivered to landfills. The partnership, formed in 2004, mutually benefits both companies. Limoneira provides Agromin with access to five acres of land, on which Agromin produces organic mulch and compost from municipal green waste collected from Ventura County residents. In exchange, Agromin provides Limoneira with valuable soil amendments for their farming operations.

According to Gus Gunderson, Head of Southern Farming Operations, and Ely Key, Special Projects Manager, the organic mulch helps improve both soil structure and water efficiency. As Gus explains, "We are confident that the Agromin product has been helping improve orchard health because after applying mulch to the orchard floor we have seen an increase in overall tree health and productivity. As we add the organic matter, we are adding benefits to the soil structure; improving soil tilth and microbial populations. We are getting better intake of water and better intake of nutrients, which in turn gives us better root systems."

## WATER-SAVING PRACTICES

- Limoneira applies organic mulch/compost on their lemon and avocado orchards. Organic mulch reduces the need for water by holding moisture in the soil and reducing the amount of water lost through evaporation.
- Limoneira contracts with Fruit Growers Laboratory to help monitor their soil and water quality, which helps them evaluate soil moisture levels and avoid ground water contamination.
- Limoneira converted to low-flow micro-sprinklers and modified furrows with micro-tubes (spaghetti-tube) emitters to irrigate crops.
- Using no-till farming methods in the orchards, they are able to reduce soil erosion and improve soil moisture holding capacity.



Limoneira lemon grove

## BENEFITS

- Compost improves soil structure by reducing bulk density in clay soils and increasing water-holding capacity in sandy soils. Improved soil structure produces better root structures and improves air and water infiltration.
- Mulch holds the soil in place, reducing soil erosion and associated negative impacts on water quality.
- Mulch increases organic matter in the soil, which in turn increases the amount of nutrients available to the trees and plants and reduces the need for chemical fertilizer.
- Organic mulch is beneficial for the maintenance of mi-



Agromin green waste shredder

croorganisms. It provides food and a stable environment, with a constant soil temperature, in which the microorganisms thrive.

- Organic mulch dramatically reduces weed growth and herbicide use.
- Mulch improves tree and plant health, leading to increased plant yield and improved fruit quality. Research conducted by the University of California Cooperative Extension also indicates that mulch can suppress the growth of *Phytophthora* and reduce the appearance of avocado thrips which cause scarring of immature fruit, thereby reducing the need for chemical pesticides.<sup>4</sup>
- The partnership between Limoneira and Agromin has had significant impacts on reducing the amount of green waste entering landfills.

<sup>4</sup> See resources list for research regarding the effects of mulch on *Phytophthora* and Avocado thrips.

“Economic efficiency is always driven back to the ranch because irrigation is probably our second largest input, after labor. If you include the cost of water, the energy to pump the water and the time to go out and check the sprinkler systems, it adds up really quickly.”

—Gus Gunderson

## COSTS

- The cost of spreading the mulch including equipment and labor is around \$350 per acre.
- Limoneira receives the mulch free in exchange for providing Agromin with five acres of land to use for mulch production.

## LESSONS LEARNED

- **Develop partnerships.** By developing a partnership, Agromin Corporation and Limoneira help recycle the community’s green waste while providing mulch for Limoneira’s orchards and a marketable product for Agromin.



Applied mulch at Limoneira