

PACIFIC GRO

Seafood for the Soil®

Post Harvest Fertilization

For orchards, berries and other woody perennials, next year's crop benefits greatly from nutrients applied after harvest. As long as plants have foliage they are absorbing nutrients and sunshine. Stored nutrients and energy will determine how many buds are set for flowering and fruit.

And fall feeding can protect plants from an early freeze, by increasing the brix of sap with nutrients stored in plant stems and branches. Higher brix provides resistance to frost damage and also to insects. One of our orchard customers avoided yield losses the following year suffered by his neighbors due to an early freeze. He attributes this to high nutrient loading with a program including Pacific Gro. A berry farmer saved his cane berries that were expected to die back due to a severe freeze.

Insights from our Customers



When fertilizing a perennial crop, the most valuable liquid applications are when the plant is coming out of dormancy, and the final application before winter. This is because during the backside of the growing season, plants are at their most vulnerable and weather can be volatile. Fall fertilization is the best time to build long term micronutrient reserves in the soil with chemical and biological soil correction. Applying minerals and inoculating or stimulating microbes in the rhizosphere prior to winter helps to make the best use of the long dormant period to build soil health without crop nutrient demands.

Depending on the plant hardiness zone and amount of soil moisture, you may still have active microbiology near the soil surface in winter. Unless ground freezes and stays frozen at 18" below ground all winter, chances are there will be biological mineralization in some layers of soil, and fungal digestion of organic matter. This sets your plants up to come out of dormancy with full vigor and healthy, balanced new growth because the soil biology has been working (slowly) all winter long. Combine the soil applications with fall foliar sprays that include Calcium, Phosphorous, micronutrients and trace elements and your plants will be receiving much of what they need to build long term resilience.

David Knaus, Apical Crop Science, Portland, Oregon



Rainier Cherries, Dwayne Bowman, Yakima Valley

We believe it is extremely important to provide post harvest nutrition to our blueberry and blackberry crops. By providing the nutrients dictated by tissue analysis along with Pacific Gro soil and foliar applications, we keep our leaves healthy as we move into the dormancy period. This enhances photosynthesis which increases carbohydrates stored in the plant reserves, bringing us closer to maximum crop potential the following season.

And it increases soil microbiological activity.

Jason Berry, Alpine Fresh, Georgia and Florida

Post Harvest Fertilization

We farm avocados and citrus in southern California. After harvest we are still carrying next year's crop on the tree so post-harvest fertilization is very important, especially for sizing. Besides carrying that crop, we are trying to set the tree up to be more reproductive than vegetative in the spring.

Using Pacific Gro gives us that little bit of extra energy that can tip the balance towards reproductive in the build up to senescence in the early fall. Lemons on the coast tend to have multiple stages of fruit development on the tree at any given time. Our harvest is more or less over by late summer, but we want to continue giving the trees as much energy as possible into the fall so that they will set more flower for next year's late summer crop. Because our winters are so mild we have found that spoon feeding small doses of fertilizer including Pacific Gro Oceanic shrimp and crab over the winter allows both types of trees to really hit the ground running in the spring.

Andy Sheaffer, Vista Punta Gorda ranch, Ventura, California

Why post-harvest fertilization?

On perennial crops post-harvest fertilizer applications are often neglected because it is assumed that the next crop set begins in Spring. But in fact the next crop bud set is being determined during the current growing season going into fall. In stone fruit like cherries, the time following harvest into fall is critical for the tree to decide how many buds will be flowers/fruit or leaves in the spring. The bud set is determined by how much reproductive energy the plant has. That can be influenced by many different factors, but primarily by post harvest nutrition applications.

The energy perennial crops use during bloom primarily comes from the stored carbon inside the plant structure, because the soil has not warmed up enough in the early spring for the roots to assimilate nutrients for energy during bloom. So the more stored carbon/energy you can get into the plant structure after harvest, before the plant goes dormant in the fall, the greater success you will have in the spring with a high-quality bloom.

There is also a balance between growth vs. reproductive energy. For example, if there are post-harvest applications of nitrate nitrogen, you will have more leaf buds rather than fruit or flower buds in the coming spring, because nitrate is growth energy vs. ammonium which is reproductive (flower promoting) energy.

This is why Pacific Gro fits so well in a post-harvest fertilization program. It provides a balanced growth vs. reproductive energy, because the nutrients including nitrogen are in organic, protein, non-leaching forms. Also it stimulates soil microbiology which will release nutrients in the spring as well as the fall before the plant goes dormant. Pacific Gro also contains multiple micronutrients which enhance bud set.

Probably the most desirable effect from post-harvest applications of Pacific Gro, is the calcium availability it provides. It stimulates soil microbiology to release calcium to the plant as well as providing a very plant available form of calcium from the ingredients in Pacific Gro itself.

Trent Graybill
SOILCRAFT Balanced Soil ~ Nutritious Fruit
Yakima, Washington

Many growers think that their job of taking care of their fertility programs for their perennial crops is done at the end of harvest until the following spring. This is totally wrong. After harvest the plant is very low on energy and needs to prepare for winter, stock piling carbohydrates (sugar) to get through the winter and initial spring and new growth. Also these "sugars" act as anti-freeze when it gets cold and will help the plant get through freezing conditions. Many growers experience "alternating years" where they have a heavy crop one year and a light crop the next. This is a perfect example of a lack of energy post-harvest. After harvest, if the plant is short of energy it will take the low road and go in to vegetative the following year. Conversely if the plant has adequate energy in the fall it will produce a heavy crop the following year. I personally have experienced this situation many times until I started understanding the energy needs of the plant. Now that I feed post harvest I consistently have good yields with high quality (nutrient density) every year without winter damage.

The way I accomplish this is to apply a couple of soil applications, many times using Pacific Gro along with minerals and other carbon sources. This gets the soil biology revved up which in turn recharges the plant. Then follow with a couple light foliar of Pacific Gro with other fertilizers.

Often the results will be subtle in the fall and very obvious in the spring.

Bob Wilt
Sunset Valley Organics / Western Aglands
Corvallis, Oregon

Pacific Gro
Oceanic Hydrolysate



Supplies a broad range of nutrients from the ocean

Increases plant Calcium levels, outperforming conventional Calcium sources

Known to improve produce firmness, thus greatly enhancing quality