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“Composted mulch has improved our drainage and reduced our weed cover.”

Penny Tideman

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Compost for fruit growing – a case study from Ticoba, Comboyne, NSW

Who

Ernst & Penny Tideman

Where

Ticoba Blueberries and Avocados
Comboyne, NSW

What

Blueberries and Avocados

Aims

- improve soil health and structure
- reduce the need for weeding
- improve soil biology

Outcomes

- 25% reduction in synthetic fertiliser use
- increased soil carbon levels
- increased soil friability
- improved soil structure and drainage
- improved soil biology
- increased earthworm numbers
- reduced irrigation requirements
- reduced weed cover

Ticoba Blueberries and Avocados

The rolling green hills of the Comboyne Plateau have highly fertile volcanic soils. With an annual rainfall around 2000 mm, Comboyne was originally a prime dairy farming region. Recent years have seen a growth in horticultural production with plantings of avocados, blueberries, macadamias and a range of other fruits and vegetables.

The Tideman family has been growing blueberries and avocados in the Comboyne region since 2005. Their four hectares of blueberries and 60 hectares of avocados are grown with minimal chemical inputs. Sustainable farming is fostered through a focus on biologically friendly practices for their plants and their soils.

Why compost?

Weeds, especially kikuyu, have always been a big problem for the Tidemans. At one stage, two people were employed full time just to weed the blocks. The Tidemans tried a range of mulching methods to reduce weeds, including permeable weed mat and a combination of wood chips and poultry manure.

The Tidemans also had areas on their farm where drainage was poor. Avocado trees in those areas were prone to waterlogging and infection with the fungal disease Phytophthora, which kills trees.

After attending a Soil Foodweb Institute workshop in 2005, the Tidemans decided to try making their own composted mulch and compost tea on site. They wanted to see if composted mulch could reduce weeds and improve the health and structure of the soil.

Compost application

Composted mulch is spread on the soil surface under trees at a rate of 145 m³/ha. Every avocado tree or blueberry bush gets one application of compost a year, usually in spring, but this varies depending on time and site access.

The outcomes

When compared to their previous mulch of raw wood chips and poultry litter, compost provides the Tidemans with many more benefits. Soil condition has improved, soil carbon levels have increased and soils are now more friable.

Nutrient levels in soils have increased and they've been able to reduce their synthetic fertiliser applications by 25%. Soil biology has improved significantly with a huge increase in earthworm numbers.

Composted mulch has improved drainage in areas that were prone to waterlogging and reduced the demand for irrigation. The Tidemans have also seen a reduction in weed cover, meaning they don't have to spray as much herbicide to keep weeds under control.

It took two to three years to see the benefits of using composted mulch, but the Tidemans have no doubt it's a worthwhile investment of time and money.

Making compost on-farm

Each year hard wood chips and poultry manure are purchased and mixed with several tonnes of avocado and blueberry prunings from the farm. A commercial compost is added to inoculate the organic materials with composting organisms and speed up the composting process. Making good consistent compost on-farm can be difficult and time consuming, so adding commercial compost as an inoculant makes the whole process easier and quicker. The compost is made in open windrows with temperature and moisture levels monitored regularly. It is turned when necessary to stop it from becoming too hot.

After years of trial and error, a steep learning curve and help from some experts, including laboratory testing, the Tidemans now have approximately 100m³ of organic material composting at any one time.



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“Composted mulch gives us more benefits than our raw mulch did.” Penny Tideman

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Where to from here?

In the past, the Tidemans have made and used their own compost teas, initially from their own compost, then with ready-made inoculums. This year they're getting back into brewing their own compost teas to produce a foliar spray. The compost teas help to establish a diverse range of beneficial microbes on the plants and reduce the incidence of disease.

The bottom line...

Compost fits with the Tidemans farming philosophy. Composted mulch helps them recycle nutrients back into the system, promote healthy well balanced and well-structured soils and foster a diverse range of beneficial microorganisms. Composted mulch is also helping them tackle their weed problem.

For more information on the program contact:



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