



Compost for vegetable growing – a case study from Hills Fresh, Gumeracha, SA

Who

Steven Newman, Hills Fresh

Where

Gumeracha, Adelaide Hills,
South Australia

What

Lettuces, cauliflowers and leeks

Aim

To maintain soil health under
a continuous cropping regime

Outcomes

- improved plant health
and soil structure
- some yield increases

Hills Fresh

Hills Fresh is a family business based in Gumeracha in the Adelaide Hills, South Australia. The Newmans have been growing in the area for six generations and these days grow lettuces, cauliflowers and leeks which are sold through the Adelaide Produce Markets and local independent grocery stores.

Steven Newman, production manager at Hills Fresh, has been moving towards more environmentally sustainable farming methods for several years now, while still maintaining the quality of their product and the profitability of their business. Hills Fresh wanted to improve the health and structure of their soil and increase water use efficiency on their farm.

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“We started using compost on one block, saw good results and so started using it on other blocks.” Steven Newman, Hills Fresh

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“The soil has a better structure and is easier to prepare for transplanting.”

Steven Newman, Hills Fresh

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The bottom line...

Using compost has allowed the Newmans to crop continuously while improving plant and soil health and continuing to produce a quality product. Soil tests show that soil organic carbon levels have not decreased since compost has been used under the continuous cropping regime. This is remarkable since the heavy cropping regime would be taking out a significant amount of soil carbon.

Steven has seen definite improvements in plant and soil health over the last three years. Compost use, in conjunction with other strategies like controlled traffic farming has also made a huge difference to the friability of the soil. They no longer see the hard crust that used to form on the soil surface and the soil is now much easier to work up before transplanting.

It is too early for Steven to quantify the yield benefits of compost but Steven knows his plants and his soils - to him the benefits of compost are obvious.



Why compost?

Traditionally the Newmans have planted cover crops in between vegetable crops to maintain soil health and organic matter levels. Increased economic pressures on production mean they now need to crop continuously which leaves no time for cover crops.

Their soils are light loam to clay loam with a natural pH of 5.5–6.5. In the past their soils have been difficult to work up before planting due to a crust that forms on the surface.

The Newmans chose compost because it can:

- provide organic matter
- improve the structure of the soil by increasing aeration and water holding capacity
- improve soil fertility through slow release of nutrients
- provide beneficial microbes that make nutrients more available to plants
- improve soil health and structure without the down time needed to grow a cover crop.

Compost application

Hills Fresh started using compost three years ago as part of trials being run by SARDI and then Compost for Soils. They saw enough benefits in those initial trials to continue to use compost on their farm. In the initial trials compost was applied at 150m³/ha and benefits were seen almost immediately. Now they broadcast compost over planting beds at a more economical rate of 20m³/ha once a year before transplanting crops. The timing of compost applications varies depending on crop rotations. The Newmans do their own spreading and compost costs them around \$400/ha. Newmans source their compost from a commercial supplier.



Where to from here?

Heavy rains in the last year meant that much of the compost that had been broadcast was washed from beds. This year the compost will be incorporated to a depth of 5–10cm to stop this from happening again. The Newmans have sometimes found it difficult to get the compost into the right place on established planting beds but will continue to experiment with their compost applications to determine the methods that work best on their farm.

For more information on the program contact:



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