



Farmer to Farmer  
Soil Best Management Practice

**Ground Covers for Soil Health**  
Lynette and Otto Saeck  
Blueberry Fields, Northern Rivers NSW



**Project Objective: Trial of groundcovers to improve soil health, optimize water use, minimize erosion, and develop a sustainable weed management system.**

Blueberry Fields is a 65.5 ha orchard with approximately 40 ha planted to blueberries of varying maturity.



**Pictured above on right: Otto Saeck**

Historically we have used farming methods based on industry developed systems for large scale blueberry production using chemical fertigation with drip irrigation under weed matting. Over the years a range of problems have emerged including low PH, poor root development and declining production. Traditionally in the Northern Rivers we have needed to replace plants every 5-7 years by completely reworking the fields which exposes the land to the threat of erosion. Therefore we are now looking at alternative systems which can address these issues. Our focus has now moved from the plants to the soil with the long term aim of achieving economic and environmental sustainability and more efficient water use.

**Groundcover trial steps:**

Blueberry Fields is located on the Alstonville plateau in Northern NSW and has a krasnozem soil type. In the north west corner of Block 3 (which does not have weed mat) the following was planted/applied in mid-late April 2010.





- Inter-row: Coated Haifa Clover, Coated Red Clover, Oats 'Saia', Bolten peanut.
- In the row between newly planted blueberries: Nasturtium.
- On prepared but unplanted mounds: Vetch Blanch Fleur and Woolly Pod Vetch.
- 6T/Ha of blend of in-house compost, purchased worm casting and lime (@ 1T/Ha).

For the remainder of Block 3 the following was planted in mid-late April 2010.



**Block 3 trial being prepared for new blueberry planting. Photo taken from the north east.**

Inter-row: Ryegrass, White and Red Clover, Oats 'Saia'.

<p><b>Proposed benefits:</b></p> <ul style="list-style-type: none"> <li>▪ Increase soil organic matter</li> <li>▪ Increase infiltration</li> <li>▪ Improve soil structure</li> <li>▪ Decrease runoff</li> <li>▪ Decrease soil erosion</li> <li>▪ Conserve soil moisture</li> <li>▪ Increase nutrient availability</li> <li>▪ Reduce nitrate leaching</li> <li>▪ Supply/maintain nitrogen</li> <li>▪ Suppress weeds (provide bulk to be mowed and left on the mounds)</li> <li>▪ Suppress soil-born diseases/nematodes</li> <li>▪ Attract beneficial insects</li> <li>▪ Increase crop yields</li> <li>▪ Improve soil health</li> <li>▪ Efficient water use</li> </ul>	<p><b>Additional information/ how to monitor</b></p> <ul style="list-style-type: none"> <li>▪ Soil health on Dave Forrest's recommendation</li> <li>▪ Cost of weed control</li> <li>▪ Erosion after rain events</li> <li>▪ Plant vigour</li> <li>▪ Plant productivity</li> <li>▪ Water use</li> </ul> <p>We note that while we are able to monitor these anecdotally to build up a picture of the benefits, we do not have the research skills, technical equipment or the baseline data to measure these changes scientifically.</p>																
<p style="text-align: center;"><b>Early fruit under net</b></p> 	<p style="text-align: center;"><b>Weed mat covered mounds</b></p> 																
<p><b>Budget</b></p> <table border="0"> <tr> <td>Seeds</td> <td style="text-align: right;">\$707.25</td> </tr> <tr> <td>Additional seeds</td> <td style="text-align: right;">\$400.00</td> </tr> <tr> <td>Compost</td> <td style="text-align: right;">\$2,250.00</td> </tr> <tr> <td>Labour (29hrs)</td> <td style="text-align: right;">\$725.00</td> </tr> <tr> <td>Consulting (3hrs)</td> <td style="text-align: right;">\$225.00</td> </tr> <tr> <td>Worm castings</td> <td style="text-align: right;">\$1,921.84</td> </tr> <tr> <td>Lime (\$75T)</td> <td style="text-align: right;">\$375.00</td> </tr> <tr> <td>Compost spreading</td> <td style="text-align: right;">\$600.00</td> </tr> </table>	Seeds	\$707.25	Additional seeds	\$400.00	Compost	\$2,250.00	Labour (29hrs)	\$725.00	Consulting (3hrs)	\$225.00	Worm castings	\$1,921.84	Lime (\$75T)	\$375.00	Compost spreading	\$600.00	
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