

Geothermal heat for hydroponics in Kawerau

na Hineani Melbourne

The Savage family of Kawerau have built on so called useless land a hydroponics hot house. What is unique about this hydroponic development is that it uses natural heat from the ground.

Heating, usually the most expensive cost for a hot house, is from geothermal activity. The nutrient tank is sunk into the ground and the soil heats the water around 22-24 degrees, the exact recommended temperature.

Around the hot house are stunted twisted plant growth. Steam drifts across barren land from the nearby hot water lake. It's long been seen as waste land. Yet here amongst the ruins of the family papakainga, kamokamo were fruiting in early September.

Says their spokesman Beverley Adlam, "We were advised to grow tomatoes but everyone else was growing tomatoes and we couldn't see a great demand for them. We also wanted to grow something we knew lots about so we could compare them with 'normal' ones grown outside. That's why we decided on kamokamo. We definitely knew there was a market for out of season kamokamo".

The operation is a family cooperative. Only William Savage works fulltime, or as much as his farm allows him. There's a pool of a dozen or so who work on a roster system.

William (Shuki) Savage, the head of the family explained that the kamokamo is a hardy plant and easier to grow than the tomato or any other plant they could think of.

However little is known about the kamokamo plant. But records are kept of each plant, the fruit it bears, size and so on. Photos help keep track of each stage and provide a fascinating record.

The kamokamo is seen as a pilot programme although the family admit to being pleasantly pleased with sales. They are teaching themselves hot house management, marketing, packaging and so on as they go along.

They have learnt some surprising things. "The kamokamo grown in the hot house," explains William Savage, "grows much larger than those outside. But they are still soft and juicy. We have had to educate our customers that though they are larger than normal they don't become tough and hard".

The family decided to try hydroponics as they had been looking at ways to use their land for some years. It was no good for horticulture or anything else that they could think of. Its only asset was the geothermal activity.

They heard Maurice Raureti speak about the advantages of hydroponics or

Nutrient Film Technique and decided that was for them. Maurice Raureti was hired as their consultant and a programme was set out.

Mostly through trial and error, although no major disasters as yet, the group has faced lots of challenges and seems to have overcome them well, learning in the process.

The busiest time for them was the actual building of the unit. Now only about two people are needed at any one

time. Vents need opening and shutting to control the flow of nutrients, laterals picked off to control growth and for a while the plants were pollinated by hand. This job is now done by obliging rented bees.

For the future the descendants of William Savage and Arahia Wharepapa are looking at further developing their lands.

"We know we are going to have to supply our young people with jobs in the future," says Beverly Adlam, "so we want to develop our resources, such as further developing the hydroponics to include perhaps exotic fruit, as well as further developing the natural hot pools in the area.

"We are not going to get this all done tomorrow," laughs Beverly "but we will work at it and face whatever challenges we meet".

Note from the author of this article: The kamokamo were delicious.



Gina Rintoul stringing up kamokamo plants. (Courtesy Kawerau News Gazette)



Bubs Pacey displays the kamokamo. (Courtesy Kawerau News Gazette)