

Development of organic farming in distant rural Māori communities in New Zealand through successful participatory approaches

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Abstract

A research partnership was initiated between scientists of Crop and Food Research and rural Māori communities in the Tairāwhiti region of New Zealand to help these communities with the transition from extensive agriculture to intensive organic horticulture. Within the project, growers are working together with agricultural scientists, extension specialists and social scientists using participatory approaches, what has proved to be a powerful tool for increasing the relevance and effectiveness of research for these communities. Progress towards original goals has been slower than expected, but mutual trust and developed relationships between the scientists and the community were recognised as the key factor in the project, and both groups were able to learn new and valuable skills. Many hands-on tools and techniques that made a real difference within the context of local organic vegetable cropping were developed and successfully employed.

Introduction

The Tairāwhiti district (Fig 1) is a remote and predominantly Māori region with traditionally high unemployment and low rates of economic development.



Figure 1. Tairāwhiti district (dark) situated on the East Coast of the North Island of New Zealand

The district covers 8330 square kilometres, almost 5% of New Zealand's total area, with 40,000 ha of rich alluvial river flats, ideal for growing crops with the remainder of the area mainly hill-country, well suited to farm sheep and cattle. The total population of the district is 45,000, a third of which is spread sparsely throughout the rural

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countryside or in small townships along the extensive coastline. In 2000, a joint local and central government taskforce was established to promote the development of the region. They concluded that organic production (already practiced on a small scale by some landholders in the region) represented a viable use of under-utilized Māori land and recommended further research into how organics might be further developed in the district. In addition, around 50 organic, most Māori growers with access to land areas ranging from a half an acre to several hectares, formed the East Coast Organic Producers' Trust (ECOP), based in Ruatoria, Waipiro Bay, Tiki Tiki and Tolaga Bay.

Objectives

The ECOP Trust produced a Strategic Plan which detailed their common agreement to develop their land for commercial organic vegetable production with the goal of increasing employment and improving the well-being of their East Coast community. Together with Crop and Food Research (CFR) an Implementation Plan was developed. ECOP and CFR successfully applied to the Foundation of Research, Science and Technology (FRST) for a programme called "Science for Community Change" was established to aid the development of a profitable and sustainable organic industry on the East Coast using participatory approaches (Kerckhoffs et al, 2006). An additional aim of the project was to improve the ability of scientists to work with rural Māori communities. The specific goals were jointly finalized (at the start of the project) by ECOP and the science team at a *hui* (formal meeting) in 2003 in Ruatoria: (1) to help East Coast Māori make the transition from extensive agriculture to intensive organic horticulture; (2) to provide scientific, education, and extension services to assist ECOP to develop and implement best organic vegetable farming practices; (3) to design methods to promote beneficial change in rural Māori communities and production systems. ECOP was strongly guided by its original vision to promote values of *tino rangatiratanga*, *kaitiakitanga* and *whanaungatanga* (approximately translated as independence, guardianship, and relationship, respectively) in the East Coast community. There was also a great desire to revive the declining cropping tradition among *Ngati Porou* growers reflected through a mixture of belief in the cultural importance of traditional cropping with a strong desire to provide a positive social and economic example in order to attract back the youth of the community to the region. There was also a strong belief in the health and environmental principles of organics, which are closely aligned to their traditional cropping practiced over many generations.

The project joins ECOP Trust with a team of crop scientists, technicians, a local agricultural consultant complemented by social scientists, and provide agronomic advice to ECOP members while carrying out various organic crop trials on members' land to determine which crops are most appropriate for East Coast conditions. Many (international) students are involved, including several Māori students from the district. The project is also designed to improve the ability of scientists to work with rural Maori communities, and as such ECOP members provide informal and formal advice and training to CFR regarding *Māori tikanga* (protocol and traditions). Most project interaction takes place through workshops and field walks, which are designed in consultation with the local growers and their community with a clear focus on both organics and *matauranga* (traditional knowledge) as guiding principles. Local *hui* (meetings) are held at *marae* (Māori meeting houses) throughout the district (Fig 2). The initial focus was predominantly on many technical soil and cropping issues, like land management and agronomy with topics as soil (fertility), management of weeds, crop selection and winter cover crops. Other topics were subsequently added, and

included market access (e.g. interaction with organic wholesalers outside the district), post-harvest and quality issues of their crops (e.g. optimising conditions during curing, storage and transport), 'adding-value' to locally grown products and building viable businesses (including topics like marketing, labelling, food safety). Over the course of the project several topics were revisited to cater for newcomers and for re-newed interest within the original group of growers. Some very practical and hands-on tools are being developed, e.g. a series of cropping calendars (A2-sized wall-planners) for kumara and Māori potatoes (Cropping Calendars, 2006; 2007), the development of a kumara curing cubicle (a low-cost solution to properly cure the kumara after harvest), the development of a mulch-system to enhance kumara growth/yield with additional benefits (e.g. water savings, and weed control). *Hui*, workshops, field-walks and other forms of interaction (e.g. newspapers, radio and TV) are the principal communicating techniques, and are characterized by its interactive and hands-on nature. In addition other scientific information is provided in hand-outs as well as *Te Panui* (newsletters/technical sheets) and on our website of the project (www.panui.org.nz)



Figure 2. Participants of a 3-d hui at Hauiti Marae in Uawa (Tolaga Bay) in August 2007 with topics: “Organic niche markets”, “Getting into business” and “Taste of the East-Coast”.

Discussion

Despite considerable enthusiasm generated at its inception, the project progressed more slowly than hoped or planned. ECOP's membership had dropped to a current active membership of 10-20 growers, yet at the same time the project has (as planned) attracted other community members not formally attached to ECOP, to its activities. Members of the science team describe an initial slow and sometimes frustrating period of trust-building and the perceived pressure to prove themselves to the growers and the communities involved. During the early stages growers were often reluctant to participate fully in the project, with low attendance at workshops and field-days, which was frustrating as workshops were a costly and time-consuming undertaking involving travel times in excess of 5 hours each way. However, some great achievements have since been made during the course of the project: (1) the emergence (and subsequent empowering) of young Maori entrepreneurs as a result of the exposure of Maori communities to new land use options and market opportunities.

These community leaders are early adopters of the sustainable agricultural practices promoted in this programme and leading others by example. (2) The increased exposure of the science team to *matauranga* (traditional knowledge) and the explicit acceptance by growers and scientists of the need to strengthen and build on mutual experience and understanding. This improved understanding has been instrumental to develop more efficient collaborative research outcomes. (3) The substantial extension of networking beyond ECOP into the wider community, evidenced by wider community participation in *hui* and workshops (29 in total) and field-walks (12 in total); and by individual networking both by Maori growers and scientists. This has significantly empowered local communities into cropping. (4) A major extension of research activity in favour of products targeting high value, niche markets (e.g. promotion of Māori potatoes to the restaurant market, novel products like kumara wine, pickled walnut, and the like). This goes well beyond the original focus on (organic) production of vegetable crops (Māori potato, kumara) alone. The total cropping area has been significantly increased and, on average over the study area, had doubled with many new paddocks now being established for cropping. In addition, the geographic spread of the project has increased the potential of cropping on the East Coast. The volume of produce sold in the East Coast has significantly grown during the period of the programme with niche markets established for many. Both scientists and growers characterize their involvement with the project as profoundly positive. All growers feel the project has greatly improved their ability to grow vegetables commercially. Both parties characterize the understanding, trust, and respect that have developed as crucial and there has been an increasing and ongoing sharing of knowledge amongst all parties (Bruges and Smith, 2007).

Conclusions

In the region the extent of organic cropping has extended along with increased volume of organic produce for the market (within and outside the district). Much more importantly, we have evidence of community development, a much more positive and entrepreneurial spirit, and an expanding level of community interaction with the science team. This reflects substantial capacity building both within the community and within the science team itself. Many meaningful tools and new techniques have been successfully developed by the team and implemented by the local growers.

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