



IFAD/G. Manners



From subsistence farming to profit: the benefits of agro-wells in Sri Lanka

Large, well-constructed ‘agro-wells’ are making farming profitable for farmers living in dry areas of Sri Lanka. Farmers in the dry areas of the district of Matale benefited from the Regional Economic Advancement Project (REAP) from 1999 to 2007. REAP was mostly funded by a loan of US\$11.7 million from IFAD to the Government of Sri Lanka. The project had a total budget of US\$14.5 million, and benefited some 30,000 households. A major activity of REAP’s subcomponent on soil conservation and water management was assistance to the poorest farmers to enable them to construct agro-wells for irrigation purposes. This activity was started in 2001.

Agro-wells are large – typically 4.5 metres in diameter and 7-8 metres deep – and carefully constructed from blocks and concrete for durability. They last for many years with minimal maintenance. This is in contrast to traditional water wells that had to be repaired each year after the rains, at a cost of 8,000-10,000 Sri Lankan rupees (Rs 110 is approximately equal to US\$1).

The typical farming pattern without an agro-well is to plant the principal crop (rice in the lowlands, and vegetables and cereals in the highlands) during the north-east monsoon, or *maha* season, and then secondary crops (typically vegetables grown in the paddy fields and a few crops in the highlands) during the south-west monsoon, or *yala* season. A major problem is that the *yala* rains are unreliable and a period of drought can destroy the crops in the field. Consequently, farm-based income and employment are not only low, but are also concentrated into the *maha* season. Farmers in this situation merely subsist.

With an agro-well, farmers have increased crop rotation and stabilized their *yala* crop – with the well providing irrigation water for periods when there is no rain. Some farmers are even able to grow a crop in the dry season – something that was not possible before. With more farm produce than ever before, farmers are now in a position to make a profit from their farming activities.

“Part of the beauty of this project system is that farmers can choose for themselves what to

do with their land,” says Anoja Wickramasinghe, senior professor of geography at the University of Peradeniya, who conducted an impact assessment of REAP in 2006 and 2007. “Farmers now have the option to link in with commercial enterprises to obtain good prices for quality produce or seed crops.”

One particularly popular option among farmers is growing big onion for seed. “Sri Lankan farmers use 160,000 tonnes of big onion seed per year,” says Priyanga Dematawa, manager of CIC Agri Business Center, Pelwehera, Dambulla. “Currently, Sri Lankan farmers produce only 50,000 tonnes of this seed. The rest comes in from India by various routes. We now have two new varieties in Sri Lanka, which yield 12 tonnes per acre [29.6 tonnes per hectare] or more, compared to the 5-6 tonnes [12.3-14.8 tonnes per hectare] of Indian varieties.” Consequently, there is great interest among farmers with access to water to become

However, big onion is not the only crop of interest. Farmers also report branching out into banana, beetroot, capsicum (sweet pepper), cassava, coconut, green chilli, long bean, maize, *nkole* (African chewing gum), okra, orange, papaya, pomegranate, pumpkin, *ratale* (a small sweet potato), tomato, winged bean and other vegetables. Several of these simply add variety to the home meal-table, but others are now grown commercially. For example, Mr Muthubanda of Digampathaha village spends 5000 rupees to grow 0.1 hectares of capsicum, from which he derives an income of 25,000 rupees.

And it is not just agriculture that benefits from the agro-wells, farmers also use the water for domestic purposes (bathing, washing, cooking and sanitation), brick-making and for watering livestock.

But, agro-wells are expensive capital investments. A typical agro-well built during the early stages of REAP cost some 100,000-140,000 rupees; by 2007, the cost had risen to 200,000 rupees! For typical farm households, REAP provided a grant of 40,000 rupees towards the capital cost, so farmers had to provide up to 100,000 rupees in the early days and about 160,000 rupees in 2007.

To help this situation, REAP developed linkages with five commercial banks, and offered direct loans to some farmers. For example, Prianka Kumara of Batuyaya village took out a loan for 30,000 rupees in 2002 to supplement his own funds of 50,000 rupees. Moreover, for farming households headed by women, REAP provided a greater proportion of the capital outlay in the form of a grant – Hema Kumarihamy of Thalakiriagama village received a 100,000 rupee grant towards her 200,000 rupee agro-well in 2007.

The great thing about agro-wells is that the huge investment is so worthwhile. Almost half of agro-well farmers had been earning 5,000 rupees or less per month before their wells were constructed; however, by 2006 over half of them were earning more than 10,000 rupees per month (see graph).

With these kinds of profits, it is no wonder that the farmers are happy and that there is still huge demand for more agro-wells. Many farmers have ploughed some of their profits back into their farms, investing in water-pumps, micro-irrigation systems (sprinkler or drip), onion stores, land and two-wheel tractors. These investments increase the profits still further – for example, the agro-well

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The owners of an agro-well in Thumbakarawilagama village, Dambulla division, tend their crop of winged beans

outgrowers for the private enterprise CIC Agri Businesses. Batuyaya village leader, Mr Bandula, noted that as an additional incentive, the Sri Lankan Government has recently imposed higher import taxes on big onion, so local producers can now make 110 rupees per kilogram, compared to about 30 rupees not so long ago.



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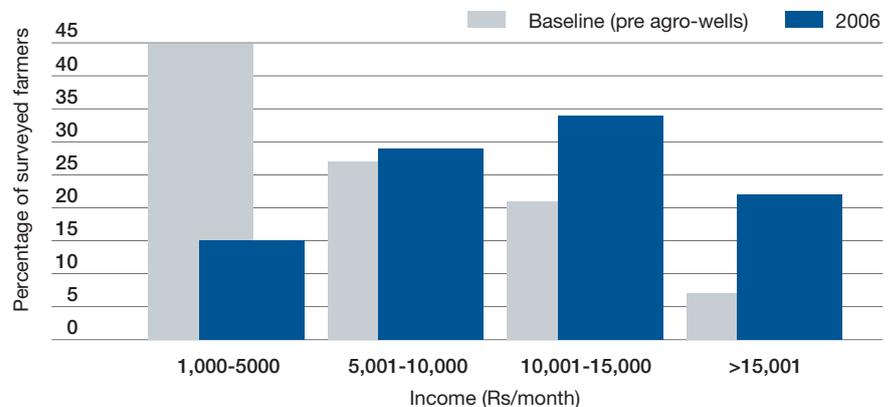
Off-season big onion production in a rain tunnel for CIC Agri Businesses, in Pelwehera, Dambulla division

of Mr Senanayake of Diggala village predates REAP, but through another component of the project, REAP helped him install micro-irrigation sprinklers. In *yala* 2007, he rented 0.8 hectares of land for 5,000 rupees, on which he grew onions; he harvested 12 tonnes of onion with a market value of 52-70 rupees/kilogram – in other words, his crop should sell for at least 624,000 rupees. He has also invested in his own onion store, so he has some flexibility to hold off sale for top market prices.

Despite the closure of REAP in December 2007, there is the political will in Matale district to continue helping poor farmers with agro-well construction. Dambulla divisional secretary, Chandra Herath, estimates that 70-80 per cent of the division's population are full-time farmers; some 8,900 of these are defined as poor and therefore requiring government attention. Meanwhile, deputy director for agriculture (extension, Central Province), Prasanna Pallemulla, says that funds were requested in the 2008 budget proposal for agro-well construction – six times the budget of 2007. However, this was to cover more divisions and districts.

So, the future is bright not only for those who have benefited from the grants available through REAP, but also for other farmers in Matale who

Distribution of agro-well farmers' income before they had their wells and in 2006



Source: Wickramasinghe, Anoja (2006) Impact Evaluation Study on the Agro-well Programme. Matale, Sri Lanka: The Regional Economic Advancement Project (REAP).

want to invest in agro-wells and reap the benefits. The growing interest in agro-wells among farmers and development practitioners shows future prospects for replication.

REAP is just one of 14 projects supported by IFAD loans to Sri Lanka to date, and the agro-wells are just part of one component of REAP. The Sri Lankan Government started working in partnership with IFAD and other donors in 1978. By the end of 2006, IFAD had committed a total of US\$191.7 million to projects in Sri Lanka, reaching 460,000 households, or 2.2 million people. Current projects (of which there are four, excluding the recently completed REAP) cover rural development (including post-tsunami support and rehabilitation), peace consolidation and conflict prevention.

KEY FACTS

Regional Economic Advancement Project (REAP)

Total cost: US\$14.5 million

IFAD loan: US\$11.7 million

Duration: 1999-2006

Geographical area: Matale District in Central Province

Directly benefiting: 30,000 households

Partners: German Agency for Technical Cooperation (GTZ), United Nations Office for Project Services (UNOPS), World Food Programme (WFP)

Status: closed

Did you know that ... ?

- Sri Lanka covers 64,610 km² – a land area slightly smaller than that of the Republic of Ireland
- The total population is about 19.6 million, of which at least 85 per cent, or 16.7 million people, live in rural areas
- About 25 per cent of the population (about 4.9 million people) live below the national poverty line
- About 45 per cent of the country's workforce, or about 3.96 million people, are employed in the agricultural sector

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LINKS

IFAD in Sri Lanka

<http://www.ifad.org/english/operations/pi/lka/index.htm>

Department of Agriculture, Government of Sri Lanka

[http://www.agridept.gov.lk/institutes_sub_more.php?id=24&mMenu=Horticulture&sMenu=Natural%20Resource%20Management%20Centre%20\(NRMC%20\)](http://www.agridept.gov.lk/institutes_sub_more.php?id=24&mMenu=Horticulture&sMenu=Natural%20Resource%20Management%20Centre%20(NRMC%20))

CIC Agri Businesses

www.cicagri.com

Stories from the field

<http://www.ifad.org/story/index.htm>

Acknowledgements: agro-well farmers: Ms Malika, Mr Bandula, Ms Gangani, Mr Karunarathne, Ms Prianka Kumara, Ms Hema Kumarihamy, Mr K. Muthubanda, Ms A.M.S. Indrani Padma, Mr Senanayake, Mr Susante and Mrs Tilakawathi; Mr M.P.R. Jayathilake of Galewela rural council; Mr Wasantha Wanninayake, Galewela divisional secretary; Mrs Chandra Heradh, Dambulla divisional secretary; Mr Prasanna Pallemulla, deputy director for agriculture (extension, Central Province); Mr Priyanga Dematawa of CIC Agri Businesses; Mr Sunil Fernando and Mr D.M.K. Gamage of REAP; Prof. Anoja Wickramasinghe, The University of Peradeniya; Mr Guy Manners, consultant writer; Mr Anura Herath, IFAD Sri Lanka programme management facilitator.

Building a poverty-free world

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