

PEANUT POTENTIAL

In the heart of PNG's fertile Markham Valley, farmers are working with research agencies to improve the profitability of peanuts, reports Robin Taylor

PARTNER COUNTRY: Papua New Guinea

PROJECT: Improving yield and economic viability of peanut production (ASEM/2001/055)

DESCRIPTION: Gathering information on peanut production, storage, use, marketing and aflatoxin contamination in PNG and developing economics management software for the Australian industry

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MARIA MAKES A DIFFERENCE

Maria Linibi is an innovative farmer living in the Markham Valley. About 80,000 people live in the valley, which stretches from Dumpu in the north-west to Lae in the south-east. Maria and her husband Peter grow a number of crops, including peanuts, coconut, rice and taro. She is participating in research with the National Agricultural Research Institute (NARI) on rice and other food crops. Initially involved in the ACIAR project as a smallholder farmer, Maria has been engaged by Ramu Sugar as a service provider to liaise with local farmers who are implementing the seed village trials.

"I was involved in an Asian Development Bank project to raise awareness and provide training in improvement of crop production so I have a good network of farmers," she explains. "Before I came back to the Markham Valley, where my husband's family had a farm, I was an information officer with the PNG government at Mt Hagen.

"I could see that the information flow to farmers could be better. They needed more links with NARI and other information providers."

Maria is now a member of the NARI Regional Research Advisory Council. She is also involved in training farmers in downstream processing of raw products, such as coconut oil and soap from coconuts, peanuts into peanut butter and biodiesel. The farmers then sell these products at local markets. Maria believes the seed village approach is very important, as farmers need to see results before they will accept the new peanut varieties and management practices.

"They are already using the variety White Spanish and will need to see that the new varieties are better before they will change," she says.

Maria has travelled widely – through the Pacific, on a study tour to Vietnam, to Singapore and Australia. "It is difficult for women farmers in PNG to be outspoken," she says, but these opportunities have given her confidence.

With Norah Omot, an economist (and former ACIAR John Allwright fellow) at NARI, Maria wants to establish a PNG Women in Agriculture organisation. The only thing holding her back is access to modern communication facilities – but it will take more than these not insignificant obstacles to stop her.



The new face of PNG peanut-farming: Lastus Kuniata and Maria Linibi.

Off the main road, and several kilometres down a bumpy track bordered by tall grass, a block of peanut plants is one of the sites for a 'seed village' being trialled to evaluate new varieties and management practices, identified as part of an ACIAR project. Peanuts have been grown in PNG for many years, mainly as a subsistence crop, but yields are generally low because of poor management and lack of access to improved varieties.

However, peanuts can provide an alternative crop to betel nut, the other major cash crop in the Markham Valley, which has recently been devastated by a bacterial disease. If land is reclaimed from this and other unproductive uses, 230,000 hectares is potentially available for food crops, including peanuts.

In a recently concluded ACIAR project, researchers from the Queensland Department of Primary Industries and Fisheries and the PNG National Agricultural Research Institute studied the industry and the constraints facing smallholders. Two commercial operators, Ramu Sugar and Trukai Industries, were also involved as project partners.

Forty-three improved peanut varieties were introduced from the International Crops Research Institute for the Semi-Arid Tropics and promising high-yielding varieties were selected.

The next step is to transfer the new varieties and associated management practices to smallholders in such a way that new technologies are recognised and quickly adopted by the farming communities. This is where the 'seed village' concept comes into play, as part of a new project to start in January 2006.

The seed village is a block of land (up to a hectare) owned by one or more farmers and made available to the project for conducting trials. Several seed village sites have already been planted in the lower and upper Markham and Eastern Highland provinces. In these on-farm trial sites, farmers, researchers

and extension workers collaborate to compare new varieties and management practices, selecting the most effective and profitable combinations.

The seed village also provides a place for field days and training workshops and for seed multiplication. The project supplies seed and crop management inputs while the grower supplies land and limited labour.

Seeds of promising new varieties are being multiplied by Ramu Sugar, and this seed will be used in seed village trials next season.

A pilot seed village was conducted near Umi Bridge in the upper Markham Valley during early 2005. At a field day at the site in July, farmers expressed interest in the new varieties and management packages, although there was concern about the costs of fertiliser and pesticides, the lack of extension services and access to financing, especially for farm machinery.

The field trials also showed that recommended management practices resulted in higher peanut yields than conventional management methods. The estimated profit was 3000 kina (A\$1300) per hectare.

In the follow-on project, the seed village concept will be extended to at least three sites each in the lower and upper Markham valley, as well as the Eastern Highland Province.

Ramu Sugar, which produces sugar cane, palm oil, beef cattle and timber, is interested in growing peanuts as a rotation crop on the company's own land and also contracting growers in the Ramu Valley, to secure a guaranteed supply. The manager of agricultural research at Ramu Sugar, Lastus Kuniata, says the seed village concept will allow the company to demonstrate to smallholders the type of management required.

A 40 per cent increase in peanut production in Morobe and the Eastern Highland Province is expected within five years of completion of the new project, which should result in additional net income of 4.5 million kina (about A\$2 million) a year at current market prices. ◀



GREG MILLS

GROWING ROLE FOR WOMEN

Recognising the important role of women in PNG agriculture, a component of the ACIAR project was a survey to see what women thought were the priorities for training and the constraints involved with peanut production.

Julie Kolopen, Geoff Fahey, John Bafui and Humphrey Saese, from Trukai Industries, conducted a survey of 52 women farmers at two of the proposed seed village sites in the Markham Valley, where peanuts are a major source of income. Julie presented the findings to a recent workshop in Lae.

More than 80 per cent of the women indicated that peanut was their major cash crop, returning an average 1050 kina (A\$480) annually. This constitutes 75 per cent of their total income, the rest coming from crops such as watermelon, cucumber, coconut and betel nut. The survey also examined the role of women in decision making, their level of participation in peanut production, constraints and training needs.

Given the well-established subsistence peanut culture, women are familiar with general husbandry practices of land preparation, planting, weeding, harvesting and marketing.

The survey revealed that as well as the traditional areas of childcare and family planning, crop cultivation and crop selection were key areas where women were involved in making decisions. Similarly, women had a high level of participation in labour-intensive activities such as seed sourcing and storage, marketing and weeding. In fact, women are involved in all major aspects of peanut production except for pest control.

Women are fairly knowledgeable about traditional peanut farming practices and ranked training in husbandry practices such as weeding, planting, bagging and harvesting as low priorities. Basic bookkeeping, pest and disease control and understanding soil fertility problems were, however, recognised as important areas where training was needed. The farmers recognised that improving their skills in these areas would help them increase their income from peanuts. Women also indicated a need for training on land preparation techniques, marketing and post-harvest technology.