

Growing better: Supporting agricultural innovation in Samoa



Fualili Vaai with her hand tiller machine

Agricultural machinery, essential for modern farming, remains expensive in Samoa, with costs reaching up to USD40,000 (AUD61,000) for second-hand excavators and USD14,000 (AUD21,000) for second-hand tractors.

Rental or service options are sometimes available but are inefficient or informal. Both farmers and businesses suffer from a lack of awareness about the range of available machinery and services, as there is little advertising. Most businesses involved in the agricultural machinery market are focused on construction and therefore have limited knowledge of the agricultural sector. This gap in market knowledge results in risk aversion and missed opportunities to meet the evident demand. MDF research indicates that while only a few farmers currently use such machinery, there is significant interest among the wider farming community. Labour migration is also affecting Samoa's agricultural households, with many women now taking on the bulk of agricultural work, where husbands have joined seasonal labour schemes.

Fualili Vaai, a farmer from Maagiagi Village, cultivates a variety of fruits and vegetables, such as Chinese cabbage, cucumber, beans, eggplant and bananas. With her husband working abroad for a year now, Fualili shoulders the farming responsibilities with her young son. However, without her husband's help, the workload seemed overwhelming, affecting their yield.

Inspired by demonstration videos featuring women operating agricultural machinery, Fualili approached her District Council, Vaimauga 3, seeking support to acquire a hand tiller. With assistance from the council, MDF partner Bluebird Lumber and Hardware delivered the machine and trained Fualili's family in its operation and maintenance.



I saw the Bluebird advertisements on TV and did more research on the hand tillers. I decided to apply for the district fund to purchase from Bluebird. I needed the help with my plantation as my husband is currently travelling for the RSE [Recognised Seasonal Employer Scheme]. The Bluebird team gave me training on how to use the tools, attachments and changing of the oil. I have used the tiller twice so far, especially when preparing a new batch of cabbages. The tiller was extremely useful to clear the land, as it is usually a two-person operation.

Fualili Vaai,
Farmer

Making machinery more available

While basic tools are available in Samoa, larger equipment like tractors and excavators are scarce and expensive. Hand tillers, though available, are often second-hand and underutilised. Import challenges, such as increased freight costs and lengthy delivery times, further exacerbate these issues. Samoa's rocky terrain also presents a significant obstacle for farmers, as it can damage machinery and necessitates pre-clearing of land for tilling equipment, thereby increasing maintenance costs and labour efforts.

With support from MDF, the Bluebird Lumber and Hardware Company in Samoa began importing and selling new products, including hand tillers, drills and battery-powered equipment, which farmers would use for land

preparation (tilling), planting and other activities.

Bluebird worked with key stakeholders such as the Ministry of Agriculture and Fisheries (MAF) to promote new farming implements to farmers and had them included in a grant list to improve access to farming equipment. Bluebird also collaborated with local farming associations to conduct demonstration days to promote their new products and to better understand farmers' needs and preferences regarding agricultural machinery. It is these 'demo' days that made Fualili consider applying for the district fund.

"I am looking forward to exploring new technologies for farming. I am particularly interested in hydroponic farming technology, using water-based

nutrition rather than soil for farming," Fualili adds.

She is now able to prepare her land faster and with less effort, significantly reducing her overall workload. Using the hand tiller instead of traditional tools like shovels and forks also allows her to utilise more land for planting. The District Council's acceptance of Fualili's request and their support to purchase the machine also reflects a growing recognition of women's roles in agriculture in Samoa. While farming is traditionally seen as a male-dominated field, Fualili's flourishing farm stands as an example of women challenging gender norms and embracing agricultural advancements – be it mechanisation or technology.

Financing the gaps

Some farmers know how to use the technology but lack the finances required to purchase it. Leilua Tavas Leota, a farmer from Motootua, sought financial assistance from the Development Bank of Samoa and purchased the hand tiller from Bluebird Lumber and Hardware Company for his farm, where he plants tomato, cucumber, corn and cabbage.

"I am a fan of the hand tiller machine and own a smaller, older version which was gifted to me by my family years ago," says Leilua.

Fualili's journey and her aspirations towards hydroponic technology are powerful symbols of gender inclusivity and innovation in agriculture, reaching far beyond the confines of Maagiagi

Village. Fualili and Leilua's stories also highlight a broader narrative of transformation in the agricultural sector in Samoa as they both enjoy the benefits of agricultural mechanisation, showcasing how embracing technology in farming leads to tangible progress.



I am able to prepare land for planting much quicker with the hand tiller, increase my planting area and improve the planting cycles. Preparing the land usually takes two to three days if done manually but can be done in only half a day with the hand tiller machine.

Fualili Vaai,
Farmer