

# HELPING TO IMPROVE HEALTH AND FOOD SECURITY IN VANUATU

Potatoes may bring important health and economic benefits to the people of Vanuatu, where AuSPICA is helping to develop high plant health seed potatoes for sustainable potato production, addressing issues of food security and dietary health.

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## POTATOES HELPING TO SAVE LIVES IN VANUATU

Improvements in potato production may hold the key to greater prosperity and better health outcomes in Vanuatu, a country that has been hit hard by devastating cyclones, economic problems and climate change.

Crop losses have led to increased consumption of imported white rice. This has brought with it an increase in serious health issues associated with diabetes, including blindness.

Vanuatu has shown the ability to grow potatoes as a cash crop, providing a locally grown food source for its people. This is essential for sustainable food security in a country where per capita Gross Domestic Product is less than \$US3,000.

Food alternatives to white rice are crucial in lowering the incidence of type 2 diabetes and its many serious,

debilitating, and even life-shortening complications. Type 2 diabetes is a serious problem in Vanuatu and a major cause of death. The disease causes breakdown of small blood vessels in all parts of the body, often impacting on the eyes, kidneys and body extremities.

Complex carbohydrates help regulate the body's production of insulin, making potatoes an important alternative to the simple carbohydrates found in rice. Increasing potatoes in local diets could therefore help reduce the incidence of type 2 diabetes.

Food security is also a priority for Vanuatu, particularly as it is a high-risk region for cyclones such as Cyclone Harold in 2020 and Cyclone Pam in 2015, each wiping out crops and causing widespread damage to infrastructure, devastating an already poor country.

## MINITUBERS AND TRAINING

AuSPICA (Australian Seed Potato Industry Certification Authority) is a not for profit, industry-based association that provides professional and technical services to the Australian potato industry. Through collaboration with the Vanuatu Prevention of Blindness Project, in 2019/2020 AuSPICA donated potato minitubers to Vanuatu.

These contributions are intended to advance sustainable potato production, address food security and dietary health concerns in Vanuatu. Potato minitubers are first generation pathogen-tested seed stocks that are effective in reducing crop loss caused by seed-borne disease in production.

To further support potato production in Vanuatu, AuSPICA delivered two workshops in late 2019, in conjunction with the Vanuatu





Dr Nigel Crump and Australian potato grower Mr Allan Condrón (Gippsland) at a local grower workshop in Port Vila



Ms Nellie Malseed and Dr Crump at one of the grower workshops

Prevention of Blindness Project and aided by financial support from the Victorian Crawford Foundation. This collaboration provided technical knowledge as well as addressing aspects of food security, sustainability, climate change and human health. Participants in the workshops included growers, community leaders and government agencies, including the Vanuatu Department of Agriculture and Regional Development (DARD). The training provided valuable knowledge to sustain long-term potato production, which will benefit the country's health and economy.

These technical workshops were a catalyst for local farmers and government advisors in further developing potatoes as a sustainable food source for Vanuatu. Since the workshops were delivered, significant advances in potato production in Vanuatu have been achieved.

## VARIETY TRIALS

In April 2020, AuSPICA donated foundation seed potato minitubers of 12 varieties. All were considered potentially suitable for production and use in Vanuatu and produced from pathogen-tested tissue culture. The 12 varieties were grown at several sites in Vanuatu and their performance evaluated to determine those more suited to local conditions. This was made possible through collaboration with the Vanuatu Prevention of Blindness Project and DARD, which led the establishment of the evaluation field sites.

Early observations showed that potatoes crops grown from minitubers have been successful, delivering both high yields and quality. Popular and high yielding varieties include Sebago, Toolangi Delight and White Star. A participative evaluation program for the 12 potato varieties has been

established involving all the project partners.

Other important goals of the project included proactive engagement with locals, and empowerment of women to be involved in potato production. The project in Vanuatu aligns with several of the United Nation's 17 Sustainable Development Goals:

- No poverty (goal 1)
- Zero Hunger (goal 2)
- Gender equality (goal 5)
- Responsible consumption and production (goal 12)

Although there is a small potato industry in Vanuatu across multiple islands, including Tanna, the ongoing development of a potato industry will make a significant contribution to improving diversity of diets and food security for the country's people.

The development of the local potato industry is especially important to counter the catastrophic damage caused by Cyclone Harold where many food crops were destroyed. The subsequent impact of the COVID-19 pandemic has further devastated the local economy from lack of tourism, a major source of income for many ni-Vanuatu people. The compound effect of these set backs, that led to a 10 per cent reduction in GDP in 2020, is a further reminder of the importance of food security for this vulnerable nation.

AuSPICA will continue to support Vanuatu in developing a sustainable and productive potato production using high health seed potatoes.

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