

## **Opportunities in Agriculture and restoring it to its central role**

There's an often stated fallacy that PNG has vast areas of fertile agricultural land, waiting to be developed. It doesn't. Most of PNG is steep mountains, swamps or subject to extended flooding, savannah and shallow tropical soils, where fertility is sustained by continuous decomposition of leaf litter from forests. Remove the forests and fertility rapidly depletes.

The country does, however, have fertile pockets, most of which support relatively high and growing populations and intensive horticulture (as in parts of the Highlands, Gazelle and Maprik, for example), as well as cash crops, much grown well below their productive capacity. It also has larger areas of poor to moderate land, suitable for certain agricultural or other land-use activities, if managed appropriately, using suitable selected (e.g. drought/damp resistant) plant or animal species/cultivars, intercropping or other inputs, or perhaps other interventions, from drainage to irrigation.

In PNG there's also sometimes a misconceived notion of an ideal or panacea crop, with some farmers ready to uproot whole plantings of productive tree crops for some untested or temporary bonanza crop. In reality, as with most traditional food gardens, with diverse inter-planted crops, there may be a variety of crops, or livestock, which perform well, often in some combination. Major commercial producers usually need to specialise, and especially with oil palm, which requires processing promptly after harvest, seek extensive accessible areas to enable maximum throughput through their mills and associated economies of scale.

Minimum commercial areas for crops range from several thousand hectares with oil palm, to a hectare or less with some high value horticultural crops or spices. (The vast areas committed for SABLs are clearly not genuine agricultural projects). Smallholders produce the majority of most PNG tree crops (except tea, sugar and oil palm and rubber - also with substantial smallholder production). Most smallholders prefer to hedge their bets, reducing risks, safeguarding food security and producing some preferred household or culturally valued products, whilst forfeiting opportunities of periodic bumper returns. A close relationship with a major (or nucleus) enterprise, to support with research, planting material, innovation, marketing, extension is a well proven model in oil palm, but also rubber, spices and other crops and livestock, partnering private investors or cooperatives. Such partnerships form the basis of support projects, like PPAP, for coffee and cocoa smallholders.

Certain locations may provide ideal growing conditions for a crop, but that doesn't necessarily make it the best choice. Some other crop may have better market prospects and fetch better or more reliable returns to land or available labour.

Generally the traditional tree crops already grown in PNG provide a reliable bet for continued focus. Their markets are large and generally face rising demand, for example for chocolate or rubber tyres in major emerging markets (like China). Agricultural commodity prices, including food prices leapt around 2006-8, including from panic trade restrictions by some countries on some staple crops. Prices largely slid in 2008-9, but have subsequently trended up again. In the longer time prices are likely to remain firm, if volatile, in the face of growing world population, limited (and even declining)

areas of agricultural land –some areas even becoming unproductive (with desertification, salinisation and pollution), restraints on further productivity gains and the spread of various serious pests and diseases (including exotics), the uncertain trend towards biofuels, especially when mineral fuel prices are high, and increased household expenditure on luxury products (chocolate etc) with growing wealth in emerging markets.

Market demand and hence prices change, and some crops will invariably gain favour, or even be discovered, or substituted. Some vegetable oil prices are now closely linked to (mineral) oil prices; minor crops invariably experience volatility, thanks to small markets and usually localised production, so a local drought, cyclone or conflict, can force up prices overnight (as with Madagascar's cyclones with vanilla), dropping back almost as quickly as production recovers; failing to compete on quality with traditional producers (or gaining a bad name from trade abuses – like false quality specification) will also severely undermine prices and market prospects for all producers. With minor crops, even when making the necessary commitment to quality and standards, it's preferable to spread the risk, by producing a range of crops, probably including a reliable traditional major crop. When cardamom prices rocketed in the early 1980s, and vanilla two decades later, some ill-advised producers replaced their main cash crops (cocoa and coffee) to enjoy the spice bonanza, only to find prices crash, especially for poorly processed product (e.g. cardamom smoked over fires), just as the main crop prices rose. Specialty products require commitment to consistent quality, whether spices, fruit, nuts (gali etc) and vegetables or higher grade or certified (organic, fair trade etc) coffee, cocoa, virgin coconut oil or RSPO-certified palm oil.

There are various new crops which PNG could produce, or existing products which could be grown more commercially for domestic and international markets, but (most) farmers should certainly not discard, but rather maintain commitment to PNG's traditional tree crops, recognising that new pests/diseases, like cocoa pod borer, will demand more intensive (and disciplined) agricultural practices. Caution should be given over some supposed 'wonder crops' like jatropha. It survives well in marginal dry land, but yields little vegetable oil in poor conditions. Other crops are likely to remain more productive or viable than jatropha on the prime land. Clearly, agricultural trials for multiple crops are needed in different PNG settings, both on research stations and farm settings, to provide reliable comparative yield and other farm management data, to guide policies and practical extension advice to farmers.

For long into the future, agricultural and related land and marine production, harvesting and processing, will provide the core income earning, employment as well as food supply needs for Papua New Guinea. However the sector cannot be taken for granted or ignored, as it has been for years. Impassable access roads, inadequate maritime, river and rural air services, poor law and order, a high kina (pushed up by extractive industries) and lack of concerted attention to sound farmer support (for research, extension, rural credit and development) all threaten the sector's prospects and viability; (every rise in the kina against US/Aust dollar reduces the kina income paid to farmers, and makes food imports comparatively cheaper to local production). It's not largely about opening new production areas, but using existing agricultural land more productively (including genuine agro-forestry), building value chains, with increased market access, opportunities and value-added and enabling rural and peri-urban areas to cater for growing populations and demand, through more sustainable production systems.

Governments have failed PNG farmers over many years, promising practical support, but then wasting immense sums on mismanaged and widely abused and politicised projects, like NADP, and leaving institutions rundown, and diverting effort away from PNG farmers' needs to scams (notably land grabs and speculation for outside interests).

Now is the time to give agriculture the central attention it deserves and requires, and to listen and respond to farmers' actual needs and support the institutions providing practical assistance, whilst reforming those (including DAL) into farmer-focused and responsive organisations. NARI's annual Agricultural Innovations Show this Friday, 4<sup>th</sup> May, (as with Kerevat and Tambul's shows) are practical occasions highlighting agricultural opportunities. On 24-25<sup>th</sup> May CIMC will also be hosting an agricultural symposium in Lae highlighting premier agriculture's role and practical requirements for progress.

In France farmers always gain their government's core attention, otherwise farm tractors blockade their capital's premier road (Champs Elisé), even dumping agricultural manure on doorstep of the Presidential palace! Perhaps PNG farmers have been too tolerant for years over being ignored or sidelined!

Paul Barker  
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