

# MACADAMIA INDUSTRY CONSULTATION: SUMMARY OF FINDINGS

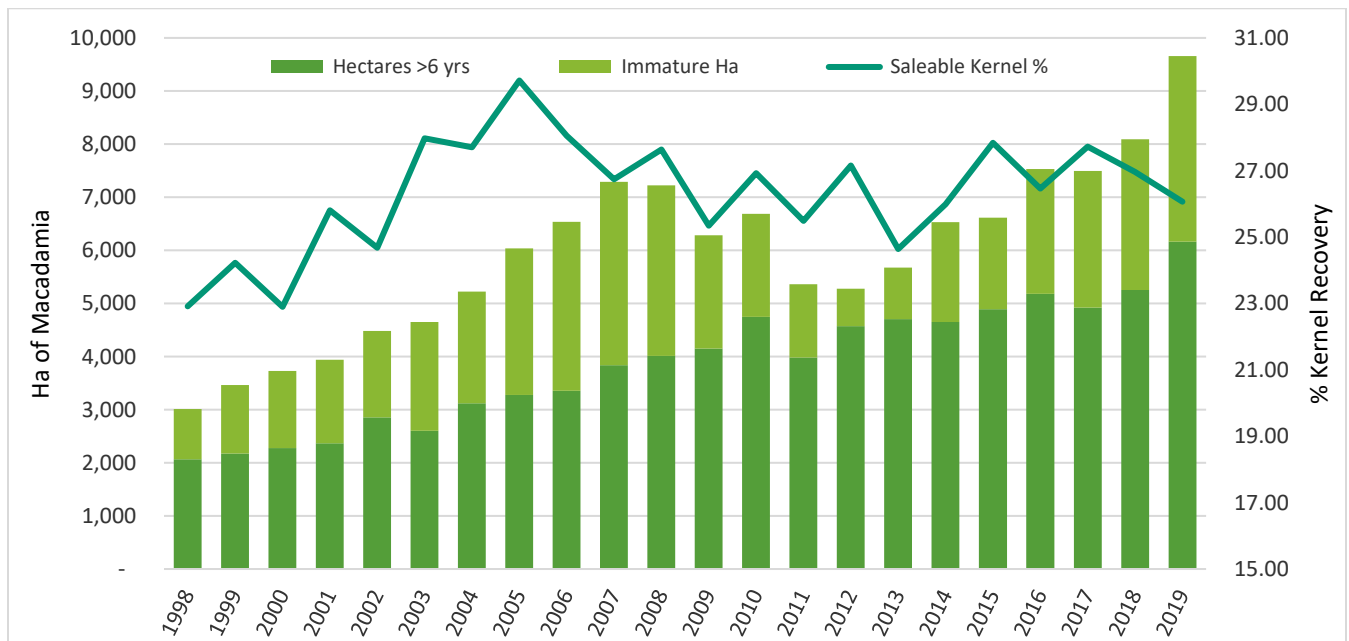
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## ACKNOWLEDGEMENTS

The team preparing this document would like to thank the whole industry for its support in this process. The TNGA has provided data and essential perspective on the industry. Individual farms and companies for agreeing to meet with the team sometimes at short notice and discussing openly and candidly about their challenges and concerns. We were not able to speak to everyone in person within the limited time frame we had available, however all contributions are welcome and can be communicated to [nicholasjevans@gmail.com](mailto:nicholasjevans@gmail.com).

## THE DEVELOPMENT OF THE INDUSTRY SINCE 2012

A strategic plan developed in 2012 has provided the reflection point for the consultation. Through data provided by the TNGA total Ha has increased from 5,280 to 9,660 an increase of 83%. Disaggregated this represents a 35% increase in mature crop, a 4-fold increase in immature trees. Annual plantings have increased 2019 recording 1,202 Ha the highest annual establishment recorded in 20 years of data an average of 980 ha/year is going in since 2016. There has been an acceleration of new establishments: 1,975 Ha in the Northern and Central Region account for almost half of the expansion during the period. This represents a shift into new areas although the Thyolo accounts for 51% and the Southern Region 60% of total Ha.



## KEY THEMES EMERGING

1. Industry capacity at field and managerial level; how to develop the next generation of people with the right skills to run the expanding industry.
2. Technical challenges in stink bug control, irrigation, nutrition and varietal selections; how best to understand, disseminate research and adapt/ apply it to on farm management
3. Challenges to origin and reputation scale relative to others, maintenance of quality markets and kernel recovery, nut theft and export
4. Changes to the industry structure is shifting the geographic centre and bringing new business entrants and business models.
5. Willingness and desire to collaborate more closely in some key areas; at present lack the structure and capacity to do so.

## INDUSTRY CAPACITY

The demand for skills both at field level and mid-senior management level will increase as new establishments continue and mature. A proportion of new positions created will be within agribusiness with limited experience of macadamia. Thus will have to turn to external support to some extent. Investment in capacity to identify and retain talent as well as develop the field skills in pest scouting, irrigation and input application will enable productivity and kernel recovery % to be maintained.

Many of the contributors stated an updated version of the World Bank program was needed. To prepare the industry for the next phase of its development support over an extended period to bring up to date technical aspects and develop a holistic capacity development is necessary. A strong voice from a macadamia industry body can better address their needs to a potential donor fund in future.

## FIELD LEVEL:

**Apprenticeships**, a structured approach combining taught content/theory alongside field experience for a 2-year course. This could yield a qualification and develop over time a pool of people, particularly for newer or rapidly expanding farms. **Specific Macadamia Courses**, offered through education institutions as a stand-alone course, or embedded in existing courses. **Placements/Exchanges**, existing staff on new/small estates are sent to established estates to receive on the job training and support to set up the systems alongside experienced operators. This is difficult as larger established estates are struggling with management already.

## MANAGERIAL LEVEL:

**Hire Externally**, with the inability to find suitable expertise in country many of the new estates may turn other origins to hire. Bringing in capacity solves issues quickly and brings in new ideas and ways of working. However, it may also bring practices unsuitable for the Malawian context. **Fast Track**, a career path to management level varies between companies however is at present about 10 years. The ability to identify, develop and invest in talent; a more structured and resource intensive approach could see candidates receiving a greater mix of taught content and mentoring of both technical and managerial skills. **Retention program**, the industry is finding it difficult to retain young managers. So reviewing what are the key drivers for leaving and developing methods to address issues though HR is needed.

## EXTERNAL EXPERTISE:

**Dissemination Sessions**, there is a flow of expertise coming in and out of the country to provide farm specific advice. The use of this expertise where possible to hold a session on relevant topics to a wider audience to raise awareness of technical issues

and practices elsewhere. **Pooling of Resources**, particularly smaller farms that are heavily reliant upon advice provided in an ad hoc, informal manner would help. There may be benefit to plan expert time between several smaller operators. **Promote Internal Consultants**, although the Malawian industry is and will continue to be considerably smaller than the South African Industry its growth and development may be able to better support local consultants. There is significant experience/expertise within Malawi which should be utilized.

## TECHNICAL CHALLENGES

There was great alignment on the technical challenges being faced by the industry, although players at different stages of the macadamia planting cycle had different focuses. The primary area identified was **stink bug control** given the impact on yield, quality and different pest complex within Malawi's growing areas and other origins. With the range of available control measures is reducing posing a major challenge to the well-established IPM system. This was an ongoing major concern for established producers and area on concern for new farms observing or expecting grater problems.

Whereas the older macadamia establishments were entirely rainfed and planted in areas with good rainfall distribution, many of the new plantings have been in drier or more erratic rainfall areas. This has led to many of the new farms installing irrigation which has in turn led to questions regarding **irrigation management** water dosage, schedule and water resource management.

**Nutrition** planting macadamia on ex tobacco land has posed new technical challenges; very low in OM combined with high residual Phosphate levels and require a different approach to nutrition. Micronutrient particularly Zn and B are very important and are best worked on from establishment as long-term management is required to build up accessible pools.

**Variety performance and selection** was another area raised frequently. Established estates were wishing to explore what to plant as orchards are turned over, looking to the next generation of planting material. Varietal performance varies between growing areas. Younger estates in new areas have planted a different and narrower mix of clones. Insights and understanding of clonal performance in different areas is important to provide the basis for decision making during farm design.

## HYBRID APPROACHES TO R&D

1. **Use internal industry expertise** and experience to interpret key research program outcomes from SAMAC and AMS into the Malawian context. This is also relevant for more established players to share knowledge with smaller or new operations. This approach would 'digest' research materials into more relevant and useful outputs. Internal players have high level insights to the industry, environment and context that no external actor can process
2. **Leverage existing data resources** and promote data sharing. Research programs do not necessarily need to generate new data through experimentation, but can achieve a lot by analysis of existing data set to provide new insights. The industry is sitting on an enormous data reserve; analysis of them is a highly efficient route to greater insights. This approach can also strengthen data collection to yield data bases which are easy to interpret and add to in future.
3. **Highly focused applied field research**, the more widely recognised main thrust of research is more appropriate where Malawi specific issues getting a much higher priority than elsewhere. Where possible, research should be embedded in industry data systems to provide baselines and controls.

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### SHORT-MEDIUM TERM:

- Phenological calendars for the different areas and clones, using internal expertise and data
- Sharing best practice on security, access and community relations as a combined pack to manage theft.
- Sharing pest practice on establishment of irrigation and ground preparation
- Industry bench marking, using yield and KR% data to identify main routes to enhance and address productivity/quality issues across the industry, including small players
- Identify main research findings from AMS-SAMAC and communicate to TNGA members
- Re-start field days were new practices can be demonstrated and explained by experts if required.

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## LONG TERM

- Stink bug research, population management and eradication
- Tree nutrition study commencing with an industry wide survey to establish a baseline for future work
- Varietal recommendations and development for new areas

## CHALLENGES TO ORIGIN & REPUTATION

Malawi has a sound international reputation for quality macadamia kernel and exports to some of the toughest markets and competes with top tier origins. Maintaining and enhancing this reputation is a key component of the success of the processing and export and therefore the bulk of the industry. Three main lines of thinking emerged those regarding NIS exports, scale and kernel style/variety. NIS exports have damaged the reputation of other origins, such as Kenya, if not well regulated to prevent low quality. Weak regulation of NIS exports has also been implicated in enabling illegal exports to occur, more likely to be of low quality and stolen.

Rapid growth of other African origins has the potential to reduce the significance of Malawi in terms of volumes. However, quality, sound reputation and foothold in existing high value markets will differentiate the origin from new entrants. Varietal make up is an important aspect; historically focused on older clones which process well, producing a range of styles (particularly large and wholes) with good colour. The shift in varietal make up underway with new establishments has required the development of new commercial approaches to crop marketing and business models.

## TNGA ROLE & ACTIVITIES

There was a recognition in general that greater collaboration within the industry could address some of the identified challenges. A general desire to see more events organized such as field days and to meet/ communicate on a more regular basis. There was also an acknowledgement that the present TNGA setup was run on a voluntary basis and centred in the South because of the historical development and the presence of major players and factories. There is now greater diversity of actors in the macadamia industry. In addition to the large established estates with processing facilities, there are large estates in new areas still in the early stages of the project cycle. There is also increased interest from medium sized holdings, focused on NIS production for sale to a Malawian based factory. As such development continue to make the industry less Thyolo centric and the TNGA in order to best serve all growers should review its mandate and purpose.

Three ideas were put forward to address some of these issues. Establish regional chapters to facilitate more regular meetings combined with video conferencing to reduce need for travel for national/AGM's. Establish a macadamia focused working group or crop specific macadamia association nested under the TNGA to provide a new vehicle to engage growers. There was a recognition that if growers desire greater collaboration, communication and functionality then the voluntary management and admin approach was not viable given time constraints and workloads.

## SUGGESTED ACTIVITIES

- A quarterly-biannual **newsletter** covering research advances, Malawi specific analysis and relevance
- **Field days**, restarted, practical applied and in collaboration with companies such as FES and Nulandis
- A basic **website**, mailing list for personal/professional contacts
- **Resources** such as paper, manuals, to be made available for members
- Point of contact for **courses** for employers and employees
- Prioritise research needs and dissemination of **R&D** through consultative process
- **Lobby** Malawian government on labour issues, NIS exports and security
- **Write proposals** for research funding, manage relations with academic institutions and donors.

## NEXT STEPS

The document represents the summary of initial findings of a consultation and are intended to set out some key themes and ideas. There is a more extensive and detailed document over 25 pages available for anyone who wishes to explore in more detail, which also contains some analysis of industry data. The consultation is ongoing and the team welcome further inputs and contributions from all. The intension for GFA/KULIMA MIERA is to support an industry platform/events which provide an opportunity to bring player together and explore these issues further. This support will be able help organise, facilitate and host the function at a time, location(s) most appropriate for the industry's needs. The team propose that events are organised that enable as many to attend as possible and are convened alongside a field day hosted by a member possibly in collaboration with Nulandis and FES. Initially this was proposed for May however due to ongoing travel disruption an event is being planned for late June which will obviously need review if required.

The objective of the first event would be to bring the industry together to explore the ideas proposed in more detail and to determine how you would like to proceed. There is also opportunity to facilitate a follow up event later in the year.

## CONTACT US:

If you would like to provide any feedback on this document, wish to additional input or request the full version of the consultation you can contact:

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