EXECUTIVE SUMMARY
The value chain for macadamia is generally short, covering farmers at the primary end of the chain most of whom are smallholder farmers. Also in the value chain are cooperative societies or producer groups, brokers, and local processing companies. At the other end of the value chain are foreign wholesalers and retailers as the majority of the crop is for export to the other regions and nations. The local sales and consumption is considerably low. Other players in the value chain include banks and micro-finance institutions.

Different crops are controlled by regulations and Macadamia is under the National Oil and Nut Crops Regulations. Some of the counties are also developing County Policies and Regulations since it is a key revenue earner in these counties. This Policy Brief is a summary of the findings and recommendations of a TradeMark East Africa (TRAC Fund) supported review\(^1\) of policies that relate to Macadamia Value Chain. It is envisaged that by following these recommendations Kenya and its counties will create a conducive environment for Macadamia farmers to fully exploit the opportunities that organic agriculture provides in terms of increasing incomes and improving health, for – humans, livestock, the environment and the soil; a win-win for farmers, consumers, the environment, and the economy.

Introduction
The Kenyan organic macadamia sub-sector is relatively small but fast growing especially for export. Initial efforts to promote the organic agriculture sector were made by civil society organisations who sought to help rural farmers address the issues of declining agricultural productivity (especially the degradation of soils and the natural resource base), high poverty levels, food insecurity and low incomes. By 2011 the Kenyan organic subsector had grown to 151,371 hectares of certified organic land. Demand is high and largely unmet. There are companies now listed as producing organic products for local and international markets, large supermarket outlets and restaurants are selling organic products and food.

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\(^1\) Under the One Stop Organic Shop East Africa (OSOSEA) programme in Tanzania, Kenya, and Uganda
Challenges in the Macadamia Value Sub Sector

The main barriers to trade in organic macadamia produce in Kenya are poor nut quality, high cost of inputs, and limited access to markets. There is low productivity and inferior nut quality as compared to that of large-scale conventional macadamia farmers, resulting in poor prices. This is caused by inadequate knowledge and access to information e.g. on the right varieties for the various agro-ecological zones. Also, inadequate extension services which therefore result in poor agronomic and husbandry methods hence low quality nuts, as well as insect pest damage. Existence of too many brokers in the macadamia trade also results in poor prices for the farmers. Additionally, entry to macadamia farming and/or expansion is difficult for smallholder farmers as seedlings are too expensive for such farmers to afford. In terms of markets, the trading processes and scenarios are still far from ideal. For example the ban of export of raw nuts is said to harm the small farmers because, when imposed, it causes a drop in the price of nuts. Further, smallholder farmers cannot manage to transport their produce to the factories and hence have to rely on brokers to buy from them at the farm-gate at less than optimal prices. Organic macadamia production also requires farmers to be certified. While the market for organic macadamia may be more lucrative, the process of certification is quite tedious and costly which may therefore lock out farmers. These barriers are influenced directly and indirectly by existing policy and/or the lack of it, which in essence restrict resource-poor farmers’ access to organic markets for macadamia.

SPECIFIC POLICY OPTIONS

Inputs

The government needs to develop policies that will enable farmers to access seedlings affordably. For example, processors could be encouraged through policy to provide inputs to contract farmers. Alternatively, Government could provide subsidized seedlings e.g. through KALRO, and support farmers through extension services to develop their own nurseries. Policy should also protect the processors so as to encourage them to invest in the training and inputs for organic farming and certification. Processors may also be compelled by the government to develop nurseries for seedlings based on the quantities of export.

The government should also develop policies to help regulate the sale of seedlings. Sellers should be encouraged to sell seedlings that are well suited to the agroecological zone and are proven to provide optimal results. Policies that support education of the farmers would also help them know which varieties to buy. Policies that support nursery formation by processors and farmer groups alike need to be developed and implemented with a push specifically for multiplication of new varieties.
Further still, in terms of inputs, the government should come up with policies to support use of organic inputs like pesticides and fertilizers e.g. through extension.

**Production**

There is need for a practical curriculum for farmers which encompasses organic production. The government needs to take charge of the development of this curriculum and should bring on board all stakeholders to participate in its development. Hand in hand with this is provision of adequate extension support for further education and awareness creation on best organic crop husbandry practices.

Policies around the harvesting of the macadamia nuts also need to be reviewed. Though the government has tried to focus much on regulation in terms of immature harvesting of nuts and smuggling of raw nuts for export, malpractice is still rampant. There is therefore need for policy to strengthen regulation perhaps introducing tighter controls at county level.

There is also an absence of laws to protect smallholder organic macadamia farmers. The situation on the ground is such that organic farming is not universal. The application of chemical and synthetic fertilizers and pesticides by neighbouring farmers affects the organic farmers and their land. An organic crop production policy would beneficial in guiding farmers, for example on which crops to intercrop with macadamia for an organic production system.

**Selling/Marketing**

Some checks and balances are needed as far as marketing and selling of macadamia is concerned if the farmer is truly to be protected. Unscrupulous practices by brokers and processors persist. One Key Informant expressed that most of the weighing scales at the buying centres are faulty – calibrated to be in favour of the broker, resulting in lower prices for farmers. Tighter controls are needed by county governments as well as inspections of weighing equipment.

Policy should be developed to support organic farmers in the formation of groups to enhance collective bargaining strength and attract better prices through bulking and selling as groups.

Formalizing the channel of macadamia production and sales would also resolve the issue of theft and premature harvesting and sale of nuts. The macadamia industry can borrow from the tea sector where all tea farmers are registered and are therefore the only ones who can sell their tea to the factories. All macadamia farmers must be registered with details of their trees and level of production so that only those who own macadamia farms can be allowed to sell their nuts.
Stringent rules should be enforced to target the unscrupulous practices of brokers. Policy can be put in place to redefine the broker as a direct agent of the processor companies, employed by the companies so that when they approach the farmer it is very clear who they are working for and under what guidelines. This will increase responsibility and accountability in the industry.

**Processing**

There is need for the processors to be compelled to maintain certain standards of trading so as to benefit the farmer as well as invest more in the crop. Failure to do so will see the farmer ripped off to a point where they opt to abandon macadamia production, as was the case with coffee. A law should be passed that forbids them from accepting immature nuts. Were the processors not to accept immature nuts, the farmers and brokers would be forced to wait for the nuts to mature.

There is also need to develop small scale industries for processing macadamia at the village level i.e. cottage industries. This will greatly reduce handling problems (key for organic produce), reduce pollution in movement of the produce, enhance employment at village level and increase motivation and responsibility of farmers as they see what is coming out of their own work.

Processors should also be compelled by law to practice either organic or conventional macadamia production, but not both. This would further enhance traceability and reliability thus increasing consumer confidence at the end of the value chain.

**Export**

As previously intimated, there is an opportunity to do more in terms of investing in research and knowledge exchange from an international market perspective. In so doing we can better channel local investment and growth in the macadamia industry so as to introduce best practices and deliver what the end consumer in the international market wants, given that 90% is for export. East Africa provides a huge potential market for macadamia nuts and associated products. This potential has not been exploited. The government therefore needs to put in place policies that incentivize regional trade and development in macadamia.

**Organic Policy**

The government also needs to develop a specific policy on organic production. In the case of macadamia in particular this makes a lot of sense to exploit the premium prices available for organic produce in international markets. There is opportunity to use macadamia as the entry point for a drive for an overall organic policy for the country by building awareness and support for the same through organic macadamia.