

## **SUSTAINABILITY ACHIEVED BY FOOD MANUFACTURER IN SOUTH AFRICA**

After completing his studies in chemistry at the University of Cape Town, in the early '70's Clive Teubes, the founder of Clive Teubes cc, spent four years in England with ICI (Imperial Chemical Industries), receiving industrial training in design and operation of chemical plants. Upon his return to South Africa, Teubes gained further experience during his employ at AECl and Air Products.

In 1981 the world of essential oils, flavours and fragrances became enticing and a business was started, producing sample products in a garage. "Some personal sacrifices had to be made, such as driving a cheaper car, but it was all worth it," says Teubes.

Although operating in a difficult market with a number of players in the industry creating competition, some exciting new products such as Jasmine, Tobacco, Orris Root, Angelica Root and Rose were developed by the market. Professor Earl Graven who was based at Fort Hare University was developing a range of indigenous essential oils which included the famous Cape Chamomile (*Eriocephalus Punctulatus*) which is part of the South African portfolio of indigenous oils today. Ed Godfrey at Waterfall Health Farms was establishing a sustainable Buchu oil business. Busby Essential Oils was a major player in the Eucalyptus industry and a number of citrus juice producers were moving towards the isolation of citrus oil for the first time. In Zimbabwe, Chris Tippett at Essen Oils was establishing Geranium and Tea Tree.

Teubes was started in partnership with DJ Gunther (Pty) Ltd, a local flavour and fragrance house that later sold its shares to AECl. The company offered the market a range of aromatics, moving into citrus products as well as Eucalyptus refining to produce Eucalyptol. Many of the local flavour houses like BBA (now IFF), Naarden (now Quest International) and Haarmann & Reimer (now Symrise) supported Clive Teubes cc. The first international clients were Charabot in France and Augustus Oils in the United Kingdom. These relationships exist till today.

During the 80s a chemical plant was built and equipment installed, mainly for distillation, crystallisation and esterification. "I recall in 1985 the telex machine clattered out the following from our client in France: 'Please be aware that we have been advised by our shipping agents that the container of products en route from Cape Town to Marseilles met with very stormy seas off the bulge of Africa. Unfortunately this container together with a number of others dislodged from the ship and was lost overboard. Therefore I need to tell you that our container of product is now at the bottom of the Atlantic Ocean!' Thankfully this situation has never repeated itself," recalls Teubes.

In 1993 Teubes bought out the AECl shareholding and became the sole owner of Clive Teubes cc. This allowed for freedom of movement and consequently the focus of the business was directed from aroma chemical manufacture into the essential oils/natural

product sectors. A major drive was instituted in the mid '90's by the South African government to establish the essential oil industry for the purpose of job creation. Teubes was therefore invited to participate with operating local activities working through the CSIR (Council for Scientific and Industrial Research) as well as the Department of Agriculture – a project that lasted across the last decades and is still continuing.

During the 2000s the company expanded its production facilities by opening up a second factory to accommodate additional plant and equipment to cater for the growing markets, both local and export. At this time a separate company called Scatters Oils was formed, within the Teubes Group, to cater for the growing demand for organic essential oils, carrier oils and other natural products serving the aromatherapy and the wellness/health industry at large.

A significant effort was put into the cultivation, harvesting and distilling of organic essential oils. Production platforms were created, both in South Africa and within neighbouring countries on the continent. The challenges became typical of what is part and parcel of setting up such a production platform, namely the teaching and processing of the agricultural inputs necessary to produce a healthy crop, the transport of the correct plant species to the production field and the harvesting and distillation at the various sites – sometimes done by mobile distillation and other times using fixed distillation equipment. These joint ventures with various farmers and farming communities are still in progress today and this activity falls under the Scatters Oils umbrella.

Support structures are required to process the products to final stage. This involves the process of control regarding the logistics and transport to transport the oils from the four corners of Africa. To date, joint venture projects to manufacture organic essential oils are operating in Mozambique, Malawi, Rwanda and Uganda. Quality control processes on the incoming oil had to be well developed and are being executed by the Teubes laboratories in Randburg.

During the last three years, for ease of operation, business in the Southern African countries and into African countries was separated out as a profit centre of its own and called Clive Teubes Africa, while the export business remained with Clive Teubes cc. The two operations are active on two separate sites.

Creating entrepreneurial sustainability is an art that only 4% of companies achieve in South Africa. Various challenges and issues impacting on business success have to be navigated. The Clive Teubes group was not spared from issues in the macro environment and had to manage through the financial meltdown of 2008/2009. Teubes responded to the economic conditions by cutting costs and entering into an operational re-engineering, improving processes and operational efficiencies.

The need for organic certification is another challenge the company had to contend with. Besides the paperwork, the significant effort needed to convert to organic oil production was no small task for the farming community. Over the past 10 years, however, farmers have adapted well. Nowadays the certification process from the harvest field through to the packaging of the final product is well established as is the annual audit which is part and parcel of this certification process. With time and practice the process has become a lot more expedient and efficient.

One of the main challenges remains the management of Agricultural Residue (AR). South Africa relies heavily on the export of its citrus fresh fruit. Consequently, spraying techniques are necessary to overcome insects and fungal growth. Over the past decade it has been a major task to assist in guiding the farmers regarding their spray programs to avoid the spraying of banned substances and limit the quantity involved in spray applications. Fortunately, efforts in this regard have worked in that the farmers have significantly improved their spray programs to avoid the ingress of either banned substances or any excess of spray material. Consequently, the agricultural residues in the citrus oils have improved dramatically so that, today, the majority of South African citrus oil is produced at a low agricultural residue level acceptable according to world standards.

With regards to the future of Teubes, “the biggest challenge for me is to continue training and developing the younger generation to shoulder the responsibilities that go with running the business beyond myself,” declare Teubes. “I can’t see myself stepping away from the business completely. It has always been a joy and a privilege to be involved in this industry. In the years ahead I certainly hope that I will still be able to make some contribution to the business”.

Goals and objectives for the foreseeable future are to see more essential oil projects survive, especially in the rural communities. Unfortunately many have fallen away. Of the 100 odd successfully initiated agricultural platforms, which have been started over the past 20 years, only a handful remains. There are many reasons for this but it all boils down to the fact that the projects lacked proper supervision, management and financial control. At one stage the strong currency position of the South African Rand also made essential oil production less economically viable. At many times a crop actually failed in the field due to lack of irrigation, the reason being that the irrigation system was stolen (and in one case the same irrigation system was installed 50km down the road for watering an organic vegetable project).

Hopefully, gone are the days when negotiations for lease agreements on tribal land leads to conflict of interest amongst the tribesmen. This has led to significant delays in moving forward with rural community development but land tenure is an important issue, especially in South Africa. The lesson of securing land before going ahead and planting a complete agricultural project is absolutely vital so that there are no uncertainties. The maintenance, upkeep and operation of the agricultural end of the essential oil equation are key elements

of the process, no crop means no oil! If the agricultural side isn't properly maintained, this can lead to disasters. For example, due to lack of weeding and weed control, one particular Geranium oil site generated weeds so high you could hide a 4 x 4 within the plantation, just seven months after planting. Over the last 20 years, lessons have been learnt and models have been implemented. There are better personnel structures, handover procedures and accountability processes than before.

One of the underlying features that still plague the industry is the application of grant funding and the proper approach that needs to be taken. Financial grants, which are given for essential oil project development, can actually hurt if not properly applied and much "soft funding" has seen its way into the essential oil production arena. Little has been achieved in terms of sustainable business activity. There are many more reasons than mentioned here, but at least there is now a clear understanding regarding which models don't work. The challenge remains to use the models which do work to create sustainable essential oil production platforms. With the worldwide growth in the organic oil market, Africa can go a long way to contribute to this demand. Hopefully the industry is set up with experience and knowledge to grasp the opportunities with both hands.

The next step for Clive Teubes would be to complete the building of a third production facility to produce a range of natural isolates. This is set to be completed at the end of 2014. Within the Scatters Oils Group, the plan is to continue to develop production platforms to produce a variety of organic essential oils both in South Africa and neighbouring African countries to increase our footprint, both in South Africa and the African continent with regard to the development and supply of flavour and fragrance raw materials.

"It has been an enjoyable 30 years and a challenging time. There are significant growth plans in place and as we reach 30 years of age it feels like a new era is actually opening up to us, using the experience and knowledge we have accumulated over time. I am grateful that we are still playing a role in the industry. Our contribution isn't large when it comes to a global perspective but I like to think that our presence in Africa makes a positive contribution. It is an objective to encourage other African companies to join us on the international stage," says Teubes. "We have enjoyed loyal support from many local and overseas clients. They would know who they are and I am extremely grateful to them for this. Without their support we wouldn't exist. Our intention is to develop these relationships even more offering a wider range of products 'Out of Africa'."

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