



Agricultural Development  
and Management Consultants

## Company Profile 2021



## 1. Vision and History

**Agricane is an Agricultural Engineering and Development company, aimed is to provide a service that will make a sustainable difference in African Agriculture, with experienced Professionals in Planning, Design, Development, Training and Management - who all have deep roots and a proven knowledge in African conditions.**

Agricane Limited began in 1996 as the international wing of its fledgling company, Canefields P/L based in Zimbabwe. It comprised then of a group of dynamic Agricultural Engineers and Agronomists, who saw a market for genuine African experience in irrigated plantation development. Since then it has expanded its service base every year and now includes a strong land survey element, a remote sensing company, mechanization expertise as well as personnel covering Agricultural Economics and Bulk Water Engineering.

Since 1999, subsidiary companies were formed in Malawi, South Africa, Tanzania, Sierra Leone and Moçambique, and more recently Nigeria and Ghana are being considered to undertake management operations of plantation projects and to expand these country's operations where the company has had a presence for 4 years.

The Directors, Partners and Associates of the group have many years of experience in Agricultural development, processing and Management. Collectively, they have were involved in both small and large agricultural operations growing a wide range of crops, encompassing commercial and small-holder developments situated in 24 countries in Africa.

Since 1996, Agricane has designed over 100 000ha and developed over 40 000ha of successful irrigated agriculture of which over 8 000ha has been small-grower farms. Some of these, Agricane have managed as successful projects in Zimbabwe, Swaziland, Moçambique and Malawi. Agricane is currently engaged in irrigation development in 4 countries and is involved in various other projects in rainfed agriculture, estate management and training.

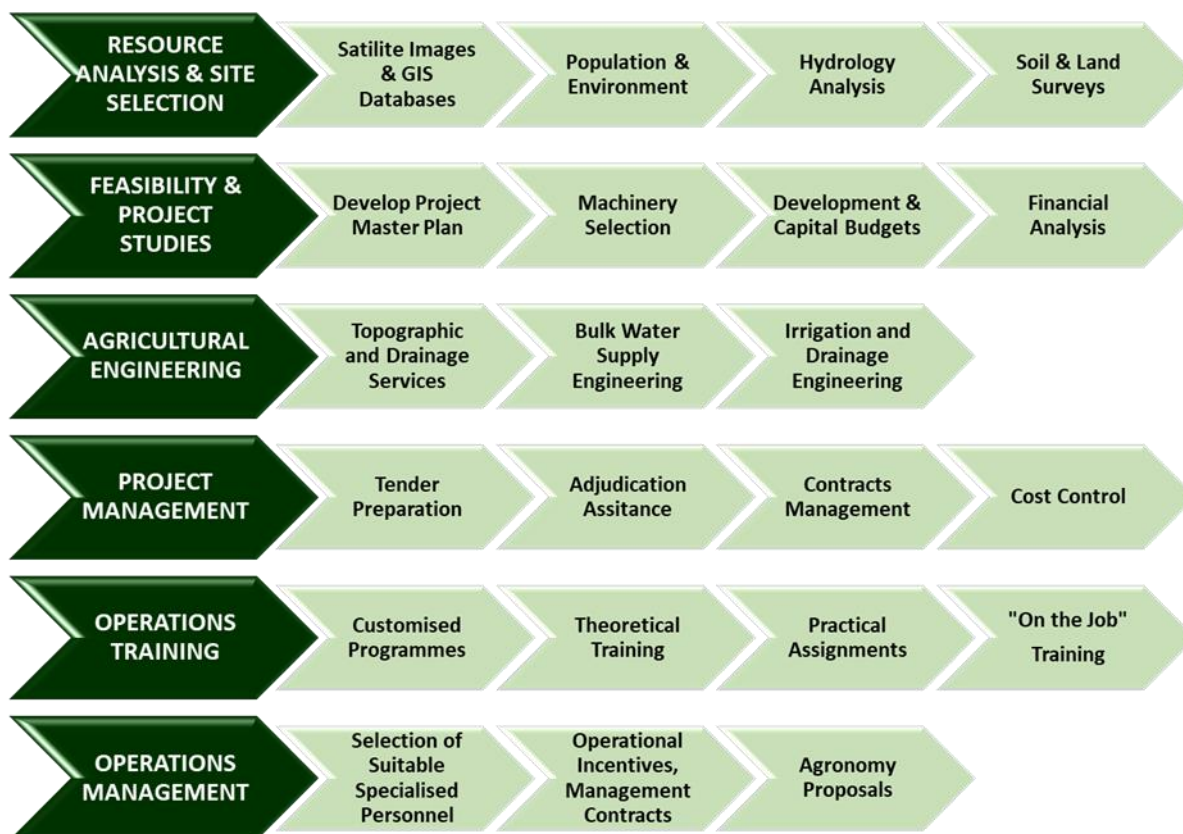
**Today we pride ourselves as leaders in the field as a service provider for:**

- **agricultural development planning and feasibility studies**
- **remote sensing using UAV and Satellite technology**
- **small-scale grower development**
- **integrated development management**
- **general land development survey**
- **soil surveys for agricultural suitability**
- **land forming technology and management**
- **sustainable & appropriate water conveyance systems for agriculture**
- **practical irrigation and drainage systems**
- **agricultural operations management**
- **agricultural training**



## 2. Agricane Services & Resources

Agricane uses a very strong team of professional personnel in the field of Agricultural and Bulk Water Engineering and is comprehensively backed up with Agronomy, Soil technology, Agricultural Operational Management, Economics and Survey. Agricane can provide a complete service from the inception of a project and sourcing of finance to the complete installation. In addition, Agricane has expanded its field into the subsequent management requirements of any development until the project has achieved stability.



Agricane has the exclusive use of a survey organisation, Cane-Survey, with a comprehensive set of state-of-the-art field and office equipment run by 12 fully qualified Surveyors & Survey technicians who have a wealth of experience throughout Africa, dealing with agricultural development projects.

Our Training and Capacity Building programmes are amongst the most progressive and comprehensive in the region. We now provide a package to cover the full training requirements for Sugarcane management down to supervisor staff. Agricane has also specialised in Capacity Building of Small-grower general agricultural schemes.

Over the last ten years Agricane has been involved in projects with EU, AfDB, World Bank and has contributed the agricultural element towards Pre-feasibility, Feasibility and Front-End Development Packages for small, medium and large-scale developments.

Agricane's remote sensing company, Agri-Sense International have now conducted over 400 000ha worth of analysis. This is in a combination of 3D, NDVI and RGB imagery.


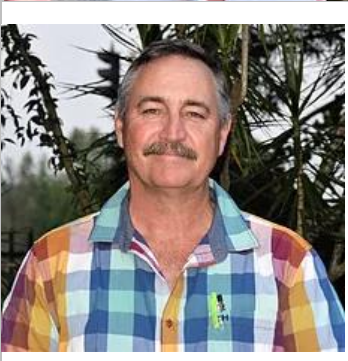


Agricane has embarked on building a knowledge base in two agro -processing industries being in Tomato pasting and Sugarcane technology for which they have associate consultants.

### 3. Agricane Key Personnel, Qualifications & Experience

The following team makes up the core professional services of Agricane Consulting Limited. There are further permanent technical and administration staff of around 20 personnel placed in various countries and contract staff employed on various project sites.

Most of the people below have had line management experience on operating estates and so can give practical advice and guidance in the Operations and Maintenance of any agricultural enterprise.

#### AGRICANE DIRECTORS

	<b>Chris Matthews</b>	<ul style="list-style-type: none"> <li>- BS. Ag.Eng (Hons) 1984 Silsoe UK</li> <li>- Founder Agricane Limited</li> <li>- 30 Years in agriculture</li> <li>- Irrigation Engineer, Triangle Ltd, Zimbabwe</li> <li>- Agricultural Engineer, Nchalo Estate, Sucoma, Malawi</li> <li>- Project Management, Africa</li> <li>- Executive Management Agricane</li> </ul>
	<b>Bruce Carruthers</b>	<ul style="list-style-type: none"> <li>- Assoc. Degree Sugar Cane Tech. Nicholls State University, (Louisiana) USA. 1982 - 1984</li> <li>- 30 years in Agricultural Management.</li> <li>- Agronomist, Hippo Valley (Zimbabwe) &amp; Nchalo (Malawi)</li> <li>- Training development, Lomaz &amp; Nchalo estates, Malawi</li> <li>- Commercial farming (Maize, soya, potatoes, wheat, citrus)</li> </ul>
	<b>Bill McKersie</b>	<ul style="list-style-type: none"> <li>- BSc Ag.Eng (Hons), 1985 Silsoe, UK</li> <li>- 29 years Irrigation &amp; Drainage Engineering, Africa &amp; Central America</li> <li>- Irrigation Equipment Supplies, Zimbabwe</li> <li>- Agricultural Engineer, Triangle Ltd, Zimbabwe</li> <li>- Irrigation training specialist</li> <li>- Fellow South African Irrigation Institute, SABI</li> <li>- Member South African Institute of Agricultural Engineers, SAIAE</li> </ul>
	<b>Bouke Bijl</b>	<ul style="list-style-type: none"> <li>- BSc Agric, Wageningen (Netherlands)</li> <li>- MSc Land Resource Management Wageningen (Netherlands)</li> <li>- 25 years Agricultural Management</li> <li>- Agronomist, Nchalo Estate, Malawi</li> <li>- Estate Manager, Coffee &amp; Macadamia estate, Malawi</li> <li>- Agricultural. Manager, Lujeri Tea Estate, Malawi</li> <li>- Country Manager, Malawi</li> </ul>

<p><b><u>ENGINEERING</u></b></p> <p>Berardo Farfan    BSc Civil Engineering; Pr Eng</p> <p>Andrew Butler    MSc Ag. Engineering; Pr Eng</p> <p>Jonty Williams    BTec Ag. Engineering</p> <p>Russell Longhurst    BEng Ag. Engineering</p> <p>Murray Matthews    BEng Ag. Engineering</p> <p>Matthew Jere    BSc Ag. Engineering</p>	<p><b><u>SURVEYING &amp; GIS</u></b></p> <p>Dr Rob Smith    PhD, Purdue University MSc Ag. Engineering BSc Mech. Engineering</p> <p>Prosper Dafana    BSc Engineering Survey</p> <hr/> <p><b>Cane-Survey</b>    Land &amp; Drone Surveying Solutions</p> <hr/> <p><b>Agri-Sense</b>    Geospatial Solutions for Agriculture <a href="http://www.agrisenseinternational.com">www.agrisenseinternational.com</a></p>
<p><b><u>MECHANISATION</u></b></p> <p>Mike von Kaufmann    BSc Ag. Engineering</p>	<p><b><u>SOIL SCIENCE (PEDOLOGY)</u></b></p> <p>Dr Alois Hungwe    PhD Soil Science BSc Soil Science</p> <p>Keith Snyman    MSc Agriculture (Soil Science) BSc Agriculture</p>
<p><b><u>MARKETING, ECONOMICS &amp; FINANCE</u></b></p> <p>Morné Oberholzer    BCom Accounting</p> <p>Monya van Dyk    CMA Finance &amp; HR</p> <p>Brendan Longhurst    MSc Agric. Marketing BSc Agric. Economics</p> <p>Andy Church    BSc Agric Economics NDip Real Estate</p>	<p><b><u>OTHER ASSOCIATED PROFESSIONAL STAFF</u></b></p> <p>Engineering Technicians Land Surveyors Survey Technicians Agriculturalists Geotechnical Engineers Financial Analyst Agronomist – Row crops Agronomist – Berries and Fruit Agronomist - Citrus Process Engineer (sugar and various) GIS Technicians</p>

## 4. Agricane Footprint

Agricane has worked in 24 countries in Africa and additionally undertaken limited work in Central America and the Far East.





## 5. Agricane Past Project Selection

### LARGE ESTATE PROJECT MANAGEMENT & EPCM CONTRACTS

#### **Nasarawa Sugar Project, Dangote Sugar Refineries - Nigeria (2016 -2020)**

Feasibility and Front-End Package Detail design of 20 000ha sugar estate in Nasarawa State, Nigeria. Design of Bulk Water Supply, Irrigation, Roads, Drainage and overall project masterplan.

#### **PJS Rice – Niger State, Nigeria (2018-2019)**

Aerial survey, detailed design and engineering supervision for 700ha paddy rice irrigation scheme including the introduction and operation of precision land forming and training operators

#### **Babator Farm Development, AgDevco - Ghana (2016 - 2017)**

Designed and developed a 350ha multi-crop pilot scheme with a combination of overhead irrigation systems. This is to prove the best way forward for irrigation expansion for commercial and small-holder farming.

#### **Sunti Golden Sugar Estate, Flour Mills of Nigeria - Nigeria (2015 – 2017)**

Provision of Design of 3 000 ha of overhead irrigation and drainage systems to assist the development program to achieve the target of 600,000 tons cane per annum. In addition to design the Bulk Water structures for this development.

#### **Savannah Rehabilitation Project, Dangote Sugar Refineries - Nigeria (2014 - 2016)**

Agricultural Engineering Advisors to DSR. Carries out the Pre-feasibility for the Backward integration program. General consulting and implementation of resuscitation works of the existing furrow irrigation layouts at Savannah Sugar, Yola.

#### **Skip Pilot Farm Development - Ghana (2014 - 2015)**

Designed and developed a 400ha multi-crop pilot scheme with a combination of surface and overhead irrigation systems. This is to prove the best way forward for irrigation expansion for small-holder commercial farming.

#### **Addax Bio-Energy Project - Sierra Leone (2010 – 2014)**

Contracted to design and implement the development of 10 000ha of irrigated sugarcane for ethanol and power generation over a period of 5 years. Budget of US\$120 million.

#### **Kaombe Irrigation Project, Illovo - Malawi (2009 - 2010)**

Feasibility soils, topological and EIA surveys, irrigation designs, tender for supplies of irrigation and earth moving and land preparation equipment, supervision of construction of 800ha of centre pivot irrigation for sugar cane in the Lower Shire Valley.

#### **Sande Irrigation Development, Illovo - Malawi (2008 -2009)**

Feasibility soils, topological and EIA surveys, irrigation designs, tender for supplies of irrigation and earth moving and land preparation equipment, supervision of construction of 700 ha of centre pivot irrigation for sugar cane in the Lower Shire Valley.

#### **Zambia Sugar, Illovo - Zambia (2007-2009)**

Survey of a 42 km pipeline and canal bulk water system. Survey, design and drainage of 3 000 ha agricultural expansion project and precision land forming.

#### **Xinavane Agricultural Expansion Project- Tongaat-Hulett Açucar - Moçambique (2006 – 2014)**

Contracted as the Agricultural Project Managers to develop 12 000 ha of new irrigated sugar cane production over a period of 8 years at Tongaat Hulett's Xinavane Estate in Southern Moçambique. Responsible for project costs of over US\$ 100 million.

#### **Land Forming – Illovo, Nchalo Estate - Malawi (2002– 2015)**

Survey, Design and Implementation Management. Carry out all replant land forming operations from Survey to land forming design and then Implementation Management for ca 1 200ha per annum.

#### **Kagera Drainage Design and Installation, Kagera Sugar Limited – Tanzania (2004 – 2006)**

Agricane Limited were contracted to design and install all surface and main drainage systems at Kagera sugar estate in the North Western part of Tanzania. This is predominantly a centre-pivot irrigation system covering a planned 5,000ha.

#### **EPCM, Marromeu Sugar Development, Sena Sugar, Moçambique – (1997 – 2002)**

Tasked to redevelop 11 000 ha of Irrigated and Dryland sugarcane in Sena district, Moçambique. This entailed the complete costing, design and engineering package for all aspects of the development including Irrigation, Roads Water Distribution systems, Drainage and all other land preparation procedures up to ridging in readiness for planting. Project budget of US\$70million.

## **FEASIBILITY STUDIES**

### **GNA – Jigawa State, Nigeria (2021)**

Feasibility design for 13,000ha greenfield irrigated cane development split between drip and centre pivot irrigation including 15km long bulk water supply system of canals and large bore steel piping all fully compliant with Bonsucro standards.

### **OLAM Rice – Nasarawa State, Nigeria (2011, 2018, 2021)**

Feasibility designs for already completed phase 1 (4,400ha) and phase 2 (2,000ha) paddy rice irrigation scheme including bulk water pumping system, internal drainage, flood protection works and drainage pumping arrangements. Ongoing technical backup on road and drainage construction works.

### **Nasarawa Sugar Project, Dangote Sugar Refineries – Nigeria (2018 - ongoing)**

Feasibility study for the ongoing development of a 20 000ha sugar estate in central Nigeria, Nasarawa State.

### **Demeter Pre-Feasibility Study, Malawi (2017-2018)**

Reconnaissance level soils investigation of the project area. Conceptual layout and design for an irrigated **organic** sugarcane estate, including roads, drainage, housing and processing facility. A capital and operational cost estimate was compiled, together with a market study.

### **ATFC II Agriculture Evaluation with Implementation Budget, Mozambique (2017- 2018)**

Resource analysis and soils investigation to identify 1 000 ha of land for rain fed crop production and 500 ha of irrigated macadamias out of the larger project area. The overall capital cost of the project was estimated at US\$14 million.

### **Outgrower Development Study, Sunti Golden Sugar Estate – Nigeria (2017)**

Feasibility study to determine the areas and their associated costs of development for 3 000ha of estate and small-grower sugar production.

### **Irrigation Conversion Project, CSKN Estate – DRC (2017)**

Feasibility study to understand the viability of developing 4 000ha of existing cane to irrigation under Centrepivot.

### **Babator Project, AgDevco - Ghana (2014-15)**

Feasibility to develop a green fields agricultural project of 6 000ha of irrigated area for the purposes of producing food crops to include commercial, outgrower and small-grower components. Model farm currently under construction.

### **Talisima Estate - Angola (2014)**

Feasibility study to rehabilitate this 5 000ha estate for mixed row cropping and irrigation development.

### **Savannah Estate, Dangote Sugar Refineries - Nigeria (2013-14)**

Feasibility study to rehabilitate the 6 000ha sugar cane plantation and to expand by another 4 000 ha.

### **SK Basin Development, IWAD - Ghana (2012 -13)**

Feasibility study of a 10,000ha potential irrigation scheme in Northern Ghana to develop food security for the country.

### **Metuchira Tongaat-Hulett Açucar - Moçambique (2012)**

Conducted a feasibility for Acucariera de Mafambisse to undertake the development of a 4 100ha sugar development to supply an extra 400,000t of cane to Mafambisse mill.

### **Hippo Valey/Triangle Expansion - Zimbabwe (2012)**

Conduct feasibility study to expand the operations of Triangle and Hippo Valley by a further 4 000ha on land in Triangle and Hippo Valley estates for small-holder allocation. (US\$150 000)

### **Bankable Project Document, Sekab Bio-Energy - Tanzania (2007 - 2010)**

This project was planned to develop 17 000ha of sugarcane in the Bagamoyo region for Ethanol production for a Swedish Ethanol manufacturing & distribution Company.

### **Xinavane Small Growers, Açucareira De Xinavane - Moçambique (2009)**

Feasibility study to raise funds for the development of 1 200 ha of small grower cane using a consortium of funds from EU to commercial banks. This project was implemented in 2010 and 2011.

### **Markala Sugar Development, Illovo Africa - Mali (2006 - 2007)**

Commissioned to carry out a Feasibility Report to for Phase 1 (4 500 ha) and extrapolate costs to develop from virgin land 15 000 ha of irrigated sugarcane development off the Niger River.

### **Massingir Ethanol Development, Procana Ltd – Moçambique (2006)**

Carried out a Pre-feasibility study to develop 15,000ha of sugarcane for Ethanol production and Co-generation situated South East of the Massingir Dam in Gaza Province, Southern Moçambique.

### **Lomaz Small Holder Sugar Project - Zimbabwe (1997)**

Feasibility for the Development of a 1 000ha of Small Grower Cane in various communal and resettlement areas in the Bindura district.



**Tica Feasibility Study, Tongaat Hulett - Moçambique (1995 - 1996)**

Produced the feasibility study to develop 2 500ha of Sugar cane on land attached to the Mafambisse Sugar Mill in Mocambique. This is envisaged as an irrigated scheme and would include 500ha of Small Growers as well as 1500ha of large private growers and some Miller-cum-Planter cane.

## **TRAINING & TECHNICAL SUPPORT**

### **Caribbean Community Climate Change Centre (5C's) – Belize (2021 - ongoing)**

Develop a project to promote behavioural change needed to sustain livelihoods and build resilience to the impact of current and future climate variability and change. This includes the preparation of data and reports to be used in the application for the Green Climate Fund (SAP) application.

### **Jacoma - Tropha Estates – Malawi (2021)**

Client representative for construction supervision for 1Mm<sup>3</sup> zoned earth-fill embankment Kaweche dam and ancillary works

### **Agrinvest - Flue Acres Estate – Malawi (2021)**

Client representative for construction supervision for 0.5Mm<sup>3</sup> zoned earth-fill embankment Chitikale dam and ancillary works

### **Pyxus Estate – Malawi (2019-21)**

Rehabilitation of existing river barrage and detailed design of combined spillway and road crossing structures for Lisandwa farm.

### **IDC – Tanzania (2020-21)**

Lenders Technical Advisor to IDC for the 2,400ha irrigated land development project including the bulk water supply and 1Mm<sup>3</sup> off-river storage dam at Dakawa and de-bottlenecking the factory to achieve a 160tch capacity.

### **Feed the Future Malawi Agricultural Diversification Activity (AgDiv) Resilience Challenge Fund, USAID - Malawi (2020 - ongoing)**

Partnered with Palladium & Dept of Irrigation to provide agricultural technical services for small holders – satellite & drone mapping, social data collection, resource audit, site selection, drip & gravity irrigation scheme design and implementation in Mulanje, Thyolo and Chikwawa districts.

### **Catholic Relief Services - Zimbabwe – (2019-2020)**

Conducted a rapid assessment of water catchments, sub-catchments, watershed, and small-scale irrigation potential in Nkayi, Lupane, Bulyana, Tsholotsho, Hwange & Binga districts of Matabeleland.

### **IDB – Belize - (2019 - ongoing)**

Carrying out a value chain and climate resiliency study for small holder farmers in Belize to provide a strategic way forward for sustainable agri-businesses.

### **AGRER/EU & Dept of Irrigation – Malawi – (2019)**

Carried out a semi-detailed soils survey for the Kholongo irrigation scheme in Kasungu district to identify potential development areas for further interventions.

### **COOPI/EU & Dept of Irrigation – Malawi – (2016-2019)**

Carried out rehabilitation and expansion of 110ha Lufuwu irrigation scheme from tender adjudication through to commissioning and training.

### **GIZ & Dept of Irrigation – Malawi (2019-2020)**

Feasibility, design, tender adjudication, and management of small-scale irrigation scheme at Thulwe.

### **Cardno/EU & Dept of Irrigation – Malawi – (2017-2018)**

Carried out drone mapping, scheme rehabilitation and expansion, socio-economic and financial analysis to fund the scheme further.

### **PCI WALA - USAID - Malawi (2009 – 2015)**

Providing agricultural consultancy, training and development to the Wellness from Agriculture and Livelihoods Advancement Project to develop Irrigation schemes in 8 Districts in the Southern Region. Irrigation technology includes simple river diversion works and gravity canal reticulation.

### **IFAD/WB Dept of Irrigation – Malawi (2009-2013)**

Carried out rehabilitation and expansion of Muona and Nkhate irrigation scheme from tender adjudication through to commissioning and training.

### **Improved Livelihoods Programme (I-Life) USAID, Malawi (2005-2009)**

Provision of technical support and capacity building to technical field staff from 7 NGO consortiums working in 7 Districts in Malawi on irrigation designs and implementation of small-scale schemes (900ha). Irrigation technology includes simple river diversion works, masonry weirs and gravity canal reticulation.

### **NJIRA Programme (Concern International) USAID, Malawi (2015-2020)**

Technical partner on irrigation interventions for small scale farmers

### **Tea Smallholder Support Programme, Solidaridad - Malawi (2009-2011)**

Contracted for design, development and delivery of training materials through a TOT programme for tea smallholders in Mulanje and Thyolo Districts in Southern Malawi. The overall objective of the project is to improve

smallholder tea production and to achieve product certification with leading certification bodies. Funded by DE Foundation, implemented by Solidaridad.

**Mazabuka Cane Growers Trust, Manyonyo - Zambia (2013)**

Contracted to complete the designs for the 500 ha small scale farmers furrow irrigation scheme initially funded by AfDB.

**Guysuco, EU - Guyana (2012)**

Provided audit and drainage design works under EU adaptation strategies for the release of variable tranche funding for the industry rescue plan.

**Kascol, EU - Zambia (2010)**

Provided technical assistance for the enhancement and expansion of outgrower operations to implement EU adaptation strategies.

**Mtibwa & Kilombero Outgrowers, EU - Tanzania (2010-2011)**

Provided technical assistance to both outgrower projects to implement EU adaptation strategies for an expansion of 7 000 ha of sugar cane.

**Sugar Outgrower Capacity Building Project, EU - Malawi (2010-2012)**

Contracted as Technical Assistance Consultancy for design, development and delivery of training materials through a TOT programme for outgrower farmers with the aim to improve productivity of outgrower sugar farmers in Kasinthula and Dwangwa. Funded by EU and implemented by Concern Universal

**Addax Bio-Energy Project - Sierra Leone (2009 – 2014)**

Contracted to supply basic training needs for machine operators for the operations for this 10 000ha development.

**Mumias Sugar Company - Kenya (2008 – 2011)**

Agricane was contracted by the largest sugar producing company in East Africa to provide Management Staff to assist with a strategy to improve sugarcane yields for both the Nuclear Estate and the Out Growers. This also includes the supply of professional services of Engineering, GIS, Agronomy and Training to back up the management supplied on site.

**Alumenda Estate Management, Illovo, Nchalo Estate – Malawi (2003 – 2008)**

Training – 5-year contract to 2008 To provide full time personnel to undertake the estate agricultural training programme to develop an agricultural training manual and institute a training programme for all levels of staff employed

**Dwangwa Sugar Estate, Illovo - Malawi (2004 - 2009)**

Irrigation Training of all Dwangwa Estate senior staff over 5 years.

**Nchalo Sugar Estate, Illovo - Malawi (2007 - 2009)**

General Training of all Estate lower management and supervisor level staff personnel - over 2 years. Supply the staff, materials and framework for irrigation and agronomic training and deliver this training to targeted field staff as requested by the estate management.

## **SMALL SCALE GROWER DEVELOPMENTS**

**Kasinthula Sugar Cane Growers Trust – Malawi (2019 – ongoing)**

Contracted to resuscitate, rehabilitate, and manage a 2,100ha irrigated smaller holder scheme and to provide critical training to local staff and trust members.

**Pyxus Estate – Malawi (2019-21)**

Detailed drip and centre pivot irrigation design for 350ha north and south blocks for outgrower farmers for row cropping.

**Phata Phase 2 Development, Phata Outgrowers Cooperative - Malawi (2016)**

Designed and developed a 300ha irrigated sugar and food security scheme with a combination of overhead irrigation systems. This is an expansion of the very successful phase 1 scheme developed to provide small-scale farmers with a scheme to sell sugarcane to the Illovo factory.

**Phata Phase 1 Development, Phata Outgrowers Cooperative - Malawi (2012)**

Successfully sourced funding from EU, designed and developed 300ha small-grower cane farm in the Shire Valley on behalf of Phata community farmer organisation to supply cane to Nchalo estate.

**Hippo Valley Small Grower Development, Tongaat Hulett Zimbabwe - Zimbabwe (2012)**

Consultants to Tongaat Hulett (Zimbabwe). Feasibility of development options for the expansion of sugarcane area of 4 000ha to be divided into 200 small scale farm units.

**Xinavane Small Growers Expansion, Acucareira De Xinavane - Moçambique (2007– 2014)**



Contracted by Acucareira de Xinavane as EPCM to design and develop of a total of 3 000ha of various expansions to Maguigwane and Macuvulane small-grower schemes and new development of the 3 de Fevereiro small grower land.

**Improved Livelihoods Programme (I-Life), USAID - Malawi (2005 - 2009)**

Technical Support in Irrigation. Provision of technical support and capacity building to technical field staff from seven NGO consortiums working in seven Districts in Malawi on irrigation designs and implementation of small-scale schemes (900ha). Irrigation technology includes simple river diversion works and gravity canal reticulation

**Small Holder Irrigation Project (Ship), AfDB - Malawi (2005 - 2008)**

Providing experts to assist in the feasibility through to development of 980ha of small-scale irrigation development in the Lower Shire Valley.

**EPCM, Maggobbo Small Holder Project - Zambia (2000)**

Designed and Developed 500ha of furrow irrigated sugarcane for the Maggobbo farming community in the Mazabuka area of Zambia.

**Lower Komati Basin Development Project - Swaziland (1999 - 2002)**

Sub-consultants to Stewart Scott (International). This project in Swaziland uses water from the newly built Maguga Dam – annual yield for the project of 83 000 ML. Work included soil analysis, site selection, land use planning, and providing a Framework for operations and management for about 7 000ha of irrigated small growers development in sugarcane.

**EPCM, Kasinthula Small Holder Project, Illovo - Malawi (1997 – 2000)**

Designed and Developed the first two phases of the ca 1200 ha of furrow irrigation at Kasinthula in the Shire Valley of Malawi. This is a scheme initiated by Illovo Sugar with the idea that it will be totally controlled by Small Growers.

**Lomaz Small Holder Sugar Project, Bindura, -Zimbabwe (1997)**

Carried out a Pre-Feasibility study for development of a 1 000ha of Small Grower Cane in various communal and resettlement areas and was officially awarded the contract to carry out the full study and development programme prior to the project being shelved due to political uncertainties in Zimbabwe.

## **OPERATIONS & MANAGEMENT CONTRACTS**

**Kasinthula Small Holder Development Project - Malawi (1999- 2007) & (2019 – Ongoing)**

Agricultural management contract. Contracted for a six-year period following the construction phase to supply personnel and expertise in managing the complete affairs of this small-holder project. This includes all financial, administration, social and agricultural aspects of the normal running of a sugar estate. Re-engaged 2019 to assist with improving yields and overall condition of the estate.

**Phata Outgrowers Cooperative - Malawi (2013 – Ongoing)**

Agricultural management contract. Contracted for an initial five-year period following the construction phase to supply personnel and expertise in managing the complete affairs of this small-holder project. This includes all financial, administration, social and agricultural aspects of the normal running of a sugar estate. This contract was extended in 2018 for an additional period.

**Sunti Golden Sugar Estate – Nigeria (2016 – 2019)**

Provision of Agricultural Management and Survey team to assist the development program to achieve the target of 600 000 t/annum cane.

**Skip Pilot Farm Development - Ghana (2016 - 2020)**

Management contract of 400ha multi-crop pilot scheme with a combination of surface and overhead irrigation systems. This is to prove the best way forward for irrigation expansion for small-holder commercial farming.

**Kaombe Estate, Nchalo - Malawi (2009 – Ongoing)**

Contracted to manage the complete Operations and Maintenance of a 1 000ha farm in Southern Malawi.

**Mumias Sugar Company - Kenya (2008 – 2011)**

Agricane was contracted by the largest sugar producing company in East Africa to provide Management Staff to assist with a strategy to improve sugarcane yields for both the Nuclear Estate and the Out Growers. This also includes the supply of professional services of Engineering, GIS, Agronomy and Training to back up the management supplied on site.

**Alumenda Estate Management - Illovo, Nchalo - Malawi (2003-2008)**

To provide full time personnel to undertake the management of this 2 700-ha sugar cane estate including all agricultural and accounting practices. Resuscitated the performance from 87tc/ha to 118tc/ha over 5 years.

## **GENERAL CONSULTING WORKS**

Agricane has carried out many small studies from resource surveys and soil analyses to due diligence studies in 24 countries in Africa, including most of Southern and Central African states and a few countries in West Africa. Some of the larger scope works are detailed below.

### **EcoFarm, Mozambique (2021)**

Technical due diligence on an existing irrigated organic sugarcane estate, including the comment and review of the proposed expansion of an additional 1 000ha under out-grower co-operative arrangement. The assignment entailed reviewing the agronomic practices, bulk water supply and infield irrigation systems, as well as the harvesting and transport logistics.

### **Project Citrus, Botswana (2020/21)**

Technical and Commercial due diligence for a new greenfield 1 200ha citrus orchard including the establishment of a packhouse in Selebi Phikwe, Botswana. The project was to be developed in two phases – Phase 1 is 800ha and Phase 2 400ha. All commercial and marketing aspects of this project were reviewed.

### **Fairtrade Impact Study – Mauritius (2020 - ongoing)**

This is an evaluative study to assess whether the adoption of Fairtrade standards and the journey with Fairtrade has brought about change and improvement in the sugar cane landscape in Mauritius from Fairtrade farm level up to a change at country level.

### **Crop Diversification Study, South Africa (2020)**

A study to identify potential alternatives to sugarcane in the South African sugar industry. The assignment included identifying suitable areas for respective crops with the cane growing areas on the industry. Gross margin analysis for each crop was carried out and compared against sugarcane for each region within the industry.

### **Macadamia Project – Technical Due Diligence, Malawi (2020)**

Carried out a technical due diligence on a proposed 2 000ha irrigated Macadamia project in Malawi. This entailed converting rain fed tobacco lands to irrigated macadamias under drip irrigation. A detailed analysis was carried out on the project capital and operating costs.

### **Lenders Technical Advisor – Barahona, Dominican Republic (2018 - ongoing)**

Provide technical and advisory support to a local financial institution, as part of their loan agreement to a sugar company for the rehabilitation of an irrigated sugarcane estate and upgrades and modifications of the sugar mill.

### **Feasibility study for an investment project in the sugarcane sector in the Cienfuegos region, Cuba (2018-2020)**

The promotion of renewable resources for electricity production from co-generation through the modernization of the sugar factory plant. This included assessing the existing cane operations and making recommendations to increase the overall cane yields and improve overall operating efficiencies. The overall area was 40,000ha forecast to produce 2 million tons of sugarcane.

### **Exagris - Malawi (2016)**

Aerial drone imagery with 1 200ha irrigation and drainage design for nine commercial farms for row cropping throughout Malawi.

### **Malawi Mangoes - Malawi (2015 – 2016)**

Provided backward integration of drainage requirements and construction for the two drip irrigated farms totalling 1 300ha for bananas and mangoes

### **Sinde Farms - Zambia (2015-2016)**

Commissioned to carry out drone imagery and micro-jet irrigation designs for a 750ha phase 1 macadamia plantation.

### **Presscane And Ethco Expansion (2015)**

Carrying out the agricultural expansion for both of Malawi's ethanol factories to source their own feedstock.

### **Mafambisse - Mozambique (2015 –2016)**

Carried out a drainage and irrigation review to provide a yield improvement plan for the home estate.

### **Coscharis Rice - Nigeria (2015)**

Carried out soils, imagery and complete irrigation and land-forming design for the new 4 000 ha flood irrigated rice scheme in Anambra State. Construction underway.

### **Rufiji Rice Project - Tanzania (2015 – 2016)**

Carrying out the soils and a pre-feasibility study for this 4 000ha paddy rice development in southern Tanzania.

### **Sukari - DRC (2014-15)**

Review of sugar cane expansion strategy for Groupe Forrest and re-design of a 3 300ha farm with off-river storage.

### **Dangote Sugar Refineries - Nigeria (2014-15)**

Rehabilitation Works. Involved in the irrigation and fields rehabilitation project to resuscitate the 4 000ha Levee blocks in Adamawa State.

**Trophia Estates - Malawi (2013 – 2016)**

Carried out resource analysis, aerial imagery and irrigation design for an 800 ha micro-jet irrigated macadamia plantation and 210 ha pivot development providing technical support during construction.

**Kafue Sugar - Zambia (2013)**

Carried out an assessment of the existing conditions and potential for the possible acquisition of the 7 000ha sugar enterprise on the Northern banks of the Kafue River.

**Xinavane – Mocambique (2012)**

Consultants employed to carry out a strategic study of all land and water opportunities within an 80km radius of Xinavane for both greenfield and brownfield expansion of sugarcane.

**Nasho District Resource Analysis - Rwanda (2012)**

Contracted to undertake a resource study of the Nasho region in Western Rwanda to analyse the potential for sugar production from the lakes off the Akagera river system. This included soils, irrigation, logistics, climate and yield consideration.

**Triangle Development Options - Zimbabwe (2009 - 2010)**

Consultants to Tongaat Hulett (Zimbabwe). Analysis of development options for the Zimbabwe sugar industry - using existing & projected water supplies. Work included project analysis from soil surveys to semi-detailed block designs for 5 000 ha of cane on Triangle and Mwanezana.

**Borotou & Zuenoula Sugar Estates - Ivory Coast (2009)**

Contracted to carry out Due-diligence investigation and report for Olam International as to the viability, sustainability and expansion potential for these 2 estates.

**Energem Bio-Fuels - Moçambique (2008–2009)**

Contracted to provided Consulting to develop 15 000ha of Jatropha in Southern Moçambique. This includes Bush-clearing, Land Preparation, Agronomy, Planning and GIS operations.

**Moçambique Reconnaissance Survey, BP Plc – Moçambique (2007-2009).**

Contracted by BP Alternative Energy Division to identify areas in Moçambique where at least 100 000ha could be developed to sugarcane over a period of about 20 years. This project should ultimately produce around 1 billion litres of ethanol per annum. The project required verifying the climate, the soils and water supplies are sufficiently adequate for a sustainable economic venture and understanding the associated social, environmental and infrastructural needs.

**Zambia Sugar Ltd - Zambia (2006-2007)**

Commissioned to carry out the furrow and drainage elements of a Front-End Package design and costing to develop 3 200ha of sugarcane for expansion to existing estate.

**Markala Sugar Development, Mali, West Africa – Illovo (2006 - 2007)**

Commissioned to carry out a Front-End Package to conceptually design and produce tender documents for Phase 1 (4 500ha) and extrapolate costs to develop from virgin land 15,000ha of irrigated sugarcane development off the Niger River.

**Chokwe Rice Development - Moçambique (2006)**

Carried out a preliminary study for Mocfer SARL to design and cost for budget purposes the bulk water systems required to develop 13 000ha of rice from the existing canal system off the Limpopo River in Southern Mozambique.

**Kinyara Sugar Estate, Gov of Uganda - Uganda (2002, 2005, 2006)**

Due Diligence Reviews - sub-consultants to Imara (Botswana & Malawi) for Priv.Unit. Conducted site studies of the farming systems, field and milling equipment and management structures and analysed the current capacities of KSWL and proposed expansion plans - including outgrowers. Site and expansion reviews repeated in 2005 and tender evaluations reviewed in 2006.

**Zambia Sugar Ltd, Mazabuka, Illovo - Zambia (2006 - 2007)**

Commissioned to carry out the furrow and drainage elements of a Front-End Package design and costing to develop 3 200ha of sugarcane for expansion to existing estate.

**Malawi Strategy Following Eu Sugar Reforms, EU – Malawi (2006)**

Complete a study on the mitigation measures including expansion and improved competitiveness to counter the effects of the loss of the preferential market for sugar into EU.

**Zimbabwe Strategy Following Eu Sugar Reforms, EU – Zimbabwe (2006-2007)**

Contracted to supply agronomy support for a study on the mitigation measures including expansion and improved competitiveness to counter the effects of the loss of the preferential market for sugar into EU.

**Markala Sugar Project Feasibility Study, TSB, Illovo - Mali (2005 - 2008)**



TSB and Illovo Carried out due diligence study to determine the viability of establishing 15 000ha of irrigation from the Niger river for sugar development.

**Lomaz Sugar Project, Tongaat Hulett Ltd - Zimbabwe (1995 - 1997)**

Project Agricultural Consultants for Farmers and Tongaat Hulett Ltd Consulting to the project board on all aspects relating to the establishment of 8 500ha of commercial sugarcane grown by private farmers. Work included the production of a bankable viability report to source the funding required for the farmers, planning of irrigation and the cane haulage practices, the establishment of the 300ha nursery.



## CONTACT DETAILS

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