



Great Lakes Mushroom Company – Uganda, Ltd.
P.O. Box 14336
Kampala, Uganda
+256 41 290 288

A Concept Paper

GREAT LAKES MUSHROOM COMPANY-UGANDA LTD.

August 2005

Name of business: Great Lakes Mushroom Company – Uganda Ltd. (“GLM”)

Address: Seeta, Bajo Estate Road, off Bukerere Road, Kampala, Uganda

Postal address: P.O. Box 14336, Kampala, Uganda

Contact person: Wanyama Wilson

Telephone: +256 41 290 288,

Fax: +256 41 290 211

e-mail: wilwanyama@yahoo.com

A new business opportunity in Uganda. This opportunity was identified by observation of progress in raising mushrooms in East Africa, particularly at Dar CDA Mushroom Company Ltd., located near Dar es Salaam, which is now expanding under the name Great Lakes Mushroom Company-Tanzania Ltd. (For information about this program in Tanzania, see *Operating Agreement of Great Lakes Mushroom Company-Tanzania.*) Great Lakes Mushroom Company-Uganda Ltd. (“GLM Uganda”) will use and build upon the base of science and technology established by Mr. Zhiguo Li and his “Chinese Tech Team” at this founding company in Tanzania.

Goals. GLM-Uganda is being formed for the purposes of creating a diversified, export-oriented, African mushroom company, with a production hub in Uganda serving mainly EU markets, that is equipped with the expertise in technology, distribution, and finance necessary to exploit fast-growing demands for a diversity of high-value-added mushroom varieties and their products for food, nutrition, and health both in Africa and elsewhere. A substantial part of production will be sourced in micro- and small-business growers in marginalized communities throughout Uganda, in order to assist thousands of farmers in rural areas who want to grow mushrooms but who are lacking the market research, reliable large-scale buyers, logistical support, and technical training that are all necessary to make a profit in the highly-competitive, globalized mushroom markets. GLM-Uganda is committed to the use of world-class, appropriate technologies that support clean, sustainable agribusiness development creating pathways out of poverty for all Ugandans, especially in rural areas.

Core activity. GLM-Uganda will produce, distribute, and sell mushrooms and mushroom products.

Location. The production hub will be built on land with ready access to Kampala and Entebbe International Airport. Under consideration is a 20-acre (approximately) site located a few kilometers east of Mbalala, 23 kilometers east of central Kamapa, on the Kampala-Jinja Highway, in the subcounty Mutuba IV of Mukono District. Alternative sites closer to Entebbe are being considered.

Product description. Mushroom varieties, fresh and dried, as well as all sorts of food, beverage, and health products, will be flexibly determined from ongoing research of global markets. Present mushroom production in East Africa (which is small) is largely oyster mushrooms because they are relatively easy to produce; there is an ample supply in global markets and hence prices are relatively low. GLM-Uganda will innovate in introducing higher-value, less common mushrooms as well as derived products for which global demand is strong and rising and for which prices are high. Varieties of button mushrooms that thrive in tropical climates, black ear or wood ear mushrooms (dried and compressed for export to Europe), and various teas and soft drinks with known benefits for the immune system, are planned. Choosing appropriate (capital-saving, labor-using) technologies of proven value in other developing regions (particularly China) will ensure good profit margins for our African producers if the management of costs is tight and if quality control is assured. A central facility for large-scale production is essential for research, efficiency, cost control, quality assurance, and for supporting small-scale out-growers with diverse services.

Local demand (within Uganda and neighboring countries) will be important and will grow from the presently small base as consumer knowledge and tastes become educated by foreign influences and demonstration. Initially, local sales will be mainly fresh products replacing imports from South Africa and other higher-cost suppliers. Hotels, restaurants, and stores serving tourists and other foreigners will be important demanders of GLM-Uganda's higher-value products, including button mushrooms that will be canned for regional markets as well as sold fresh locally.

Suppliers. GLM-Uganda will produce or build most of its own equipment with local materials, using methods well tested at Dar CDA Mushroom Company (located at Mbweni, 45 minutes drive north of Dar es Salaam). Material purchases are available locally and have been assessed by Zhiguo Li on previous visits to Kampala. The science and technology inputs are acquired from China on the responsibility of our Chinese Tech Team, headed by Mr. Li. Reliable and ample water supply and refrigeration for mushroom spawn are essential and will be guaranteed by the Ugandan partners in this joint venture: World Light Caring Mission (WOLICAMI) and the Uganda Mushroom Association (UGAMA).

Registration. Great Lakes Mushroom Company-Uganda Ltd. is being registered in Uganda as a Company Limited By Shares. The Subscribers (Robert Lyagaba, Wanyama Wilson, and Paul Armington) have filed the MEMARTS for the Company, prepared by M/S Ssemakula & Co. Advocates, Plot 1 Entebbe Road, P.O. Box 27190, Kampala.

Certifications and licenses. The acquisition of organic certifications and import licenses of various types in various markets is a lengthy process that has been started and is expected to take many months or even years. GLM-Uganda aims to deal proactively with the burdensome restrictions against imported agricultural products prevailing in the USA and Europe. It has joined or started dealing with the International Federation for Alternative Trade (IFAT), International Fund for Agricultural Development (IFAD), the Uganda Organic Movement, Cooperation on Fair Trade in Africa (COFTA), Export Promotion of Organic Products from Africa (EPOPA), Center for Promotion of Exports from Developing Countries (Netherlands), USDA, and USAID. Mr. Wanyama Wilson, Executive Director of WOLICAMI, has been invited by the Fair Trade Resource Network (based in Washington D.C.) to attend the Fair Trade Futures Conference in Chicago, September 30-October 2, 2005, organized by the Fair Trade Federation. GLM-Uganda has been selected to participate in the WTO Ministerial Conference on Fair Trade in Hong Kong, December 13-18, 2005, and will participate as a representative of East African organic food producers. Well-targeted travel by the Managing Director of GLM-Uganda and Mr. Li over the next few months will be needed in order to exploit the opportunities being offered by foreign helpers to deal with foreign regulations.

Environmental assessment. A NEMA report will be obtained. Additionally, WILMA CDM Services, LLC, one of the Members of GLM-Uganda, is actively collaborating with NEMA on CDM (Clean Development Mechanism of the Kyoto Protocol) projects, for which GLM-Uganda's investments may qualify. This depends on confirmation that carbon emissions can be reduced significantly by substituting Ph-control techniques for the heat-intensive sterilization of mushroom substrate without using materials that themselves cause carbon emissions.

Customer description. The mainstay customers will be large foreign buyers (final or intermediate) for both household and industrial use. Most sales will be in fulfillment of long-term contracts to supply specific types of mushrooms or products in specified quantities at regular time intervals. To the extent feasible, these sales will be supplemented with sales to local institutions, hotels, and supermarkets. Outsourced (smaller-scale) production will be processed for sale fresh in local markets and for sale dried in distant markets.

Export markets. Outside Africa, the most convenient and deepest markets for GLM-Ugandan sales will probably be the EU, served through the airport of Entebbe. However, the Gulf States represent a less developed, less competitive, and potentially rich market which can be served both by air for high-value fresh mushrooms and for dried products through the port of Mombasa. The DRC represents another market opportunity when conditions there become more settled.

Market research. Market research for GLM-Uganda began in 2004 with a small contract with Mr. Alex Musoke, and Ugandan entrepreneur who posed as having access to European markets but who failed to deliver results. Exploratory contacts with EPOPA and CBI, among others, were also initiated in 2004, but to date have not born fruit. Mr. Wanyama attended

the Arusha conference of April 13-15, 2005 on fair trade and G-8 policies (titled “Make Poverty History”), followed by his participation at the annual IFAT/IFAD conference and trade fair of May 1-7, 2005 at Quito, Ecuador. Various fresh products prepared by Mr. Li were promoted through GLM-Uganda’s booth at this trade fair and received with enthusiasm by many. This fair led to an invitation to visit a prominent wholesaler of dried food exports from Africa to Europe, Mr. Wasil Khan, CEO of Lakes Food Euro Ltd, in London. Mr. David Laughton (of WILMA, a Member of GLM-Uganda) visited Mr. Khan in London in August 2005, engaged his interest in visiting GLM production sites, and provided samples of dried mushroom product for testing by London chefs. Future market research will require additional foreign travel to trade fairs and wholesalers, to reach closure with particular buyers once GLM-Uganda’s capacity to deliver products at sufficient scale is well established and reliable. TTT Holding Company USA Inc., an investor in GLM-Uganda Ltd. (through a TTT-WILMA joint venture), will be an asset in marketing and in expediting the necessary certifications and import licenses particularly in the USA. More help with marketing in Europe is being sought from CBI, among others. Funding for market research is being sought from Members of The Company and others.

Profits and competition. The Company believes that several favorable factors outweigh the negative cost factor regarding its global competitiveness, which is Uganda's remoteness from wealthy buyers and thus higher transport costs. On the positive side, Uganda and other countries in the Great Lakes region have an abundance of cheap labor and free agricultural waste that can be transformed into mushroom products of high value. GLM-Uganda has the scientific and technical capacity to adapt labor-using, capital saving technologies to local resources and to optimize use of local materials and skills. Moreover, Africa’s remoteness and relative inaccessibility creates a competitive advantage in selling fresh products in local markets. For example, the price of fresh button mushrooms in China (in U.S. dollars) is far below the cost (in U.S. dollars) of producing a comparable product in Tanzania, but distance and perishability insulates the Tanzanian market from Chinese competition. In Dar es Salaam today, the price of fresh button mushrooms is about 3.5 *times* the estimated production cost at Dar CDA Mushroom Company (not including capital costs). At such a price-cost ratio, there is plenty of demand in Tanzania (which moreover is growing rapidly) to make button mushrooms a profitable opportunity for this small African company, even though this demand may be too small to attract the interest of the Chinese. In this sense, being marginalized globally is an advantage for local innovators.

Finally, good relations with local governments, which are promoting innovations in agro-exports to compensate for declining world prices and demand for traditional primary products, can compensate (through favorable tax and regulatory treatment) for protective policies in major industrial markets. GLM-Uganda emphasizes to governments that its business is development and public service, and the Company expects that the public sector will treat the Company as an ally.

The competitive weakness of previous attempts to develop mushroom cultivation in East Africa is due to:

- weak management of costs and technology
- lack of quality control of product
- insufficient attention and resources devoted to packaging/distribution/marketing
- borrowing on too short a term to accommodate the long lags in achieving market penetration and in creating demand for new products

- failure to take operations to scale in time to achieve scale economies, which has been due in part to the “missing middle” of Africa’s financing institutions
- perhaps most importantly, copying what others are doing, hoping for quick and easy profits, instead of insisting on continuous research and leadership for innovation.

GLM-Uganda will deal systematically with each of these potential weaknesses.

Personnel. We anticipate that, in the start-up period of about one year, the principal staff will consist of the Managing Director (the chief executive officer, whose hire awaits closure on financing) and Zhiguo Li as director for engineering/production. As the Company is taken to scale, directors for finance and distribution/marketing are likely to be added. The technical core of the Company's research and training capacity will be the Chinese Tech Team, an expandable group of experts from China who work well together and who can, with the aid of interpreters and Ugandan management, provide effective technical guidance and training for production operations. These operations will encompass the Company's large-scale hub facility near Kampala/Entebbe, the smaller-scale operations of the individual members of UGAMA, the communities served by WOLICAMI where SMEs will be incubated with assistance in many forms from the hub, and the thousands of relatively poor individual growers in rural areas that are organized by a team led by Mr. Robert Lyagoba in a pan-Ugandan organization called Mushrooms Africa.

Technology. The technologies that will be used are those that optimize costs and production under local conditions and meet the requirements of major markets. Optimizing the choice of production method is a complex decision that varies not only with local conditions but also with the types of mushrooms being grown and with the ever-changing regulations in market countries. Optimizing choices of technology and process requires not only scientific, technical, and economic know-how of a high order, but also significant information resources and attention to regulatory changes in market countries. GLM-Uganda’s correspondents in these countries must have the interests of GLM-Uganda at heart, and their interest must be engaged on a continuing basis. GLM-Uganda aims to access such collaborators through the Members of The African Great Lakes Mushroom Company LLC, which will own half its stock.

Ownership structure and operations. See *Operating Agreement of Great Lakes Mushroom Company-Uganda Ltd.* Assumptions and projections for cash flows and the balance sheet of the company, 2005-9, are included in Annex I and Annex II.

Annex I
Balance Sheet of GLM-Uganda Ltd. (Projected)
(In US\$ thousands, end of period)

	2005	2006	2007	2008	2009
Assets					
Reserve cash	5	15	35	75	135
Equity cash	140	140	140	140	140
Reinvestment/amortiz'n fund	0	0	0	0	221
Buildings, equipment, tools	0	100	209	298	468
Land and infrastructure	6	25	45	60	100
Total assets	151	280	429	573	1064
Liabilities					
Debt	22	217	253	108	0
Total Liabilities	22	217	253	108	0
Net worth	129	63	176	465	1064
# shares held, @ \$1,000	320	320	320	320	320
Net worth per share	.403	.197	.550	1.453	3.325

Annex II
Revenue, Expenditure, and Financing of GLM-Uganda Ltd. (Projected)
(In US\$ thousands, unless specified)

	2005	2006	2007	2008	2009
Revenue					
Fresh mushrooms (various types)					
Metric tons per year	0	5	30	60	100
Value @ median price of \$7,000 /ton	0	35	210	420	700
Value added in products (60% of fresh)	0	21	126	252	420
Other sources: spawn sales, training of out-growers, advice (about 10% of fresh)	0	4	24	43	70
Total revenue	0	60	360	715	1190
Expenditure (including interest)					
Land lease (purchase in 2009)	1	3	4	5	30
Site preparation	3	7	10	5	5
Water and power infrastructure	3	12	10	10	5
Pick-up truck leases (2 purchased 2009)	.5	2	4	4	40
3.5-ton truck leases (3 purchased 2009)	0	3	6	9	60
Marketing, promotion, advertising	3	3	3	3	3
Manager's house, office, and lab	0	15	14	6	2
Mushroom houses & fencing	0	50	50	40	30
Water equipment	0	10	10	10	5
Mushroom processing equipment	0	20	30	30	30
Other equipment and tools	0	5	5	3	3
Input materials	.1	10	20	30	40
Packaging materials	0	6	15	22	25
CTT salaries	3.5	30	40	70	80
Wages labor costs	.5	11	28	44	65
Medical expenses	0	4	6	7	8
Training	0	6	10	10	5
Travel (other than marketing)	1	2	3	5	7
Fuel and vehicle maintenance	.6	20	25	40	55
Water and power fees	0	5	6	7	7
Communications	.2	4	7	10	12
Shipping	0	3	7	10	13
Banking and professional fees	.3	3	4	5	5
Interest on debt @ 10% p.a. on approximate mean stock	0.3	11	23	19	8
Total expenditure	17	245	340	404	543
Revenue less expenditure	(17)	(185)	20	311	647
Borrowing for operations & fixed capital	22	160	0	0	0
Borrowing for equipment	0	35	36	0	0
Repayment of loans	0	0	0	145	108
<i>Debt (end of year)</i>	22	217	253	108	0

Taxes (10% of revenue less expenditure)	0	0	2	31	65
CSR (10% of revenue less expenditure)	0	0	2	31	65
Net cash flow after transfers	5	10	52	104	409
Additions to cash reserves	5	10	20	40	60
Payments to reinvestment/amort. fund	0	0	0	0	221
Dividend payments	0	0	32	64	128
<i>Dividends per share (in \$)</i>	<i>0</i>	<i>0</i>	<i>100</i>	<i>200</i>	<i>400</i>