



VALID develops highly effective and innovative ready-to-use food products to address malnutrition.



“Our philosophy is not to import solutions into the developing world, but to add value to society, industry and farming locally.”

ANNUAL REVIEW OF 2017

Introduction and Governance Structure

Welcome to VALID Nutrition's Annual Review 2017. The purpose of this document is to provide our supporters and the general public with a candid review of VALID Nutrition's activities and developments during 2017, including a brief overview of our plans for the year ahead.

VALID Nutrition is a "not for profit" company, limited by guarantee and incorporated in Ireland. As such, it has no shareholders and cannot disperse profits outside of the business. It is a registered Irish, UK and US public charity, but operates a distinctive social impact business model that incorporates a special dispensation from the Irish Revenue Authorities allowing it to trade.

Seven Members (Trustees), four of whom form the Board of Directors, govern the company. The Board is chaired by company founder Dr. Steve Collins and includes Howard Dalzell (former Director of Policy at Concern Worldwide), Roger Yates, (Humanitarian Director of PLAN International) and Dr. Hans-Jürgen Koch, (former CEO of Deutsche Bank (Suisse) SA). The Company Secretary is Derek Staveley, formerly Finance Director of Unilever Ireland. VALID Nutrition's small management team report to the Board through their Chief Executive, Paul Murphy (former Chief Executive of Unilever Ireland). Our lean structure is designed to harness modern technology and progressive work practices, thereby reducing costs and enabling smarter, more efficient work methods.

- **Auditors: KPMG, 1 Stokes Place, St. Stephen's Green, Dublin 2.**
 - **Banking Services: Allied Irish Bank (Irl), Barclays (UK) and Northern Trust (USA).**
 - **Head Office: Derry Duff, Bantry, Co. Cork, Ireland – "virtual office".**
 - **No. of Employees: 7.**
 - **Turnover: €759,495 (for year ending 31st March 2017, our financial year).**
- Note: The above figure excludes turnover from our foods manufacturing partnership in Malawi.**

Ending Malnutrition

Despite the extensive humanitarian efforts made over the last 40 years, **ACUTE Malnutrition** affects 55 million children globally and is responsible for between 1-2 million childhood deaths each year. Acute Malnutrition is divided into **Severe** and **Moderate** forms treated by Ready-to-Use Therapeutic Foods (RUTF), and Ready-to-Use Supplementary Foods (RUSF), respectively. Both forms of acute malnutrition are treatable. **The challenge** is to extend treatment to all those who need it by reducing product cost and improving access to treatment.

CHRONIC Malnutrition or "stunting" is caused by a prolonged diet deficient in key essential nutrients and affects 159 million children in developing countries – equating to approximately one third of all children in these locations. These children are denied the opportunity to ever reach their full human potential - both mentally and physically. **The challenge** is to extend nutritional awareness to mothers and local communities, coupled with the provision of access to appealing, affordable and effective nutritional products for low-income consumers.

A solution is possible and the prize is absolutely enormous, not just for the children concerned, but also their societies and the global economy. By changing mind-sets and regarding malnourished children as autonomous individuals (by providing them with affordable nutritional choices) rather than beneficiaries, and by empowering mothers using an innovative evidence-based approach, VALID aims to unleash a significant change in how this problem is addressed – and in so doing, be a catalyst for an enterprise driven sustainable solution to malnutrition.

Our VISION is that market based solutions, which create and nurture consumer demand for good nutrition are the key to ending global malnutrition – and driving economic growth in the countries concerned.

Childhood malnutrition is the most important cause of global poverty, underdevelopment and child mortality in the world today (ref: The World Bank/WHO). **The global consensus is that preventing malnutrition has the highest return on investment of all development interventions.** At the individual level, preventing malnutrition leads to massive increases in adult earning and educational potential. At the macro level, it increases GDP in affected countries by an average of 2-3% and by up to 10% in high burden countries. In November 2014, The Copenhagen Consensus confirmed that childhood malnutrition is the most critical and economically sound intervention.

VALID Nutrition's MISSION is to make the choice of effective, affordable and appealing nutrition available to consumers in developing countries – at scale.

VALID Nutrition—Country Operations

Malawi

In 2017, **VALID Nutrition Malawi** in collaboration with our local business partner **Exagris Africa Limited**, produced 6.5 million sachets of **Ready-to-Use Therapeutic Food (RUTF)** – enough to treat over 48,000¹ children suffering from **Severe Acute Malnutrition (SAM)**. Since establishment, VALID Nutrition Malawi has produced over 44 million sachets of ready-to-use therapeutic food. This figure represents sufficient product to treat approximately **326,000 children** with severe acute malnutrition. Crucially, and with support from customers such as **UNICEF** and **WFP**, these figures represent local production which has now nearly eliminated the need for any ready-to-use therapeutic food to be imported into Malawi from Europe or the USA. This is a significant fact given that approximately 50% of the market is currently supplied from offshore. Furthermore, we are assisting local farmers and suppliers as well as providing employment and skills transfer. All this has a hugely **beneficial multiplier effect** on the local economy.

In addition to our manufacturing activities above, VALID Nutrition Malawi continues to act as a progressive and innovative research and development hub supporting VALID's broader objectives, which in 2017 have included activities in collaboration with **World Vision Malawi** and designed to generate further operational evidence of cost effectiveness through a **Community-based Management of Acute Malnutrition (CMAM)** pilot programme and thus to support the anticipated endorsement by the **World Health Organisation (WHO)** of VALID's recent breakthrough **Soya-Maize-Sorghum (SMS) RUTF** recipe – which will facilitate more children to be treated within existing donor budget constraints. For more detailed information about this breakthrough product, see our R&D section further below.



Also in 2017, and as part of a major research project to include a Test Market, further development of our new line of **Ready-to-Use Complementary Food (RUCF)** designed to prevent chronic malnutrition (which affects 43% of children in Malawi and on average over 40% of all children in Sub Saharan Africa) continued. Latest steps involved consumer and market research activities including a **Willingness to Pay Study** as well as a **Landscaping Study** to understand Infant and Young Child (IYC) feeding practices in Malawi. Supported by **Irish Aid** and the **Department of Agriculture** (through their **Africa Agri-Food Development Programme - AADP**), these studies form part of the evidence base to enable the development of further finished prototypes of product and proposition during 2018. This work is focused on addressing the process used to reach children affected by Chronic Malnutrition. These are first steps in a progressive programme we have designed to start the process of unlocking this potentially massive market and bringing autonomy and food choices to individuals affected by malnutrition.



Finally, and to sustain our significant achievements to date - including the attainment of **ISO 22000 Certification** during 2017 - and rather than continuing to invest in what is effectively a converted warehouse facility, VALID Nutrition Malawi is actively seeking grant funding in addition to borrowings already secured, to support the requirement for a move to a larger and purpose built factory facility during 2018.

India

The goal of the VALID/Amul collaboration which was supported by **DFID India** is to stimulate and shape the global market, introducing more competition to the established and dominant European and US based players. The Amul factory is certified by UNICEF and is providing a top class ready-to-use therapeutic food product that is priced competitively. Amul is India's largest Dairy Co-Operative and is owned by its 3.6 million milk producers, most of whom are smallholder farmers. Our initiative in India therefore is a further step in our efforts to establish a better balance in this vital market.



¹ Median calculation of 12.5kg or 135 sachets of RUTF product per child treated.

Research and Development

Soy Maize Sorghum RUTF

In 2016 globally, 17 million children under 5 suffered from Severe Acute Malnutrition (SAM) according to UNICEF. The WHO recommended method of treating SAM is VALID's Community-based Management of Acute Malnutrition (CMAM) model, which involves provision of Ready to Use Therapeutic Food (RUTF) to the patients. Less than 25% of SAM cases globally are currently being reached, leaving millions of children with a greatly increased risk of death. **A significant contributing factor to the low coverage is the high cost of RUTF.** To reduce cost and improve coverage, developing alternative lower cost recipes that are at least as efficacious in treating SAM as the existing standard milk-peanut based RUTF formulation, is essential.

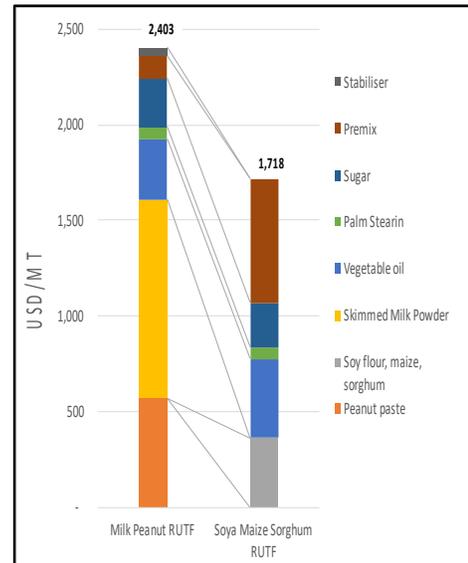
VALID Nutrition has been working to develop effective, locally sourced, non-milk based recipes for almost a decade. During this period, it has completed three clinical (efficacy) trials involving an innovative soy, maize and sorghum (SMS) based RUTF recipe. In 2014, we partnered with Ajinomoto Co. Inc., together with funding support from the **Japanese International Cooperation Agency (JICA)** and the **Global Innovation Fund (GIF)**. A new generation version of the SMS based recipe was developed using innovative techniques and Ajinomoto's amino acid and food science technology, to optimise the formulation. A clinical efficacy trial took place in 2015/2016 in Malawi.

A scientific Paper on the trial and outcome was published in August 2017 by the *American Journal of Clinical Nutrition*. This outcome represents a major breakthrough. **For the first time since the mid-nineties when RUTF was developed, we now have a lower cost product that is as efficacious as the sole standard recipe – which has dominated the market in all that time. This is a transformational development for the international RUTF market; and most importantly, for children affected by SAM.** In summary, this new product:

- Is as efficacious as the standard Milk-Peanut RUTF recipe in treating SAM.
- Is superior to the standard milk peanut RUTF in treating anaemia – which is a highly significant benefit, both for SAM and for application in improved supplementary foods, especially for the critically important group of pregnant and lactating women.
- Will cost substantially less, allowing more children to be treated within existing donor budgets - with ingredient costs in developing countries expected to be 15~25% lower, depending on prevailing market prices (see graph provided).
- Is much easier to manufacture in developing countries, with the base ingredients grown locally, and avoiding the need to import expensive milk powder. This will make manufacturers in developing countries much more competitive.
- Contains 10% less sugar than the standard RUTF recipe. Avoids lactose intolerance or nut allergy in children.
- Has a greatly superior environmental profile with significant sustainability benefits from the use of cereals rather than animal source ingredients. Furthermore, manufacture in programmatic countries will reduce the carbon footprint associated with supply from offshore.

These Results signify a hugely important breakthrough that will be a transformational development for the international RUTF market and most importantly, for children affected by Severe Acute Malnutrition. Making therapeutic foods out of local grains and pulses has long been a goal of international research and development efforts into Ready-to-Use Foods. Non-milk formulations reduce cost, reduce dependency on imported milk, make better use of locally grown ingredients and decrease the risks of fungal (aflatoxin) contamination. The cost of the new SMS RUTF will be considerably lower than the current milk peanut recipe. We estimate that the cost reduction will result in a global saving of several million dollars, and thereby enable the treatment of

Recipe Cost Comparison – Estimate (Malawi)



hundreds of thousands of additional cases for the same budget. As the cost of RUTF is a major factor in limiting the expansion of CMAM across the globe, we believe that this research marks only the start of an exciting and very significant change in the way that these products are made.

Smallholder Farmer Project

In collaboration with **University College Cork** and funded initially by **Irish Aid** and subsequently by the **Irish Research Council**, the Smallholder Farmer Project forms part of VALID's overall aim to develop a locally based value chain for the production of Ready-to-Use Foods. Latest results from the second iteration of household surveys were disseminated at a meeting of the **Irish Forum for International Agricultural Development (IFIAD)** held on 20th November 2017.

The Smallholder Farmer Project, has been conducted over a 6 year period to date (2010-2016), and with surveys undertaken in 2016 providing a better indication of the medium-term effects and impacts of the value-chain interventions on the lives and livelihoods of involved smallholders. Between 2010 and 2016 the same cohort of farmers were surveyed annually to collect information about their experiences with groundnut production for commercial markets and the impact of same on their household livelihoods. Our objective was that, through partners and value chain stakeholders, we could support farmers to produce commercial grade groundnuts for use in RUTF, thus creating a reliable source of high quality local groundnuts. Indeed, the 2016 survey showed that a group of farmers in Mchingi had established their own groundnut cooperative to look for good markets and to add value by processing. Both reports are available on our website at (<http://www.validnutrition.org/?s=small+holder>) and suggest that with appropriate policy changes, Malawi and countries like it, which experience high rates of malnutrition, can competitively produce effective nutritional products. This has the potential to save buyers considerable time and money in the procurement of goods like RUTF, thus increasing the number of lives saved and greatly increasing the proportion of the aid and development budget that remains in the developing world. There are also significant benefits to the local economy through the purchase of raw materials from smallholder farmers and through employment creation along the value chain.

Communications

In addition to upgrading our Website in 2017, we continually review our website material and social media streams, providing regular updates. Relevant items are shared frequently on our social media platforms of Twitter, LinkedIn and Facebook.

IUNS 21st International Conference of Nutrition in Buenos Aires:

The ground-breaking results from the third clinical trial of a Ready-to-Use Therapeutic Food (RUTF) product made without milk or animal source protein and undertaken in Malawi in 2016, was unveiled by VALID Nutrition's Founder, Dr Steve Collins, at the IUNS 21st International Conference on Nutrition (15th – 20th October 2017). The Soy-Maize-Sorghum (SMS) based recipe has been in development for almost ten years, involving three clinical trials and considerable investment from several stakeholders including **Irish Aid**, **PRANA Foundation**, **Japan's International Cooperation Agency (JICA)** and the **Global Innovation Fund (GIF)**.



Africa Agri-food Development Programme (AADP)



As part of VALID’s longer-term strategic plan and with support from **Irish Aid** through their **Africa Agri-food Development Programme (AADP)**, VALID is now driving ground breaking operational research into providing effective, affordable and appealing branded nutritional products to those at risk of Chronic Malnutrition (stunting). In 2017, AADP funding was deployed for small scale consumer and market research activities including a **Willingness-to-Pay** and a **Landscaping Study** to help our understanding of Infant and Young Child (IYC) snacking practices in Malawi. Follow-up activities are underway in 2018 including the development of enhanced prototypes of product and proposition. As illustrated above, this work undertaken by VALID and supported by AADP funding was presented to a delegation of 11 African countries at Iveagh House on 8th February 2018 as part of a broader discussion around agribusiness partnership potential between Ireland and African nations.

SUN Business Network

VALID Nutrition continues to be a member of the **Scaling up Nutrition (SUN) Business Network** which is working in association with GAIN to intensify business efforts in support of better access to affordable nutrition.

Funding and Finance

The table below presents a summary for the year ending 31st March 2017, our most recent Financial Year.

Summary Actual Figures	Year Ended 31 March 2017
Total Incoming Resources	€759,495
Total Resources Expended	€514,731
Surplus/ (Deficit) on Ordinary Activities	€244,764

Incoming resources, which consist of income from grants, voluntary income, revenue from consultancy services and royalties, has reduced by 36% from the prior year. The reduction reflects a decrease in grant income and demonstrates a reduced dependency on voluntary income (i.e. donations) as well as an increase in earned royalty income, showing further steps taken towards financial self-sustainability. VALID Nutrition has also reduced outgoing resources by over 50% as a result of continuing strategic control measures. The effect on income and expenditure lines has resulted in a surplus on operating activities again this year which is in line with the prior year. This in turn has allowed us to reduce creditors and further improve our balance sheet position. Separately, manufacturing operations in VALID Nutrition Malawi have reported income of over 2,216 million KWACHA which is an increase of 60% on the same period in the prior year, and demonstrates the continued growth and strength of our local partnership. VALID Nutrition is striving and nudging closer each year to becoming a self-sustaining social enterprise funded through the sales and marketing of effective low cost nutritional products. Key to the model is the complete alignment of revenue generation with social impact. In contrast to traditional aid and development organisations, VALID Nutrition does not invest revenue into public fundraising activities, preferring instead the autonomy of basing our competitive advantage on the quality and effectiveness of our products and services. As highlighted above, we have several exciting projects underway and in the pipeline. However, it will take some time before the full benefits of our work to date filters through to providing sufficient revenue to fully fund VALID Nutrition. In the meantime, finding the “bridge” funding required to enable us to continue to pioneer real change in the way that malnutrition is addressed remains a challenge.

Looking Ahead

After more than a decade of collaborative research effort, VALID and its partners have finally developed a lower cost and more effective Ready-to-Use Therapeutic Food product that now provides an opportunity to deliver a superior and more cost effective solution to a global problem that kills between 1-2 million children per year. Once formally endorsed by the World Health Organisation and commercialised, this innovative new product will enable the treatment of up to 1 million additional cases of severe acute malnutrition within existing global aid budgets for Community-based Management of Acute Malnutrition (CMAM). Additionally, this new recipe will directly impact and improve upon the ability of local manufacturers to compete and thus reshape a global market which still involves significant amounts of imported product into Africa, and worth approximately USD 150 million.



We believe that ending the scourge of malnutrition and the devastation it causes is not a problem that can be resolved without combining the efforts, skills and resources of both the public and private sectors. Indeed, market driven solutions are imperative to providing sustainable solutions to malnutrition in local communities. Through the development of ethical market mechanisms we can deliver at scale, nutritious food options at affordable prices - thus enabling mothers and communities with autonomous choices that harness their capacity to take control and responsibility for their own malnourished children over the longer term.

VALID Nutrition is also determined to source funding that will facilitate the provision of evidence-based solutions for tackling chronic malnutrition – solutions that will demonstrate to aid and food industries alike, that there is a viable market for providing people with the missing nutrients their children need and, that by developing and investing in this market, we can reduce and eventually eliminate this scourge once and for all. Harnessing the private sector to bring vast new resources to bear on this age old problem is crucial if we are to reach and prevent malnutrition in over 159 million children annually.

VALID Nutrition - 2017 in brief:

- VALID Nutrition Malawi has produced 6.5 million sachets of ready-to-use therapeutic food in 2017. This equates to the **treatment of over 48,000 local children** with Severe Acute Malnutrition.
- VALID's research and development programme published Results of **the lowest cost and most effective Ready-to-Use Product currently available**, in the prestigious *American Journal of Clinical Nutrition*, in August 2017. The cost reductions associated with this new recipe would mean that its global roll out would allow an additional 1,000,000 starving children to be treated each year within existing global aid budgets for CMAM.
- VALID Nutrition Malawi achieved ISO 22000 accreditation.
- Undertook operational research to develop and test additional products to tackle Chronic Malnutrition.
- Local production of 44 million sachets of Ready-to-Use Therapeutic Food since establishment.
- Has produced specialized products to treat over 326,000 children with severe acute malnutrition to date.
- VALID Nutrition Malawi now has capacity to supply both RUSF and RUCF products.

VALID Nutrition - March 2017