



# GLOBAL AGINVESTING QUARTERLY

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## A Look at the Soya Complex in Sub-Saharan Africa

By Lynda Kiernan, *Global AgInvesting Research & Insight*

The following article explores the production, processing capacity, and consumption of soybean and soya products in Sub-Saharan Africa, and attempts to gauge the marketing potential for soya in the region.

Depending on the source, there are between 189 and 196 independent countries on the earth today. As world markets become increasingly globalized and developing countries assume larger roles in the world economy, more opportunities for mutually profitable partnerships are being found outside of traditional trading partners.

Outside of South Africa, commercialized agriculture is not prevalent in Sub-Saharan Africa. The large-scale, commercialized farming that does exist lacks available credit and is just beginning to garner interest from investors. African farming is dominated by many small-holder farmers, who operate at little more than a subsistence level. Despite this, the middle class of Sub-Saharan Africa is expected to grow by more than 80% over the next 10 years – faster than any region in the world outside of Asia-Pacific. Additionally, over the next decade, food sales in Sub-Saharan Africa are forecasted to increase by 60%, again more than any other regions aside from Asia-Pacific.

Growing food demand on the continent, combined with economic growth has pushed total agricultural imports to US\$37.7 billion in 2012, slightly less than the 2011 record of US\$43.6 billion. Over the past decade, U.S. agricultural exports to Sub-Saharan Africa have increased by 200% to equal US\$2.9 billion in 2011, representing only a 7% market share in the region.

MAP 1 Sub-Saharan Africa



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# First Agro

The Co-founder and CEO, Naveen Modekurti, Discusses the Next Generation of Agriculture in India

By Kyle Wendling, *Global Aginvesting Research & Insight*



**Naveen Modekurti**  
CoFounder and CEO of First Agro

I recently had the pleasure of speaking with Naveen Modekurti, the co-founder and chief executive officer of First Agro. First Agro is the first commercial horticulture grower in India that is 100% pesticide-free, non-GMO, and complies with the Food & Agriculture Organization and World Health Organization's Codex Alimentarius, the highest food safety standard in the world. Currently, First Agro has one fully integrated farming operation, 'Cauvery,'

located between Bangalore and Mysore. However, over the next five to seven years, plans are in the works to open up an additional 16 clusters, totaling 1,500 acres of pesticide-free, fully integrated farm clusters, each 100 – 150 acres.

To understand the significance of this endeavor, you must first have an appreciation for the current toxic state of India's agriculture sector. Today, the rampant misuse of legal and continued use of banned pesticides and herbicides is wreaking havoc on the health of India's population. A recent study, conducted by the Delhi-based NGO Consumer-Voice, found that, on average, the amount of pesticides in Indian eatables is as much as 750 times the European standard.

The reasoning behind the excessive use of agricultural chemicals is not complex. It began with the Green Revolution, which hit India in the 1960s. When Indian farmers first began experimenting with agricultural chemicals and genetically modified seeds, they instantly saw dramatic increases to their yields. Recognizing higher yields, farmers adopted an 'if some is good, more must be better' attitude toward the new technologies. However, this logic did not hold true, and soon the

lands became poisoned with unabsorbed chemicals. As the soil quality and yields declined, farmers, desperate to increase yields, began applying even greater levels of chemicals, further exacerbating the problem and triggering a vicious cycle.

The health effects of such overuse are undeniable. An average Indian meal is approximately 20% vegetables, which comes out to a little over 200 grams of vegetables on a daily basis. These 200 grams of vegetables regularly contain as many as 40 different deadly chemicals. Pesticides, that have been banned in 62 different countries, are still regularly used in India. Researchers at the New Delhi-based Centre for Science and Environment have found high levels of pesticides in blood samples from villagers in the Punjab state in Northern India. Other studies have found cancer causing carcinogens and other chemicals, such as heptachlor and phosphomidone methyl, in the breast milk of new mothers throughout the Punjab region. Exposure to such chemicals can, at any age, cause physical deformities, cancer and disorders of the central nervous system. And recently, 23 school children in the village of Dharmasati Gandawa in Bihar died from eating a free school lunch tainted with the pesticide monocrotophos, a chemical similar to sarin gas.

However dreary the outlook may be, there is hope for reversing such crippling agricultural practices, and First Agro, along with its co-founders, Nameet Modekurti, KN Prasad and Naveen Modekurti, are leading the charge.

When I spoke with Naveen, he laid out his vision for bringing sustainably produced, pesticide-free produce to India, and being a catalyst for improved food safety and quality.

"First Agro has a matured Integrated Pest and Disease Management (IPDM) where nature's beneficial insects, beneficial microbes, bio-derived neem oil and garlic along with pheromone insects traps are used effectively to manage the agriculture pests," Naveen said. Through

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## Naveen Modekurti: Discusses the Next Generation of Agriculture in India

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these practices, First Agro is able to manage about 90% of common pest issues in agriculture, enough to maintain an economically viable operation. Naveen shared one example of how Mother Nature can be leveraged to balance the ecosystem, “Many pests, such as Carrot Fly or Armyworm, who feed off of carrots or parsnips, hate the presence of garlic and coriander. By planting garlic or coriander with our carrots, we can effectively control the presence of carrot flies. For every pest, nature provides its own solution.”

While concoctions of neem oil, chili-pepper spray, pheromone traps, etc. may seem like relics of a different age, there is huge opportunity in producing safe agricultural products for Indian consumers. Naveen and his team were initially attracted to the Indian market for a number of reasons. Firstly, the team felt a social obligation to bring pesticide-free, sustainable farming to India, and secondly, the huge marketing potential provided by the rapidly growing region.

“India’s population is expected to surpass 1.6 billion by 2050, roughly adding the population of Australia to the country every year. And, according to a McKinsey report, by 2030, there is estimated to be more than 68 cities with populations of 1 million, or above, that’s 50 – 60% urbanization,” Naveen noted. “Additionally, on the supply side, farming is highly-fragmented, an average sized farm in India is about 2 hectares, and nearly 2,000 farmers a day are quitting farming.”

“We saw an opportunity, we had the expertise and we knew how to run an operation like this,” Naveen said of the three-man team. Naveen spent several years in Japan and the U.S. as vice president and business unit head at Hewlett-Packard and iGate Global Solutions. Naveen, Director & Head of Farm Production, is the pioneer of First Agro’s Zero Pesticide operation. He is an expert on olericulture (the science of growing vegetables) and spent several years working with horticulture growers in Canada. The third partner, KN Prasad, but known as KNP, brings with him over 25 years of cross functional experience in the agricultural supply chain and information technology industries. And, for more than a decade, KNP co-owned and managed his family’s plantations in India.

The key to capitalizing on this opportunity was to adhere to a meaningful standard for food security. The team decided to adopt FAO & WHO’s Codex Alimentarius standard. The Codex not only places the most stringent criteria on the production process, but it is also a common reference point for exports entering the global market. Naveen explains, “Codex has defined global food safety standards to ensure that consumers are not exposed to unsafe levels of hazardous and

toxic materials. First Agro has adopted Codex Maximum Residue Limits (MRLs) for Pesticides and Extraneous Maximum Residue Limits as part of our farm production. Every batch of First Agro produce is tested and certified by reputed Food Safety Test laboratories to ensure on-going compliance to Codex standards. As we do not use any pesticides or herbicides, the residual test always shows zero.”

Naveen goes on, “Today’s customers in the information age are discerning, savvy and demand quality food. They are more health conscious than ever before! When a customer buys First Agro produce, they are assured of food safety for their loved ones and peace of mind.” First Agro focuses on four unique differentiators to deliver the highest quality product to their customers: quality, food safety, traceability, and environmental sustainability.

Naveen remarks, “Our produce is all grown on First Agro owned and managed farms, and we do not use any pesticides or harmful toxins for plant production. All production is based on two batches and fifty-two weekly lots in a calendar year. Every shipment from farm to retailer can be traced to a production batch and lot. So as a customer, you know the origin of the First Agro fresh produce.”

Additionally, all efforts are made to ensure environmental stewardship. First Agro uses sustainable growing practices. All crops are grown in safe, clean and environmentally friendly conditions. It’s ‘earth friendly’ growing practices that ensure long term sustainability, efficient utilization of resources and respect for local bio diversity. It’s compost manure with beneficial microbes helps to maintain the soil’s complex micro-environment and fertility, at the same time nurture the mother earth for future generations. Drip-irrigation systems allow for the reduction of water consumption by 70% over conventional agriculture, thus conserving natural resources, said Naveen.

First Agro is truly a trailblazer when it comes to safe and sustainable agricultural production, and it is their dedication to providing such products to their customers that will ensure their success in the long run. In the words of co-founder KN Prasad, “In the last year, customers have become very keen on knowing about the produce, where and how it is grown, besides nutritional details. The ability to grow local in a sustainable manner with focus on food safety in large volumes to make a difference to the society and for a healthy living of our fellow citizens will be our key to success.” ■

*For more information on First Agro and its operations, please visit their website, [www.firstagro.com](http://www.firstagro.com).*