



CORAF



WAAPP / PPAAO

WEST AFRICA AGRICULTURAL PRODUCTIVITY PROGRAMME
PROGRAMME DE PRODUCTIVITE AGRICOLE EN AFRIQUE DE L'OUEST

Key Results in Nigeria

WAAPP/NIOMR
fish Smoking Kiln.



November 2019

Nigeria



The Government of Nigeria received, during the period 2011-2016, a total of \$US 51 Million (IDA-45 M + GFRP (Spain)-6 M) to increase the productivity of Fish (Aquaculture), Rice, Yam and Poultry value chains. The main activities supported were:

- i. Research and development infrastructural construction and rehabilitation and equipment procurement;
- ii. Training of young scientists and extension agents;
- iii. Technologies and innovation (T&I) generation;
- iv. T&I dissemination for broad adoption.

Major Research & Development; Infrastructural construction & equipment, operational cost (2012 - 2016)

\$US 7.68 Million



Major Renewal of research-development personnel (2012 - 2016)

\$US 6.86 Million

31 Young Scientists Trained

Technologies dissemination between 2012 - 2016

\$US 11.05 Million

310 000 farmers adopted T&I on 420 100 ha



Major Research & Development activities between 2012 - 2016

12 Technologies and Innovations Released

\$US 23.99 Million

Success Stories



An Aquaculture Millionaire at 25

When 25-year old Olubunmi Aderinsola Yahya arrived to do her bachelor's degree in the Department of Aquaculture and Fisheries Management (DAFM) in the University of Ibadan in Nigeria, she had no idea; it might one day propel her to a millionaire.

After all, for a long time, many university aspirants were shunning the department in part because of the disregard of the potential of aquaculture and fisheries management or because it was not one of the trending courses on campus.

"For many years, we had a difficult time attracting students to the department," says Prof. Emmanuel Kolawole Ajani, outgoing Head of DAFM.

Like many in her class, Ms. Yahya got down to work learning critical skills as entrepreneurialism, fisheries extension, and economics, postharvest utilization and biodiversity management, environmental management and conservation of renewable natural resources.

"My focus was mainly on my studies. When I finished my bachelor's degree, I decided to continue with a master,

which I completed in August 2018," she says.

By the time Yahya was completing her master's degree, she was already immersed in a department's practice of marketing smoked fish products. As a way of building the entrepreneurial skills of students of the DAFM, interested students can undertake the sale of smoked fish and in return get 10 percent of proceeds. The rest is deposited into the university's account and used for maintenance.

Her Path to Millionaire

While Aderinsola Yahya learned many relevant fishery-related courses, she had a great interest in marketing and customer relations.

"When I was marketing the products of the department, I developed a large customer base and kept close contact with my clients," says the young entrepreneur. This close connection endeared her customers to her.

"This is primarily the reason why I started mulling over setting up my own business. I had demand, a customer base, and knowledge of rearing fish."

In 2015, this native of Abeokuta, Ogun State founded BSpice Products and services limited.

But when she decided to go solo, she set her sight beyond the university in the community in part because she wanted a market size that would match her high ambitions. Ibadan located about 150 kilometers North of the economic capital, has a population of about 2.5 million people. This represents a significant market for edible products include fish and other sources of protein.

“When I started, I introduced my products to the existing customer base. Later, I spread to supermarkets.”

To the traditional marketing approaches, she brought her social media strengths to attract new customers.

“About 60 million buyers in Nigeria use social media. This is a large market and that’s how we penetrated and pushed our products through our social media connections.”

Overall, BSpice Fish produces and commercializes smoked fish and other processed fish products such as Fish Snack Pack, Fish Oil, Fish Powder, Fish Spice, and Chunked Spiced Catfish. As her customer base has grown, so has also diversified her products. Today, she also processes and packages other products that allow for the cooking of local food delicacies such as okro, ogbono and egusi soup.

Monthly revenue is now estimated at between 2-2.5 million Naira for B Spice Fish. This is roughly (USD 4,000).

Income, she says, tends to increase with feasting periods such as the Muslim fasting period (Ramadan). “Based on our accounting, we have already generated close to 1.6 million Nairas,” she said when we met with her on May 16, 2019, on the campus of the University of Ibadan. Ramadan is being celebrated across Muslim communities since May 5, 2019.

When CORAF and the West Africa Agriculture Productivity Program (WAAPP) engaged the DAFM in 2013, producing future entrepreneurs was not a central priority.

The DAFM alongside the University of Buea in Cameroon and the University of Njalah in Sierra Leone won a commissioned project. A multi-donor trust fund funded it with CORAF’s management.

The primary objective of the project was for these three universities to further integrated fish farming research. The breakthrough nature of the findings of this adaptive research project and the exceptional approach with which they have promoted the outcomes as well as the level of adoption has resulted in buy-in from all actors.

Not only has the University of Ibadan thrown its weight behind the department to further expand the results, but many across Nigeria and in West Africa have also bought into the practice including Aderinsola Yahya.

“I am a product of integrated fish farming. Not only did I study it, but I also practice it,” says Aderinsola Yahya.

Today, Aderinsola Yahya is an employer. She manages a team of six and operates six large ponds with the capacity to contain about 1500 catfish at a time. Given the increasing demand, she farms all-year-round. When she is short on fish, she reaches out to other farmers for supply. She also partners with the DAFM for fish supply when she has shortages.

Her unique story has attracted development organizations to invite her to international conferences to speak about her experience and motivate young people across the world.

Having just married towards the end of 2018, Aderinsola Yahya is looking forward with excitement to her newfound passion of aquaculture entrepreneur and consultant of fisheries issues.

Over 50000 people have adopted integrated fish farming in Nigeria (fish, rice, poultry, and pig production). Development organizations as well as research institutes including WorldFish, FAO, etc. are also looking to partner with the department. The university has gained further recognition as a result of this technology.





An Innovatory Model Attracting Teens to Aquaculture in Nigeria

A public education campaign targeting mostly secondary school students in Nigeria is attracting teenagers at an unprecedented rate to aquaculture.

Pressure on fish products is on the increase in Nigeria as in most parts of Africa. As demand for fish rises among the growing population, the government of Nigeria under the West Africa Agriculture Productivity Program (WAAPP) undertook research and outreach measures in a bid to mainstream aquaculture.

Part of this included going into selected schools and training interested students, the basic techniques for rearing fish with the hope of getting them interested in the fishery sector at a younger age.

“For us in Nigeria, we think one of the sustainable ways of enhancing the fish culture is to engage the students and kids when they are young,” says, Dr. Mabel Yarhere of the Lagos-based Federal Institute of Oceanography and Marine Research (NIOMR).

“Changing the mindset of youths about anything inclu-

ding fishing is best done when they are young. So, our model of reaching out to young people is consistent with our ambition of getting Nigeria to be fish self-sufficient in the future,” added Dr. Yarhere.

WAAPP Nigeria started the campaign in schools in 2014. They adopted four schools for this purpose. Though the WAAPP has ended in Nigeria, the ‘adopted schools have retained a fit-for-purpose fish farm and in some cases established a fishery club.

In the economic capital, Lagos, Kings College, one of the country’s oldest schools has not only integrated fishery into the school curriculum but also put in place a vibrant club where students discuss fish activities.

“When I arrived in Kings College, I noticed that most students were interested in information, communications, and technology (ICT). Aware of the unemployment situation in Nigeria and the importance of diversifying one’s skill, I opted for fishing. A trade in fishing might make all the difference when we join the labor market in the future,” says Omokanye Abdul Lateef, a ninth-grade

student of the college.

Nigeria's push to mainstream aquaculture dates back to 2014 when inspired by results from WAAPP school outreach programs, the then Minister of Agriculture, Dr. Akinwumi Adesina, collaborated with the government to integrate fishery into the school program.

“What we can say is that thanks to WAAPP, we have been able to instill a fishery culture in our school system and this promises to be game-changer for the fish industry in future. To demonstrate the centrality of engaging young people, the current management of NIOMR has approved similar outreach to two schools in the 2019 budget,” says Dr. Yarhere, also NIOMR's head of outreach.

WAAPP funded the outreach activities of NIOMR. Besides schools, WAAPP also reached out to three villages in Lagos State where they trained some of the community members about tilapia and catfish as well as different aquaculture practices. The WAAPP extension program used participative approaches and together with the target beneficiaries, decisions were made on what approaches and techniques are most suitable to communities.

“One of the main differences in the WAAPP approach is that we worked with communities to determine the technologies that they preferred. We did not impose anything on target communities. It was a co-creation approach and as a result, farmers picked technologies based on their environmental realities,” argues, Dr. Mercy Adeogun, an extensionist with the Federal College of Fisheries and Marine Technology of Lagos who also contributed in disseminating the WAAPP aquaculture technologies to target beneficiaries in Nigeria.





The Trending Nigerian Blue Collar Jobs in Aquaculture

Innovative aquaculture practices brought about the West Africa Agriculture Productivity Program are opening new employment opportunities for young Nigerians.

Several years after communities were trained in fish farming, integrated aquaculture, and new ways of producing quality fingerlings, thousands of youths and families have either joined fish farming or expanded their farms and as a result, increasing their incomes and livelihoods.

Alahji Rilwan Monai is a 40 years old resident of Monai village, on the outskirts of New Busan in Niger State, Nigeria. He has been in fish farming for about 15 years. At 25, he mostly fished off the Kainji Lake. Culturing fish was almost foreign to him at the time.

But things changed substantially with the arrival of the West Africa Agriculture Productivity Program (WAAPP) in 2008. Rilwan was one of the first beneficiaries of the WAAPP program aimed at introducing fish farming in Monai village. Like many others, they were taught fish farming techniques including preparing and managing ponds, rearing fingerlings, and managing water.

“I started off with two ponds, but I am now operating 13 ponds,” he says with confidence.

A tonne of catfish sells in Nigeria for about N 750,000 (USD 2000).

“I have to be honest that this has increased my income considerably. It is with the revenue that I built my house, bought my cars and now planning to marry a second wife,” says a beaming Rilwan.

For someone living in rural Nigeria with most of the population living on an average of USD 2 per day, this is significant. As a result, he sees no reason to envy his peers who are living in cities or traveling abroad.

Most rural youths in Africa seek to travel to cities or abroad in search of white-collar jobs or greener pastures.

“This has never been my dream. I make enough and do not plan to move away from my community,” says Rilwan.

“There is More Money in Fish”

39 years-old Hafsat Oladele of New Busan operates both a cement shop as well as a fish farm. After years of ma-

naging both, she does not mince words with respect to which of the activities generates more revenue for her. “There is more money in fish,” she said unequivocally when asked to compare both activities.

Oladele operates seven fish ponds of an average of 1000 catfish each. When she harvests, she makes significant income which allows her to assist her family as well as take care of her needs.

When we spoke to the many youths of Monai village, many explained that fish farming had become their major source of subsistence and employment. Almost every household in Monai, now operate a fish pond, experts say.

Exponential Growth of Aquaculture in Monai

When WAAPP was introduced in Nigeria in 2008, the three leading institutes making up the Aquaculture National Center of Specialization, picked a few villages to pilot new practices.

In New Bussa, the National Institute for Freshwater Fisheries Research (NIFFR), started a demonstration plot in Monai.

“When we came to engage with the village, the community Head was not too sure what we were trying to do. There were just a handful of aquaculturists in Monai back in 2008,” says Dr. Attahiru Mohammed Souley of NISPR.

Today out of about 5000 inhabitants in this village, almost everyone is practicing aquaculture.

With increased production, one may think this may pose demand challenges.

“There is a huge demand for what we produce,” says 42 Alahji Rayyanu Ibrahim.

Ibrahim, another Monai resident now has a total of 12 ponds including two for fingerlings. In 2018, Ibrahim harvested close to 50 tons selling at N 750,000 (USD 2000). This represents about USD 100,000 per year.

Ibrahim’s economic comfort has reached a point where he says, he does not see himself doing anything else other than fish farm despite some of the challenges that they face.

“With my income, I can send my kids to any school that I want. I can afford the medication of my kids as well as improve the living standards of my family,” says Ibrahim.







WAAPP Gender-Sensitive Technology Uplifts Women's Dignity

Incomes of women in rural Africa could sometimes be laughable as they tend to be considerably low for survival. For all their contributions to the upkeep of the household, they often have restrained rights and little or no voice in decision making.

Combined with cultural restrictions, they become more vulnerable. In Muslim-dominated communities such as northern Nigeria, some of the 'cultural norms' mean they cannot fully participate in income-generating activities despite their willingness to do so.

But in Busawa, Niger State, located about 500 kilometers north of the economic capital, Lagos, an empowerment program led by West Africa Agriculture Productivity Program (WAAPP) Nigeria has not only boosted women's dignity but even changed their perceptions among men.

Hassana Douada, is a septuagenarian and Secretary of a women group cooperative in Busawa. Hassana benefitted from a smoking kiln, a technology devised by WAAPP to reduce waste and improve the income of users. WAAPP was implemented in Nigeria by the Aquaculture National Center of Specialization made up of three institutions.

In New Busan, the outreach efforts were led by the Natio-

nal Institute for Freshwater Fisheries Research (NIFFR). Women were also handed a loan which is rotated among its 40 members every three months to purchase more fish for smoking.

"Our profits have increased significantly as a result of the projects," says Hassana.

"Not only have we seen an increase in revenue, but we have also been able to have additional money to purchase other protein foods as well as rice. Now, I support my family and proudly provide support during events," she said with a smile.

"Now, I can compete with my peers. In fact, thanks to this project, our dignity has been lifted."

Busawa is a largely Muslim village. Women are mostly restricted to household chores.

But with women starting to support their husbands on household issues, some have begun to encourage them to undertake fish smoking.

"I am one of those who did not like the idea of allowing our wives to work out of the home. But since the introduction of the project, my wife has been supporting in the

upkeep of the household,” explains Abdouhaman souleymane, one of the leaders of the community.

For this dad of 15 children and 2 wives, the fact of having his wife bring home an extra income is a welcome relief.

“When my wife or the kids are sick, she not only goes to the hospital directly, but she also pays the bills.”

Souleymane is so convinced that he is gradually encouraging his peers to free their women to work on the smoking kiln.

“I will encourage others to do the same,” he says.

The results of the use of the WAAPP-devised smoking kiln have been so encouraging that some men are now allowing their wives to trade in the New Busan market. Married women are usually not allowed to go to markets unaccompanied. While they smoke the fish, the sale in the market is done by their kids or the older women.



About WAAPP

The West Africa Agriculture Productivity Program (WAAPP) involves 13 countries. The 10-years program was designed to make agriculture more productive, sustainable and profitable for smallholder farmers in West Africa. Started in 2007, WAAPP also aims to improve the conditions of life of consumers through the provision of agricultural products at competitive prices, build a critical mass of researchers for sound, efficient and collaborative research programs and finally to ensure that technologies generated nationally are available regionally. The WAAPP was established at the initiative of the Economic Community of West African States (ECOWAS) as a response to the renewed commitment by African countries to implement the Comprehensive African Agricultural Development Program (CAADP). Participating countries fund the USD 500 million program through a loan system obtained from the World Bank. At the regional level, the program is coordinated by CORAF. More than two hundred technologies were released and adopted by almost 4,5 million producers and processors on about 4.8 million hectares. These technologies are available on www.mita.coraf.org. WAAPP financed master degree and Ph.D. studies for 1021 youths. This represents 72% of men and 28% women. These young researchers are expected to replace most the agriculture researchers going on retirement. The nine national centers of specializations of countries participating in the program benefitted from the renovation of their infrastructure and new research laboratories were constructed. Two of the centers have been upgraded in regional centers of specialization. This includes the Dry Cereals Center based in Senegal and The Roots and Tuber center based in Ghana. By increasing the primary crops yields between 30% for dry cereals and 150% for rice, fruit, and tubers, the program has had a considerable impact on food security and caloric intake. Caloric consumption rose from 2,777 kcals to 2,964 kcals and the "hunger period" reduced by 28 to 55% according to the commodity. WAAPP has also increased by 34% the economic situation of farmers as well as transformed communities.

Contact WAAPP NIGERIA

Min. of Agriculture ARCN Mabushi Abuja - Nigeria

Coordinator of WAAPP Nigeria

James APOCHI
Abuja - Nigeria
+234 80 33 34 59 49
jamesapochi@yahoo.com



In collaboration with:



THE WORLD BANK
IBRD • IDA | WORLD BANK GROUP

