

The GSSP Corner:

This edition highlights on three research articles published in the Food Security and the Land Use Policy journals; and a policy note on the role of rural non-farm economy on youth employment and poverty reduction.

Articles:

- ❖ Ragasa, C. and Chapoto, A., 2017, Moving in the right direction? The role of price subsidies in fertilizer use and maize productivity in Ghana, *Food Security*, 9(2), 329-353.
<https://link.springer.com/article/10.1007/s12571-017-0661-7>

Despite major maize programs in Ghana in the last two decades and large expenditures on fertilizer price subsidy programs, maize productivity remains low. Are there limits to fertilizer subsidy as the focal policy for fertilizer use and productivity increases?

Utilizing cross-sectional data on 645 maize plots in Ghana, this paper provides empirical evidence on the responsiveness of maize yield to fertilizer application, profitability of fertilizer use, and how the economics of fertilizer use have changed with the subsidy program.

- The study finds that maize yield increases significantly with fertilizer application - 1 kg of nitrogen leads to a yield increase of 22–26 kg per hectare.
 - Production with fertilizer, whether subsidized or not, is profitable, even after incorporating risk in the estimation and analysis.
 - Rather than fertilizer prices, other factors such as accessibility to modern varieties, mechanization, and hired labour emerge as more serious bottlenecks to fertilizer application and productivity increases.
- ❖ Ragasa, C. and Chapoto, A., 2017, Limits to Green Revolution in rice in Africa: The case of Ghana, *Land Use Policy*, Vol. 66, 304-321.
<http://www.sciencedirect.com/science/article/pii/S0264837716313941>

The Ghana National Rice Development Strategy in 2009 anticipated doubling of rice production by 2018 with a 10% annual increase, to reduce overreliance on imports and help achieve national food security, increased incomes, and reduced poverty. Although rice production has been increasing at 7.5% annually since 2009, more than 40% of the total rice consumed is imported. At this rate of productivity growth, the gap between production and demand cannot be bridged. Average rice yield at national level hovers at 2.2–2.5 tons per hectare (t/ha) compared to the potential achievable yields of 6–8 t/ha based on on-farm trials. Will the adoption of fertilizer-responsive, high-yielding modern varieties be sufficient to bring about a Green Revolution in rice in Ghana, as happened in Asia? Employing yield response models and profitability analysis, this paper shows that:

- The adoption of various technologies such as fertilizer, certified seed, transplanting, bunding, leveling, and seed priming can contribute to yield improvements in irrigated and rain-fed systems across the 10 regions of Ghana.
 - But the levels of improvement vary across rice ecologies and location - e.g., marginal increases in yield from these technologies in rain-fed systems do not match the productivity growth achieved during the Green Revolution in Asia.
 - The study recommends that the expansion of irrigated areas, coupled with improved market infrastructure and intensification of extension services will be necessary to boost rice productivity and production in Ghana.
- ❖ Ghebru, H., and Lambrecht, I., 2017, Drivers of perceived land tenure (in)security: Empirical evidence from Ghana, *Land Use Policy*, Vol. 66, 293-303.
<http://www.sciencedirect.com/science/article/pii/S0264837716307013>

Tenure security is believed to be critical in spurring agricultural investment and productivity. Yet what improves or impedes tenure security is still poorly understood. This paper makes two contributions:

First, it provides an extensive review of the existing literature on tenure security and points to the lack of conclusive or consistent evidence.

Second, using household- and plot-level data from Ghana, the study indicates that some of the factors associated with farmers' perceived tenure security are:

- Gender, migrant status and political connectedness of individuals and households.
- Individually, farmers perceive greater tenure security on plots acquired through inheritance than on plots allocated by traditional authorities.
- Collectively, however, perceived tenure security is lower in communities with more active land markets and economic vibrancy.
- Migrants and women in polygamous households perceive their tenure to be less secure; however, female-headed households with large holdings feel more secure.

GSSP Policy Note:

- ❖ Diao, Xinshen and Silver, Jed, 2017, A spatial analysis of youth livelihoods and rural transformation in Ghana, GSSP Policy Note 12, IFPRI, Washington DC.
<http://ebrary.ifpri.org/cdm/ref/collection/p15738coll2/id/131315>

With Ghana's population becoming younger and increasingly urbanized, there is rising concern among policy makers regarding the location and types of jobs required to employ the youth. The tendency to exit from agriculture is found to be more pronounced for youth aged 15 to 34 years - while the total share of rural households engaged in agriculture fell from 56.9 percent in 2000 to 51.1 percent in 2010, that for rural youth-headed households

plunged from 53.8 percent to 42.5 percent. Correspondingly, the participation of youth-headed rural households in the rural non-farm economy has increased from 22.6 percent to 36.7 percent between 2000 and 2010.

What is the impact of urbanization and rural non-farm economic growth on agricultural intensification and technology adoption through the increase in population density, improved market access and rising rural labor cost? Can the growth of the rural non-farm economy reduce poverty? Using data pooled from the fifth and sixth rounds of the GLSS (2005/06 and 2012/13), this research explores these issues.

Announcement:



IFPRI/GSSP Policy Dialogue, 2017, scheduled for September 26, 2017. Participation via invitation and registration. Further details on the event and logistics will be shared soon!

GSSP News Digest:

Agricultural Issues

❖ [18 Warehouses Completed under Agric Programme to Improve Food Security](#)

Eighteen warehouses partly financed by the Ghana Commercial Agriculture Programme (GCAP) to improve food security in the country have been completed. While some are already in use, others are receiving finishing touches and will be ready for use during this year's farming season. Sixteen of the storage facilities are in the three regions of the north with the two others in the south. GCAP is a Ministry of Agriculture project jointly funded by the World Bank and the United States Agency for International Development (USAID) to develop agriculture in Ghana in line with the country's efforts at poverty reduction and ensuring food security by promoting inclusive commercial farming along selected commodity value chains.

❖ [Comprehensive Agricultural Marketing Policy Needed](#)

Agriculture in Ghana is predominately smallholder, with about 80 percent of its agricultural output being produced by smallholders on family-operated farms with an average of not less than two hectares. The participation of smallholders in the agriculture marketing, in both domestic and international markets, offers an opportunity for increasing their incomes and good returns to their resources, resulting in food security and poverty reduction. Ghana currently does not have a comprehensive agricultural marketing policy, although there are several policy documents and strategies within MDAs. The harmonisation of these policies into an umbrella marketing, with coherent implementation plan would help address most of the marketing constraints confronting farmers as well as the entire agribusiness sector.

❖ [USAID-FinGap: An innovative System of Financing Agribusiness to Boost Food Security](#)

Agriculture in Ghana is bedeviled with many challenges, thus undermining the potential of the sector. Access to finance is one of the major constraints confronting the sector in the country, especially for smallholder farmers. Financial institutions in the country are reluctant to provide financing to the agriculture sector due to perceived and actual risks inherent in lending to, or investing in this sector. The risk of financing agriculture is said to be high due to farming being dependent on rainfall, low productivity, price instability with an accompanying high incidence of post-harvest losses and low value addition to farm produce. There are others who also think most of the bank and other financial institutions in the country do not understand the dynamics of agriculture in the country, thereby tagging the sector as 'highly risky' venture for investment. USAID-FinGAP provides technical assistance and incentives to unlock significant financing for agribusiness through partnerships with strategic investors and buyers of maize, rice and soy.

❖ [US\\$42million Lost to Illegal Vegetable Oil Imports Annually](#)

The country loses an estimated US\$42million per annum from the illegal importation of 7,000 metric tonnes of vegetable palm oil into the country, data by vegetable oil palm producers have shown. “Today, the industry is facing a mammoth threat that is draining the economy of the much-needed revenue and affecting local plantations, farmers and local refineries to the extent of being at the brink of closure,” Mr. Samuel Awonnea Avaala, President of the Oil Palm Development Association of Ghana (OPDAG) told B&FT. Available data show that the existing palm oil refineries in the country have a combined capacity of approximately 626,000mtns per annum. This is more than the local demand of under 600,000, indicating the ability of local producers to fully meet local demand and export the surplus to neighbouring West African countries.

❖ [New Deal Sets 200,000mt Cashew Production Target](#)

A deal to boost cashew production in the country from 57,000 metric tonnes to about 200,000 metric tonnes has been signed between the Ghana Export Promotion Authority (GEPA), the Cashew Industry Association of Ghana (CIAG), and BLC, a private consultant. The deal was signed as part of the processes to develop a 10-year National Cashew Development Plan (2017-2027) which is to support research and development, improve inputs and technology from the farm to export; and increase processing capacity from 57,000 metric tonnes to 200,000 metric tonnes.

❖ [17 MOFA Staff Trained in Preparing Policy Briefs](#)

Seventeen (17) staff from Ministry of Food and Agriculture’s (MOFA) Policy Planning and Budget Directorate (PPBD), Agribusiness Unit, Project Coordination Unit and the Monitoring and Evaluation Directorate were presented with certificates from the University of Ghana’s Institute of Statistical Social and Economic Research (ISSER) at the close of a three-week training on Project Planning, Policy Cycle, Monitoring and Evaluation and Policy Analysis. The United States Agency for International Development (USAID) funded the training at the University of Ghana with the vision to coordinate and harmonise agricultural policy environment to help ensure increased agricultural growth and incomes.

❖ [Grow More Palm Trees - Food Processors International Ghana](#)

Food Processors International Ghana Limited (FPI), producers of Ghana Fresh® concentrated palm- nut cream, has said there is the need for outgrowers of palm trees to endeavour to increase their production capacity to meet the demand of processors in the country. The company, which sources palm fruits through its intermediaries from communities such as Asuom, Kade, Tweapease and Abompe, says producers have the opportunity to increase their capacity since the company offers a ready market for their produce. The General Manager of FPI, Mr. Thomas Goka, told the Daily Graphic in Tema that the company’s flagship product, Ghana Fresh® Palmnut Cream Concentrate, which is

exported to the United States and European markets, had gone through key validation processes to ensure that the product was accepted in those markets.

❖ [Ghanaian Investor Appeals for Support for Planting for Food Policy](#)

A United States based Ghanaian investor, Dr James Arthur, has appealed to the ruling New Patriotic Party(NPP) government to release adequate funds to support the planting for food and jobs programme to enhance food sufficiency and export. He said there was the need to speed up in assisting investors in the agric sector in both financial and farming inputs because the season for crops planting was ripe. Dr Arthur, President and Chief Executive Officer of Na'adom Farms Company, made the appeal when the Member of Parliament (MP) for Gomoa Central, Naana Eyiah Quansah and Mr. Benjamin Kojo Otoo, DCE nominee for Gomoa East visited the farms at Gomoa Osankrom.

❖ ['Planting for Food and Jobs' Policy Gets International Attention](#)

Government's flagship agricultural programme, "Planting for Food and Jobs," has attracted international interest at the ongoing 52nd AfDB Annual Meeting in India. The Minister of Food and Agriculture, Dr. Owusu Afriyie Akoto, who is leading Ghana's delegation to the event, gave a presentation during which he highlighted government's flagship policy aimed at turning around the fortunes of the ailing agricultural sector in the country. The Minister's presentation focused among other things on how to bridge the huge gap between food imports and local production as a way of boosting the sector and building the economy. He further touched on how the Government of Ghana intends to modernize Agric and encouraging the youth to consider farming as a lucrative business.

❖ [Planting for Food and Jobs Programme Receives Support](#)

The Crop Research Institute under the Centre for Scientific and Industrial Research (CSIR) has introduced three new improved varieties of cassava seeds this year for farmers to support planting for food and jobs programme. The new improved plants are purposely meant for production of highly industrial starch and for consumption and would be released to farmers for planting in July this year. Professor Joe Manu Aduening, Deputy Director of Crop Research Institute and Crop Bleeder made this known at a day's sensitisation programme against cassava brown virus streak at Awutu Beraku. The farmers were drawn from Agona West, Gomoa East, Effutu Municipality, Awutu Senya East and Awutu Senya districts. It was organised by the West Africa Virus Epidemiology (WAVE) of Ghana and sponsored by Bill Gates in the United State of America. Prof Aduening said the move by the Crop Research Centre was given a boost for the Planting for food and Job programme instituted by government to improve the agricultural sector.

❖ [Narrowing Food Base Threatens Ghana's food Security- Crops Research Warns](#)

The Crop Research Institute of the Council for Scientific and Industrial Research is warning against Ghana's narrow food base which could threaten the country's food security. Principal

Researcher, Dr. Emmanuel Otoo, says a co-ordinated effort is needed to avert future crisis. “All the food types we knew in the past are becoming extinct. We need to expand our food base so at all times we can be assured of food security,” he emphasized. Dr. Otoo who is also Head of Yam Improvement Project is excited by successful release of four new yam varieties by the institute. The CSIR-Crops Research Institute (CSIR-CRI) in collaboration with International Institute for Tropical Agriculture (IITA) has for the past ten years worked on developing improved varieties of Water Yam, with support from West Africa Agricultural Productivity Programme (WAAPP).

❖ [Feed the Future Enabling Environment for Food Security Project: Enabling the Business of Agriculture Data Snapshot: Ghana](#)

The Ghana data snapshot, prepared by the Feed the Future Enabling Environment for Food Security project, briefly highlights how Ghana fared on selected data relevant to USAID/Ghana. At a high level, Ghana’s scores perform relatively well in fostering access to seed, fertilizer, water, and machinery; and areas of excellence are access to financial services and ICT. However, Ghana’s scores within sub-categories highlight burdensome time and costs for registration of seed, fertilizer, machinery, and constraints to agricultural trade.

❖ [USAID Trains Women in Agriculture](#)

Fifty women leaders in agriculture, District officers of the Ministry of Food and Agriculture and Civil Society Organisation drawn from the Upper East Region have ended a day’s capacity training programme on Gender and Agricultural Development Strategy held in Bolgatanga. It was organised by the United States Agency for International Development (USAID) and Feed the Future’s Northern Ghana Governance Activity, through the United States government’s global hunger and food security initiative. The Training Programme was on the theme” Sensitisation on Gender and Agricultural Development Strategy 11 (GADS 11), To Enhance Women’s Participation in Local Governance and Increase Access to Agricultural Information and Opportunities”. The training programme forms part of the interventions being carried out in a five-year Northern Ghana Governance Activity project being implemented in 28 districts in the Northern, Upper East and Upper West Regions, funded by the USAID in Ghana.

❖ [Locally-made Organic Fertiliser Launched](#)

The Managing Director of Jekora Ventures Limited, Mr. Immanuel Nartey-Tokoli speaking at the inauguration of the JVL Fortifer Compost Plant said the company committed to producing and marketing 500 tons of the organic fertiliser and would invest about US\$90,000 of its own funds in plant operations and maintenance as well as product commercialization. “Commercial production of the Fortifer compost will begin immediately, and they are designed to meet the needs of both small and medium holder farmers,” he said. The Fortifer is made through processing of human and other organic waste and is a safe and nutrient-rich compost which will be sold in powder and pellet forms. The Director of Crop Services at

the Ministry of Food and Agriculture, Mr. Seth Osei Akoto said the new product would enhance agriculture productivity in Ghana and ultimately help the country achieve food security.

❖ [Ghana Imports \\$300m Worth of Rice in 2016](#)

Ghana imported some 689,000 metric tonnes of rice in 2016, and that cost approximately \$300 million, according to an official of the Ministry of Food and Agriculture. Mr. Benjamin K. Gyasi, the Acting Chief Director, said rice had become one of the most important food staples in Ghana during a mid-term review workshop of the Food and Agriculture Organisation (FAO). The inception mid-term review international workshop of the FAO, dubbed: “Strengthening Agricultural Statistics and Food Security Information in Coalition for African Rice Development (CARD) countries,” is underway in Accra. The two-day workshop is being attended by participants from CARD member countries such as Ghana, Ivory Coast, Ethiopia, Kenya, Madagascar, Senegal and Nigeria. The workshop, which is being organised by the FAO in collaboration with Ghana, seeks to afford participants the opportunity to share ideas and knowledge on improved rice production practices.

❖ [Ghana Committed to Addressing Land Issues - Prof. Frimpong-Boateng](#)

The Minister of Environment, Science, Technology and Innovation, Professor Kwabena Frimpong-Boateng, has stated Ghana’s commitment to address issues of land degradation and deforestation in line with efforts to achieve the Great Green Wall initiative underway in parts of West Africa. The Great Green Wall initiative is an umbrella programme supported by the Global Environmental Fund and the World Bank in 12 selected countries in West Africa and the Sahel, using a landscaping approach. At the opening of the fourth conference of the Sahel and West Africa Programme in support of the Great Green Wall initiative in Accra, Prof. Frimpong-Boateng said land degradation in Ghana and Africa was increasingly being recognized as a key development issue.

❖ [European Union \(EU\) to Support ACP Countries to Combat Climate Change](#)

The European Union (EU) will support 79 developing nations in Africa, the Caribbean and the Pacific (ACP) with a €8 billion (\$891m) to implement a global deal to combat climate change. Mr. Miguel Arias Canete, the European Climate Commissioner, said this in a release copied to the Ghana News Agency. It said: “Today more than ever, Europe stands by its long-term partners most vulnerable to climate change. We developed and developing countries together, will defend the Paris Agreement. We are all in, and our joint commitment to this Agreement today is as in Paris: irreversible and non-negotiable”. The ACP group and EU have agreed common positions on the next steps to implement the Paris Agreement and strengthened cooperation to promote low-emission, climate-resilient development, the release said. It said as a sign of closer cooperation with the ACP group “the EU has announced support of 800 million Euros up to 2020, with around half earmarked for climate action”.

❖ [Kufuor Foundation Begins Regional Consultation on Zero Hunger Strategic Review](#)

The John Agyekum Kufuor Foundation has begun regional consultation on the Ghana Zero Hunger Strategic Review (GZHSR) as it seeks to develop a national framework to eliminate hunger by 2030. The consultation is aimed at establishing a baseline that fosters understanding of the challenges and gaps in the national response to food and nutrition security. Speaking at the first regional stakeholders' consultation in Cape Coast, Professor Matilda Steiner Asiedu, Team Leader of the review, stressed that extensive multi-sectoral consultations and partnerships were key to achieving SDGs two and to further eradicate hunger and malnutrition. Prof. Asiedu explained that the review was to result in joint agreement and consensus by the Ghana Government and its development partners on priority actions required to achieve the United Nations (UN) Sustainable Development Goal two (SDG 2).

❖ [Niche Cocoa to Double Capacity with US\\$18m Reinvestment](#)

Indigenous cocoa processing company, Niche Cocoa, is investing US\$18 million to expand its processing capacity from 30,000 tonnes per annum to 60,000 tonnes. The move forms part of the company's aim to process more cocoa beans and reach more markets soon. The Chief Executive Officer of the company, Mr. Edmund Poku, told the Daily Graphic that to help make this a reality, the company was already at the verge of clinching a supply deal in Trinidad and Tobago that will allow it to export to that country. He disclosed this after members of the board of the Ghana Cocoa Board (COCOBOD) toured some processing factories in the Tema Free Zones Enclave. As part of plans to expand, he said the company had also begun works on establishing a confectionary factory to increase its production of finished products such as cocoa powder, chocolate, chocolate spread and chocolate drinks.

❖ [Produce Quality Seeds to Support the Presidents Campaign, SEEDPAG urged](#)

Mr. William Boakye-Acheampong, Northern Regional Director of Agriculture, has called on seed producers to take advantage of government's Planting for Food and Jobs campaign to produce quality seeds for production. He said the success of the campaign, launched earlier this year to boost agricultural production, would depend on the availability of quality seeds hence the need for seed producers to improve their operations and supply enough seeds to support the campaign. Mr. Boakye-Acheampong made the call during a five-day training in Tamale for members of the Seed Producers Association of Ghana (SEEDPAG). Dr Roger Kanton, Deputy Director of the Council for Scientific and Industrial Research - Savannah Agricultural Research Institute (CSIR-SARI), said it is unacceptable for the country to continue to import huge quantities of rice when she had the favourable climate to produce in abundance.

❖ [Army Worms Invade Farms in Ghana; Threaten Food Security](#)

The Pests Intelligence Control Unit of Ghana Chamber of Agribusiness Executives can confirm a seemingly invasion of cereal farms in the country by army worms, and call on the Ministry of Food and Agriculture to act with a sense of urgency. The Chamber is urging the ministry to release required supplies to the Agricultural Extension Officers across the country to enable them to visit farming communities and render their valuable services to the worried and affected farmers. We can confirm with certainty that at least four regions in the country have been affected by the army worm invasion. We can confirm with certainty that at least four regions in the country have been affected by the army worm invasion. By this release the Chamber is equally sending a strong caution to all agrochemical dealers in the country, not to take advantage of the situation to exploit the distressed farmers.

❖ [Ningo-Prampram District Receives Chemicals to Fight Army Worms](#)

The Ningo-Prampram District Agricultural Department has received agrochemicals from the Ministry of Agriculture for the spraying of farms affected by the fall army worm. Mr. Boadi Asamoah, Ningo-Prampram District Agricultural Director, told the Ghana News Agency that his outfit took delivery of cartons of Confidor and Agoo attack insecticides from the Ministry to be used on the reported 37 hectares affected maize and vegetable farms in district. Mr. Asamoah said the insecticide were allocated to the District after Mr. William Kwaiwoo, Deputy Minister of Agriculture in charge of Crops, paid a visit to the district and visited some affected farms at Afienya and its environs to assess the extent of damage. He said most farms in the District were affected and therefore advised farmers to report any sighting on their farms early to agricultural officers. He noted that since the fall army worm was not well known to farmers, it could only be detected when they start attacking the leaves of the maize and vegetables.

❖ [Forestry Week to Focus on Tree Planting](#)

The Ministry of Lands and Natural Resources and Forestry Commission in collaboration with stakeholders will joined the world to celebrate the International Day of Forests. This year's programme will be dedicated to tree planting and promoting awareness on the importance of forests and trees in our lives. This year's celebration will be observed from 24th - 25th May, 2017, under the theme "Forests and Energy: Implications for Ghana". It is a day set aside since 2012, by the United Nations (UN) General Assembly to raise awareness on the importance of all types of forests and trees outside forests. The UN however, allows member states to adapt the date of the celebration of the International Day of Forests to suit their peculiar national circumstances. In view of this, Ghana chooses the month of May every year for the celebration of the Day to coincide with the major rainy and planting season to ensure greater survival of the planted seedlings.

❖ [The AfDB - Making a Sustainable Difference](#)

For Africa's 1.2 billion people, rural communities are home to almost two-thirds of the population. For most, Agriculture is the main source of livelihood. Even though Africa contains 65% of global uncultivated land, the continent is a net importer of food - \$35 Billion a year. Djiby Mbaye grew up in Mbaye. It's one of many rural communities around Lake Guiers, Senegal's main fresh water reserve which provides 60% of drinking water needs for the capital, Dakar. But Djiby says that for decades, there was an exodus of young people, many of whom embarked on the risky adventure of heading to Spain and Italy by boat. Poor access to water and limited job opportunities took a toll.

❖ [FAO Worry about Impact of Disasters on Food Security](#)

The Food and Agriculture Organisation (FAO) has expressed concern about the impact of natural hazards and disasters on food security in the sub-region, saying the phenomenon is further exacerbated by climate change. The Organisation said globally, from 2003 to 2013, 1.9 billion people in the developing regions were affected by natural hazards and disasters, causing an estimated half a trillion US dollars in damage. It is estimated that, approximately 22 per cent of the total economic impact of these disasters is absorbed by the agriculture sector.

❖ [WFP Ghana Country Brief, April 2017](#)

As part of Ghana Zero Hunger Strategic Review process, stakeholders in food and nutrition security from all the regions in Ghana have participated in consultations to discuss ways to address the key challenges in the sector, and proffer sustainable measures to attain zero hunger.

❖ ['Poultry Farmers Urged to Embrace New Dimensions'](#)

Mr. Napoleon Agyemang Oduro, Vice Chairman of Ghana National Association of Poultry Farmers (GNAPF) have tasked poultry farmers to re- position themselves and embrace new dimensions in the industry to create jobs and increase products. According to Mr. Oduro some farmers were comfortable in doing the old things which did not achieve results. Mr. Oduro said this at the launch of three new products by Boris B's Farms and Veterinary Supplies Ghana Limited, a giant Distributor of animal feed and drugs to boost poultry and meat production in the country. The launch brought together farmers from Western, Central, Volta and Greater Accra Regions.

❖ ['Thirty-Four Farmers yet to Receive Compensation'](#)

The Ghana National Association of Poultry Farmers says 34 members whose birds were infected with bird flu and subsequently destroyed last year have not received any compensation from government. According to Mr. Napoleon Agyemang Oduro, Vice President of the association, the affected members were currently in financial difficulties and their kids were in dire need. Speaking to journalists after the launch of three products by

Boris B's Farms and Veterinary Supplies, Mr. Oduro said the association found out this problem after monitoring the situation on their farms. Mr. Oduro appealed to government to investigate and ascertain why only 27 members had been compensated with GH¢1.1 million out of the GH¢11 million set aside for farmers after Parliamentary approval. He said payment of the compensation for the 34 members would go a long way to alleviate their plight and encourage more people to venture into the industry.

❖ [Sweet Potato Remains an Important Food Crop-Afriyie Akoto](#)

Minister for Food and Agriculture, Dr. Owusu Afriyie Akoto has noted that even though sweet potato is not listed as a food security crop in the Food and Agricultural Sector Development Policy (FASDEP II), a lot of attention is being given to the promotion of the crop to address food and nutrition security. Sweet potato, he observed, is gaining roots in the agricultural sector owing to the derived benefits in nutrition and income generation. In a speech read on his behalf at a dissemination workshop to conclude a three-year pilot on sustainable and inclusive market-driven approaches for orange-fleshed sweet potato (OFSP) in three West-African countries- Ghana, Nigeria and Burkina Faso, the Minister noted that in recent times, micronutrient deficiency has been a serious health problem in the country and other sub-Saharan African countries.

Reports/Articles/Book Chapters

❖ [Assessment of Irrigation Water Salinity and Crop Production at Botanga Irrigation Scheme](#)
A Sadick, R Amfo-Otu, E Dugan, CT Edward, SCIREA Journal of Environment, 2017

A research was conducted at Botanga irrigation area to assess the levels of selected irrigation water quality parameters. The parameters considered were pH, electrical conductivity (ECw), total dissolved solids (TDS), calcium (Ca), magnesium (Mg), sodium (Na), sodium adsorption ratio (SAR) and bicarbonate (HCO_3^-). Water samples were collected from the dam, main canal and laterals for analysis. The results showed that all the selected irrigation water quality parameters were found with the maximum allowable limit, and the value of HCO_3^- was low to precipitate CaCO_3 in the water thereby increasing the value of Na and SAR. The water was therefore suitable for irrigation.

❖ [Innovative and Beneficial Informal Sweet potato Seed Private Enterprise in Northern Uganda](#) ,P Rachkara, DP Phillips, SW Kalule, RW Gibson, Food Security, 2017

Research conducted in the informal sweet potato seed (vines) supply system in the Gulu region, northern Uganda (2013–2015) revealed a diverse set of actors using private enterprise in a range of selling and marketing channels. The different channels offer an efficient and

effective marketing system, providing different services and conveniences for farmers at different prices. The actors include local vine multipliers, traders, dry season root farmers, transporters and town sellers. The local multipliers and dry season root farmers grow crops during the dry season in swampy areas and sell the vines in the following rainy season to the many farmers who lack access to such areas and therefore lack vines to plant. The presentation and discussion of this case study adds to an expanding argument in the literature for increased attention to support actors in informal food crop sectors who are providing sustainable production and marketing systems on a platform of beneficial and innovative private enterprise.

- ❖ [Awareness and adoption of land, soil and water conservation practices in the Chinyanja Triangle, Southern Africa](#) , N Mango, C Makate, L Tamene, P Mponela, G Ndengu, International Soil and Water Conservation Research, 2017

The promotion of land, soil and water conservation measures has been a widespread development in sub-Saharan Africa in a bid to tackle degradation and improve productivity. Thus, several governments have launched various campaigns on soil, land and water conservation measures. The aim of this study is to determine some of the factors that influence farmers' awareness (knowledge) and adoption of land, soil and water conservation practices. Data for this study was collected from 312 households using a questionnaire survey in the Chinyanja Triangle of Southern Africa. The study sites were sampled from Tete province of Mozambique, central and southern regions of Malawi and eastern Province of Zambia. We used t-tests to classify adopters and non-adopters of soil, land and water conservation measures and binomial logit models to identify the factors that influence farmers' knowledge of conservation measures and adoption of land productivity practices. The results show that the household head's age, education, agricultural advice reception and farmer group membership are critical in raising awareness. While the household head's age, education, agricultural advice reception, farmer group membership, pieces of land owned or used in production and land-to-man ratio influenced adoption decisions.

- ❖ [Comparison of Citrus Pre-harvest Fruit Drop in three Major Citrus Growing Areas in Ashanti Region, Ghana](#) , PY Adjei, et.al., Agriculture and Biology Journal of North America, 2017.

Citrus pre-harvest fruit drop has been a major problem among citrus farmers in Ashanti region. Commercial citrus farms were visited and an estimated one hectare (1 ha) was used to determine the number of fruits that dropped per the major citrus season prior to harvesting of both the late Valencia and red blood varieties. The estimation was done from mid-August to mid-September, 2015 for the red blood variety and mid-December, 2015 to mid-January, 2016 for late Valencia. In each farm, grid method was used to select 12 trees

per variety for the counting or estimation of the dropped fruits. Sixty trees (60) per variety in each district was used. There was significant difference in the drop between red blood variety and late Valencia in all the three citrus growing areas. The highest mean for red blood variety was 228 whilst the highest mean of late Valencia was 109 and both were recorded at Ahafo Ano South. Red blood variety dropped as twice as late Valencia among the areas. Adansi North had the least mean fruit drop of both varieties. Even though the overall mean drop did not show statistical differences among the districts, there is a greater tendency amongst the farmers in Adansi North to control fruit drop possibly through various agronomic interventions. Even though soil pH appeared optimum at Ahafo Ano South, it had the least zinc value in the plant analysis for both Valencia and red blood oranges. This could have pre-empted the more fruit drops in the district though potassium levels were quite low in all the districts

- ❖ [Climate Change, Agricultural Production and Trade in Africa](#) , Y Balcha, J Macleod, United Nations Economic Commission for Africa Addis Ababa, Ethiopia, 2017.

According to IPCC (Intergovernmental Panel on Climate Change) (2013) predictions climate change is forecast to hit Africa heavily, with temperatures rising on the continent more than the global median, extreme weather events becoming more prevalent, and drier areas becoming even drier. Additionally, Africa's economy is highly dependent on agriculture most vulnerable sector to the impacts of climate change and supports nearly 90 percent of its population. A critical challenge facing the continent is how to feed an expected population of around 2.4 billion by 2050 which will be double the current population size while simultaneously reducing and responding to climate change. Unless action is taken now to make agriculture more sustainable, productive and resilient, climate change impacts will seriously compromise food production in countries and regions that are already highly food-insecure. Embedded in these, climate change possesses substantial challenges in agricultural production, but also creates opportunities for trade. Trade is often built into the economic model which assess climate change and agriculture, but are rarely the focus of such analysis. Despite the considerable opportunities trade creates in moving goods from surplus to deficit area, only a limited number of studies have explicitly investigated the interaction between trade, climate change and agriculture in Africa.

- ❖ [The Role of Agricultural Extension in Africa's Development, The Importance of Extension Workers and The Need for Change](#) , CP Msuya, et.al., International Journal of Agricultural Extension, 2017.

Agriculture is generally referred to as the mainstay of African economy, the real driver of economic growth. Agricultural extension plays a critical role in African development by bringing the farming community information on new technologies, which they can adopt to increase productivity, incomes and standards of living. Therefore, extension staffs are key

players in the development process. However, extension systems in Africa face numerous challenges, which, in turn limit their effectiveness in promoting smallholder farmers' productivity. This study by an emerging Africa Extension Reform Group (AERG) was carried out to determine issues and challenges facing extension personnel in Africa. The researchers interviewed 393 extension staffs at the district, sub-district and grass root levels in nine countries, namely, Ghana, Botswana, Tanzania, Cameroon, Senegal, Malawi, South Africa, Uganda, and Nigeria. Although the study is not generalizable to Africa or even the countries of study, it does help identify critical issues and challenges facing extension in Africa. The study looked at issues, such as job satisfaction; use of Information and Communication Technologies, types of extension methods practiced; and communication and other training needs. The researchers found that the challenges of extension were similar across countries, suggesting that a common solution was possible.

- ❖ [Seeing Through the Gender Lens: Capturing Gender-sensitive Stories in Agricultural Research and Development](#) , G Fischer, J Odhong , Africa Rising, 2017.

Gender is not a given. Men and women's roles, opportunities, and relationships are socially constructed and vary across different societies. Language and images may perpetuate restrictive gender norms or co-create avenues for more equitable relationships. Africa RISING is committed to reporting the "whole story" about its communities, research, and cooperation with various partners. It wants to present the dissimilar livelihoods and needs, the diverse voices and positions of the social groups it is working with. Generalizing the situation of one group to represent others would mean that only one side of the story is told at the expense of others, which are equally valid. For example, when writing a success story about the impact of an improved agricultural technology offered to a household, getting the "whole story" means including perspectives from several members of the household who have different, unique but important interactions with the technology.

- ❖ [Microbial Profile of Common Spices and Spice Blends Used in Tamale, Ghana](#) , N. Bakobie et.al., Journal of Food Contamination, 2017

The main purpose of using spice to grill meat is to add aroma, color, flavor, taste and pungency. However, the purpose is sometime befitted when spice is contaminated with pathogenic bacteria that result in foodborne illnesses and toxicological effect. The study was necessitated by paucity information on handling practices and microbial load common spices used for grilling meat, Ghana. A total of twenty spice samples were collected from five popular and widely patronized joints in the Tamale in Ghana. Detection and identification of potential pathogens was carried out following standard procedures. E. coli count ranged from 0 to 3.14 log₁₀ cfu/ ml with a mean of 1.17 ± 1.07 log₁₀ cfu/ ml. Contamination level for Salmonella spp ranged between 0 and 0.9 log₁₀ cfu/ ml with a mean of 0.38 ± 0.31 log₁₀ cfu/ ml. Coliform bacteria were present in almost all the spices sampled. Faecal coliform and

E. coli presence was an indication of contamination by fresh faecal matter. The possible sources of spice contamination include storage equipment, handling, unhygienic surroundings, vehicular transmission, atmospheric particles and air-microbes. There is a possible risk to public health associated with consumption of spicy meat from the selected joints. There is the need to maintain good sanitary practice and hygienic quality during production stages of spice to avoid or reduce prevalence of food borne illnesses in Tamale and Ghana in general.

- ❖ [Undergraduate Students' Willingness to Start Own Agribusiness Venture after Graduation: A Ghanaian Case](#), Martin Bosompem , Samuel K. N. Dadzie , Edwin Tandoh , in Paul Jones , Gideon Maas , Luke Pittaway (ed.) Entrepreneurship Education (Contemporary Issues in Entrepreneurship Research, Volume 7) Emerald Publishing Limited, 2017.

Agriculture and related businesses in Ghana for the past decades have been the preserve for the smallholder, aged and illiterate farmers. Meanwhile, hundreds of students graduate in Agricultural Sciences from the universities over the years. This study seeks to investigate potential determinants of the entrepreneurial spirit of agricultural students to do self-employed businesses in the agricultural sector. A survey of 165 undergraduate students of agriculture in the University of Cape Coast, Ghana was undertaken to examine factors that influence their decision to enter agribusiness as a self-employment venture after graduation. The results show that many the students were males (87%) and approximately, 67% were willing to enter agribusiness after school. The factors that students perceived to be hindrance to entering agribusiness was the market competition of agro-products with imported products, unstable prices of agro-products, absence of insurance policy for agribusiness and unfavorable land tenure arrangement in Ghana. Correlation analysis showed negative and significant relationship between students' willingness to enter agribusiness as a self-employment venture and the following personal characteristics: (1) level of education of mother, (2) level of education of guardian other than parents, (3) students who live in farming communities and (4) students who undertake farming activities at home.

- ❖ [Non-Farm Enterprises and the Rural Youth Employment Challenge in Ghana](#), M Lambon-Quayefio - IDS Bulletin, 2017

Non-farm enterprises have generally been perceived as a silver bullet solution for rural unemployment. This article therefore provides some insights on their potential to resolve the youth unemployment challenge in rural Ghana. Non-farm enterprises in Ghana are heterogeneous in nature based on type of enterprise, range of activities and productivity. Evidence suggests that motivations for operating these enterprises are mixed. Some households operate them as a coping mechanism to deal with household or agricultural shocks, while others may also be operated as business entities with the potential to grow sustainably and offer employment to young people. To harness the full potential of non-farm

enterprises to address the rural youth employment challenge, it is imperative for policymakers in Ghana to identify specific sub-sectors that lend themselves to growth and have the capacity to offer sustainable employment avenues, and to critically interrogate and examine the primary reason of their establishment.

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