

REASONS TO CONSUME CONSUME



Provides the most powerful dietary antioxidants

02 Reduces blood pressure

Delays physical signs of ageing

04 Fights dental decay.

Rich dietary iron which helps to fight anemia.

Has Aphrodisiac effect

Prevents stroke by improving blood circulation

Fights stress

Minimizes discomfort/ pain associated with menstrual periods

Protects blood vessels.

Boosts sense of well-being.

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GHANA HITS NEW PRODUCTION RECORD OF 1.045 MILLION METRIC TONNES: THE SCIENCE BEHIND THIS ACHIEVEMENT

Ghana has produced the highest volume of cocoa beans in its history, breaking a ten-year-old record set in the 2010/2011 crop season. During that season which ended on 30th September, 2011, the country's total production output was one million and twenty-four thousand (1,024,000) tonnes.

The record annual production was mainly due to several laudable interventions, among them being the Cocoa Diseases and Pest Control Programme (CODAPEC) and HiTech Programme, introduced between 2001 and 2003 to combat Capsid/Mirid and the Black Pod disease and also improve in soil fertility.

It was the general expectation of stakeholders that the record production would be replicated in the ensuing years but this expectation would not see the light of day any time then. Increased presence of pests and other cocoa diseases, especially the Cocoa Swollen Shoot Virus Disease and Black Pod disease, coupled with low soil fertility, overaged cocoa farms, unfavourable weather, inadequate extension services, among other factors, contributed to low yields per hectare thereby keeping the country's average annual production about 850,000 tonnes for almost nine years.

There was therefore the need to initiate and implement pragmatic policies and interventions to transform the cocoa sector, reverse the dwindling production levels and make the sector more lucrative and attractive. The journey towards achieving these had been challenging but we have finally gotten there.

Data on beans graded by the Quality Control Company showed that, another production record has been set at the end of the 2020/2021 crop season, with production figures standing at One Million and Forty-Five Thousand, Five Hundred (1,045,500) metric tonnes.

But how was this made possible? How did we do it? How did we get here?

This commendable achievement is mainly attributable to the Productivity Enhancement Programmes (PEPs) rolled out by COCOBOD a few years ago, adherence of our cherished cocoa farmers to good agronomic practices, the dedication of staff of COCOBOD and its Divisions and Subsidiaries and massive support from other actors on the cocoa value chain.

In 2017, Government re-launched the Cocoa Diseases and Pest Control Programme (CODAPEC) otherwise known as 'Cocoa Mass Spraying" to assist cocoa farmers to combat Capsid/ Mirid and the Black Pod disease. The Programme also provided opportunity train farmers and technical personnel on the cultural and chemical methods of pests and diseases control, educate and train local sprayers on safe pesticides usage, help put more money in the pockets of farmers and create jobs for the unemployed youth in the rural communities. The result of this, coupled with the introduction of the Mass Pruning Programme ensured significant reduction in the incidents of pests and Blackpod disease and ensured effective pod survival.

Apart from the above interventions, conscious efforts were made to streamline the HiTech Programme to ensure equal access to fertilizers and other farm inputs, farmers were encouraged and equipped to form cooperatives and farmer groups to aid their farming activities. Also, a National Hand Pollination Programme was introduced in addition to the piloted Cocoa Farms Irrigation project.

It is worth mentioning that the Hand

Pollination Programme and the Pruning Exercise have collectively had perhaps the greatest impact on the high productivity, increasing the number of pods a single cocoa tree bears at a time.

In an effort to reduce the staff-farmer ratio, COCOBOD has employed many young and qualified extension officers who have been working in close collaboration with farmers across the country to facilitate their adherence to Good Agronomic Practices, increase yield and sustain the cocoa business.

COCOBOD News would like to take this opportunity to thank every single player within the cocoa value chain for their individual and collective contributions to this laudable achievement. We are very optimistic that this has come to stay.

Not long ago, the National Cocoa Rehabilitation Programme was relaunched to prevent the country from losing almost 40% of its potential yields to the Cocoa Swollen Shoot Virus Disease and over aged tree stock. The Programme, which has since seen the cutting and replanting of tens of thousands of unproductive farms will not only stop the rapid spread of the CSSVD but, facilitate increased productivity and production.

As we celebrate this remarkable achievement, let's not forget to reflect on what we can all do to keep cocoa as the beacon of hope for the Ghanaian economy. The future of Ghana's cocoa is bright and we must all be proud to be associated with everything that can help reach this bright future.

For we at COCOBOD News, we can't wait for the announcement of yet another feat; the 1.5 Million tonnes Production Target.

BOARD OF DIRECTORS, COCOBOD



Mr. Peter Mac Manu Board Chairman



Hon Joseph Boahen Aidoo Chief Executive, COCOBOD



Dr. Ernest Addison Governor, Bank of Ghana



Hon. Charles Adu Boahen Minister of State, Ministry of Finance



Hon. Yaw Addo Frimpong Deputy Minister for Food & Agriculture



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Nana Adwoa Dokua President's Nominee



Nana Johnson Mensah Farmers' Representative



Nana Obeng Akrofi Farmers' Representative



Mr Edward Okoh Ampofo Workers' Representative

ELEVEN-MEMBER BOARD OF DIRECTORS FOR COCOBOD SWORN IN



 A group photograph of the newly appointed Board of Directors with the Minister for Food and Agriculture



The Minister for Food and Agriculture, Hon. Dr. Owusu Afriyie Akoto has inaugurated an eleven (11) member Board of Directors of Ghana Cocoa Board (COCOBOD) and tasked the new members to continue to work hard to consolidate the enormous success chalked by the previous Board. The Board is chaired by Mr. Peter Mac Manu.

Inaugurating the Board, Dr. Afriyie Akoto recounted how the coronavirus (COVID-19) pandemic had affected every aspect of the world's economic trade with the cocoa industry having its fair share, stating that despite these challenges, the Board put in place various Productivity Enhancement Programmes (PEPs) and successfully achieved its production target for the 2020/2021 crop year.

'The 2020/2021 crop year production is a turnaround in the country as it brings hope to cocoa farmers". Great efforts were put in to attain this feat which is mainly as a result of our extensive agronomic practices and initiatives such as, rehabilitation, hand pollination among others", he added.

Hon. Afriyie Akoto urged the new Board of Directors to advance policies and programmes to improve upon the Board's relationship with Licensed Buying Company (LBCs) to facilitate effective internal purchases of cocoa in the country.

'Financing LBCs to purchase Cocoa Beans is an area that needs to be looked at immediately to reduce constant complaints from farmers", he stressed.

According to him, the Cote D'Ivoire-Ghana Cocoa Initiative is a major step towards the implementation of the Living Income Differential (LID) and implored on the Board to work closely with the Secretariat for the initiative to advance policies to improve upon the incomes of cocoa farmers.

In his acceptance statement, the Board Chairman, Mr. Peter Mac Manu was grateful for the opportunity and the confidence reposed in him to serve the country and the Cocoa Industry. He also lauded the previous Board for rolling out programmes which significantly contributed to the successes chalked in the 2020/2021 cocoa season.

'The policies administered by my predecessor have contributed positively to farmer's Production and Income which is of key interest to this administration, and I am

looking forward to building on it", he emphasized.

'I want to maintain the current production in the country, and I believe with the help of such a strong team with much experience in the industry, we will increase it" he added.



The policies administered by my predecessor have contributed positively to farmer's Production and Income which is of key interest to this administration

The members of the new Board of Directors are the Chief Executive of COCOBOD, Hon Joseph Boahen Aidoo, Dr. Ernest Addison, Governor of the Bank of Ghana; Mr. Charles Adu Boahen, Minister of State at the Ministry of Finance; Hon. Yaw Addo Frimpong, Deputy Minister for Food and Agriculture; Hon. Herbert Krapa, Deputy Minister for Trade and Industry.

The rest are Hon. Kwadjo Asante, the Member of Parliament for the Suhum Constituency; Madam Nana Adwoa Dokua, a Businesswoman; Nana Johnson Mensah, a Cocoa Farmer; Nana Obeng Akrofi, also a Cocoa Farmer, and Mr. Edward Okoh Ampofo; COCOBOD Workers Representative.

LET'S PARTNER TO ESTABLISH MORE FACTORIES IN GHANA - COCOBOD BOSS TO SWISS MINISTER



■ The Chief Executive of COCOBOD (Middle), the Swiss Minister (Right) and some key members of delegation addressing the media

The Chief Executive of Ghana Cocoa Board (COCOBOD), Hon Joseph Boahen Aidoo, asserted that, Switzerland can strengthen its existing economic ties with Ghana by supporting the effort of the Ghanaian government to expand the local cocoa processing and value addition sector.

Such support, he explained, can be in the form of partnerships to establish more processing factories in Ghana to feed the international market with finished or semi-finished processed cocoa.

He added that other avenues which can be explored together include the promotion of organic and sustainable practices on cocoa farms; the modernisation of cocoa farming, particularly, through the provision of

irrigation systems; and advocating decent income for farmers.

The COCOBOD Boss made this call when he and the Swiss Minister for Environment, Transport, Energy and Communications, Simonetta Sommaruga, led a delegation to tour an organic cocoa farm, the Yayra Glover warehouse and the FairAfric factory at Suhum, in the Eastern Region.

The tour was organized as part of a four-day working visit to Ghana by the Swiss Minister. Also on the tour was a delegation from the Swiss Embassy in Ghana, including the Ambassador, Philipp Stalder.

Hon Aidoo said the visit by the Swiss Minister is timely because it had coincided with the period when Ghana is engaged in discussions with the European Union (EU) on sustainable cocoa production.

He noted that the policies of COCOBOD are aligned with the global common agenda to maintain and improve forests. As such, COCOBOD is championing the practice of agroforestry in Ghana.

Cocoa trees, he stated, are forest trees which grow best in the company of other forest vegetation and that is why farmers grow other crops on their farms and as well, grow tall permanent shade trees.

Satellite images reveal that, the parts of Ghana which have lost most of their vegetation over the years are parts where cocoa is not grown but through cocoa agroforestry, these parts can be made green again and their vegetations restored, he said.

COCOBOD, Hon Aidoo added, also teaches farmers the advantages of organic cocoa farming. The use of herbicides and weedicides on cocoa farms has also been banned because of their negative effect on biodiversity.

The Swiss Minister, Simonetta Sommaruga, acknowledged the importance of Ghana's cocoa sector to Switzerland. She stated that with the growth in global demand for more organic products, it is important that Ghana continues to encourage more organic cocoa cultivation.

She said, she was in the country because Ghana and Switzerland have signed an agreement on climate change which means that her country will invest in climate protection projects in Ghana.

'This agreement is good for both Ghana and Switzerland", she noted, 'and for sustainable investments. I'm very glad because cooperation between our two countries works very well."





COCOBOD SIGNS AGREEMENT WITH CHOCOLATE GIANT, BÜHLER, TO BUILD LOCAL PROCESSING CAPACITY



■ Hon Boahen Aidoo and Mr. Heiko Feuring signing the agreement ■

Ghana Cocoa Board (COCOBOD) has signed an agreement with Bühler to build Ghana's local cocoa processing and value addition capacity through training, product development and technology guidance.

This is in line with the government's plan to significantly increase local processing to meet local and international consumption demand.

Speaking at the signing ceremony, which was held at Bühler's Cocoa Competence Centre in Abidjan, Hon Joseph Boahen Aidoo, the Chief Executive of COCOBOD, said that the agreement will deepen the strong relationship COCOBOD already has with Bühler, both of which are significant players in the world's cocoa trade environment. Bühler is one of the top-class organisations in the world.

Hon Aidoo disclosed COCOBOD'S intention to modernize cocoa production and build capacity through acquisition of lastest farming technologies.

"You have the technology, and we need

the technology, so we want to work together. This partnership that we are forging today should continue to grow into the future and remain beneficial to the mutual interest of the two parties", he stated.

In his response, Mr Heiko Feuring, the President of Bühler Middle East and Africa commended the leadership of Hon Aidoo and the management



You have the technology, and we need the technology, so we want to work together

of COCOBOD towards building a sustainable and prosperous cocoa value chain for Ghana through the introduction of the Productivity Enhancement Progrommes (PEPs) and the implementation of the Living Income Differential (LID).

He observed that, the memorandum of understanding will be the landmark of a new fruitful and long-lasting collaboration to unlock the potential in the Ghanaian cocoa value chain.

He gave the assurance that Bühler will offer its expertise to Ghana to build a solid local processing industry to capture a higher share of the over US\$100 billion cocoa and chocolate trade.



■ Hon Boahen Aidoo and Mr. Heiko Feuring exchaning the signed agreement ■

DR OWUSU AFRIYIE AKOTO ELECTED CHAIRMAN OF COTE D'IVOIRE-GHANA COCOA INITIATIVE



■ Hon. Owusu Afriyie Akoto - Minister (MoFA) addressing participants at the event ■

Ghana's Minister for Food and Agriculture, Dr Owusu Afriyie Akoto, has been elected the first Chairman of the Steering Committee of the Côte d'Ivoire-Ghana Cocoa Initiative at its first meeting in Abidjan on 21st June 2021.

The two countries unanimously elected Dr Akoto to chair the Committee for the next fifteen (15) months. His Chairmanship ends in September 2022.

The Steering Committee is the highest decision-making body of the initiative. It is responsible for formulating rules and regulations; ensuring the smooth implementation of the Charter and functioning of the Secretariat;

approving all budgets and work programmes of the Initiative; approving the rights and responsibilities of member countries and resolving conflicts among the member countries.

Dr Akoto, in an address described the meeting as historic and important since it seeks to ensure that the vision by the Presidents of the two countries – Excellencies Nana Addo Dankwa Akufo-Addo of Ghana and Alassane Ouattara of Cote d'Ivoire – are realised.

Hon Akoto, however, expressed concern about the "dragging of feet" by some stakeholders, which he noted is unfriendly to efforts to ensuring that the Living Income Differential (LID)

initiative is fully realised.

He charged the participants of the meeting to ensure that all parties share the burden of compliance with the dictates of the initiative, since it is the only means to achieve the vision of President Akufo-Addo and his Ivorian counterpart.

The meeting was attended by members of the Steering Committee. Also present was the Chairman of the select Committee for Food, Agriculture and Cocoa Affairs of the Parliament of Ghana, Hon. John Osei Frimpong and his ranking member, Hon. Eric Opoku as well as a delegation of senior Ivorian government officials.



EXPLORE VARIOUS COCOA RECIPES-COCOBOD TO CULINARY SECTOR

The Senior Public Affairs Manager (SPAM) of Ghana Cocoa Board, Mr Fiifi Boafo, has called on the culinary sector to explore cocoa recipes to maximize its use in homes.

This, he said, would help inculcate the habit of cocoa consumption, in various forms, in the youth and become a major driver for the campaign to make Ghana a major cocoa consuming economy; in addition to being an important producer of cocoa beans.

Mr Boafo was speaking at the Grand National Finale of the ONGA Cook Art 2021, which was organised by the Ghana Education Service (GES) for senior high schools. This year's competition was the third edition since its inception.

According to the GES, the competition has helped to promote vocational education and culture for national development.

COCOBOD has also been associated with the competition, as it provides a platform to promote the use of cocoa as a food ingredient.

"Whatever you come up with this afternoon could become the blueprint for a cocoa or chocolate product that will also put Ghana on the global map", Mr Boafo said. He advised the participants to relish the chocolate produced in the country and invite all visitors to enjoy our chocolate when in



■ Mr Fiifi Boafo - SPAM, COCOBOD ■

Ghana

He added that, aside from the culinary sector, there are potentials and opportunities within the cocoa industry for everyone to explore and take advantage of, based on their skill set; to turn around the fortunes of the country.

"Ghana's cocoa industry belongs to all Ghanaians. We need to have a workforce trained in all the services within the value chain, such as, warehousing, chocolate and other cocoa products manufacturing, packaging, wholesaleing and retailing and other logistical services that generate revenue within the cocoa sector", he said.

He cited the Addison sisters, makers of '57 Chocolate', and members of the Cocoa Value Addition Artisans Association of Ghana as examples of entrepreneurs who are getting recognition in Ghana and around the world for their resolve to transform Ghana's cocoa and chocolate business.

Mr Boafo gave the assurance that ,COCOBOD will support entrepreneurs with ideas and business which add value and improve current practices in the cocoa industry. 'I can assure you that the management of COCOBOD promise you the fullest cooperation when you come up with any such intervention", he added.

According to Mr. Boafo, COCOBOD is working closely with the Ghana Investment Promotion Centre, the Ghana Tourism Authority, and other stakeholders to provide funding, training opportunities and technical support for individuals and organisations who desire to go into cocoa processing.

At the end of the competition, the team from Akwamuman Senior High School beat four other competing schools to emerge as this year's Culinary Champions. They took home GH¢15,000.00 from GES and products from the sponsors.





■ Mr. Yofi Grant - CEO, GIPC (Left) and Hon Joseph Boahen Aidoo - CE, COCOBOD (Middle) interacting with the audience

The business community has been urged to take advantage of the many untapped investment opportunities in Ghana's cocoa value chain. This came up at a maiden cocoa value chain investment meeting in Accra, where participants expressed worry about Ghana's less than six percent share of

the \$110 billion global cocoa industry.

The meeting was organised by the Ghana Investment Promotion Centre (GIPC), in collaboration with Ghana Cocoa Board (COCOBOD) on the theme "Ghana's brown gold: Sustaining investments and leveraging AfCFTA".

Hon Hoseph Boahen Aidoo, Chief Executive of COCOBOD, in a one-onone interview with Bernard Avle at the event, urged investors to focus their attention on Ghana's cocoa sector, more especially cocoa processing, to increase earnings and create jobs.

'Our current focus as an industry is in three broad areas; productivity

enhancement, processing and consumption", said Hon Aidoo.

According to him, COCOBOD was modernising cocoa farming to boost production in an effort to ensure regular supply of cocoa beans for local processing. He said the various Productivity Enhancement Programmes (PEPs) being implemented by the Board are all aimed at facilitating sustainable cocoa production in Ghana.

The CEO of the GIPC, Mr Yofi Grant, said the country must move from the era of over-concentration on the production and export of cocoa beans to a more value addition approach, adding that, the African Continental Free Trade Area (AfCFTA) presents huge opportunities for businesses and the cocoa sector is one key area.

He was hopeful the cocoa sector could help build millionaires and billionaires for the country. Other speakers and

TAKE ADVANTAGE **FSTORS** URGED



Our current focus as an industry is in three broad areas: productivity enhancement. processing and consumption

Panellists at the meeting were Ms Grace Jeanet Masond, South African High Commissioner to Ghana, Ms Mosa Tsabalala, Group CEO, Gauteng Growth and Development Agency of South Africa, Dr Emmauel Opoku, Deputy Chief Executive of COCOBOD in Charge of Operations, Nana Agyemang Ansong of the Cocoa Processing Company and a representative of Niche Cocoa Industries Ltd.

Participants at the meeting included stakeholders in the cocoa value chain, cocoa processors and manufacturers, members of the Cocoa Value Addition Artisans Association of Ghana, investors and consumers.



PARTNER US TO FIND SOLUTIONS TO COCOA INDUSTRY CHALLENGES-COCOBOD BOSS TO ACADEMIA

Hon Joseph Boahen Aidoo, the Chief Executive of the Ghana Cocoa Board (COCOBOD), has called for the establishment of strong partnerships between the cocoa regulator and academia to find solutions to challenges in the cocoa industry and expand the benefits which accrue out of the industry to the country.

He is convinced that the expertise, experiences, and research capacities of academic institutions can be devoted to the cocoa sector to enhance efficiency and create opportunities along the value chain, which can attract private sector investments.

'It is also important, Hon Aidoo said, 'that the research feeds into material production both at the farming level and when it comes to processing and value addition".

Hon Aidoo was speaking at a meeting with a delegation from the University of Energy and Natural Resources (UENR), Sunyani, when they paid a courtesy call on him on Wednesday, 05 May 2021.

The delegation, led by Prof. Elvis Asare-Bediako, the Vice-Chancellor of



It is important that research feeds into material production both at the farming level and when it comes to processing and value addition

UENR, discussed possible avenues for collaboration between the University and COCOBOD in a variety of basic and advanced research areas.

He said the University has the technology for weather, disease, pest, and plant-stress forecasting to better inform the schedule and timing of the various farming practices to improve yields. The technologies when adopted will allow for enhanced monitoring of the progress being made in the fight against the Cocoa Swollen Shoot Viral Disease (CSSVD) which is a major challenge presently facing the industry.

In his response, Hon Aidoo said

COCOBOD, in recognition of the need to adopt different technologies to advance the cocoa sector, has introduced farmers to some user-friendly machinery to ease farming practices and is currently rolling out the Cocoa Management System (CMS) to gather critical data which will inform the management of the cocoa sector.

He added that changing weather patterns caused by climate change is already forcing a modification to the traditional cocoa farming practices. There are also observable shifts in the production cycle of the cocoa trees as well as the prevalence of the pests and diseases.

COCOBOD he said, is open to new partnerships with academia to aid in the management of these challenges as well in the area of cocoa product development for the consumer market.

Hon Aidoo expressed much pleasure at the initiative taken by UENR to establish a partnership and assured the delegation of further detailed discussions in anticipation of a fruitful long-term collaboration.



Hon Boahen Aidoo and some key personalities of COCOBOD in a group photograph with Mr. Elvis Asare- Bediako (Middle, Right), Vice Chancellor (UENR) and his delegation



Traditional Authorities in the Ashanti Region have called on farmers and other stakeholders in the cocoa industry to support the efforts being made by COCOBOD to successfully implement the Cocoa Management System (CMS).

The calls were made during separate interactions with members of the CMS Publicity Committee as well as Regional and District staff of the Cocoa Health and Extension Division (CHED) New Edubiase. Bekwai, Oboasi and Antoakrom, Asiwa cocoa districts in the Region.

The team was in the region to officially inform the traditional authorities about the commencement of mapping of cocoa farms in the region as part of the broad planned activities for the successful implementation of the CMS.

Mr Charles Gyamfi, Deputy Ashanti Regional Manager of CHED and leader of the delegation, described the CMS as an integrated data management platform on cocoa farmers and other stakeholders in Ghana's cocoa sector. He said the project includes the development of a software data system, mapping of all farms as well as a census of all cocoa farmers in Ghana.

'As part of the project, we are sensitizing farmers and relevant stakeholders to understand how the new system will operate. Being the custodians of the land, we deem it necessary to meet with you and seek your support and blessing to ensure the success of this laudable intervention", he said



A group photograph of the sensitization team and some traditional authorities in the Ashanti Region

TRADITIONAL **AUTHORITIES** IN THE ASHANTI REGION **ENDORSE COCOA** MANAGEMENT SYSTEM

Nana Akua Dwum II, Queen Mother of New Edubiase was full of praise to the Management of COCOBOD for coming out with an innovative initiative such as the CMS. 'This is obviously a good intervention which all well-meaning Ghanaians must embrace. As leaders of the traditional council, our people listen to us so we will do everything possible to encourage the farmers to cooperate with your field staff so that the objective of the project is achieved", she added.

Omanhene of the Bekwai Traditional Area, Nana Osei Kwadwo II, was of the view that several laudable projects initiated by other government agencies could not achieve the desired outcome but was optimistic that, judging by the success of the Productivity Enhancement Programmes (PEPs), the CMS would also see the light of day.

Nana Okyere Darko Ampen of Antoakrom and his Elders, all of who are cocoa farmers, expressed their readiness to receive and support the surveying and enumeration teams to capture the relevant data in the district.

'As the 2020 National Best Cocoa Farmer, I understand how a successful implementation of this project will help transform the lives of cocoa farmers and therefore, together with my Elders, we will do everything within our means to encourage all farmers within the Oboasi District to take part in this exercise", declared Nana Kwabena Ponkoh II of Atatoase in the Obuasi District of the Ashanti Region.

Nana Owusu Agyei Brimpong III, Chief of Asiwa said he was happy that the CMS would help solve numerous challenges concerning land tenure system, input supplies and sale of cocoa beans in the area.

Deputy Chief Executive in charge of Agronomy and Quality Control at the Ghana Cocoa Board (COCOBOD), Dr. Emmanuel Agyemang Dwomoh has challenged scientists at the Cocoa Research Institute of Ghana (CRIG) to adopt current research methods to meet up with international research standards, considering modern trends in cocoa production and the rise in consumption globally.

For him, research has become dynamic and it is important that COCOBOD, the regulator of Ghana's cocoa, coffee and shea sectors, ventures into key research areas to complement the efforts being made to increase and sustain domestic consumption.

Dr. Dwomoh made the call at Koforidua in the Eastern Region during CRIG's Annual Review Meeting to assess the progress of some projects that the Institute is embarking on within the cocoa sector.

'Now the world has seen the benefits of cocoa, so if we can get sugar which is not of carbohydrate source but protein, it will go a long way to increase consumption especially among the aged and the world, largely", he said.

Dr Dwomoh mentioned the alternative use of some botanical plants such as 'stomatocucus danielii" to substitute sugar in the production of chocolate and other cocoa confectionaries.

Dr. Dwomoh commended the scientists for their extensive research over the years, which has helped sustain Ghana's cocoa industry.

'I am highly impressed with the extensive and in-depth research undertaken by our scientists and I am convinced we shall work closely to ensure the adoption of the various outcomes", he added.

The review meeting which is held annually considered various research projects undertaken within the 2020/2021 cocoa crop year under

ADOPT NEW TRENDS IN YOUR RESEARCH WORK - DR. DWOMOH CHALLENGES CRIG SCIENTISTS



■ Dr. Emmanuel Agyeman Dwomoh, DCE (A&QC) - COCOBOD ■

six thrusts. These include Soil and Management, Crop Improvement, Insect and Pest Management, Plant Disease Management, System Assessment and Analysis thrusts to oversee the component within the research areas.

The review was done by CRIG scientists

and other researchers from various disciplines across the country.

Present at the meeting was the Acting Executive Director of CRIG, Dr. Francis Padi and other management staff of the Institute.



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COTE D'IVOIRE-GHANA COCOA INITIATIVE HEADQUARTERS AGREEMENT SIGNED







■ Mr. Yves Brahima Kone, Director-General of Le Conseil Cafe Cacao speaking at the event

The Government of Ghana has signed an agreement to host the Secretariat of the Cote d'Ivoire-Ghana Cocoa Initiative in Accra. The signing is the latest milestone in a unique bilateral process to further strengthen and expand the existing economic relations on cocoa and other related matters between Ghana and Cote d'Ivoire; the two largest cocoa-producing countries in the world.

The signing is a major milestone in the two countries' resolve to secure and sustain a decent income for cocoa farmers in their respective countries. This is being achieved through the implementation of the Living Income Differential (LID) pricing mechanism and other joint programmes.

The initiative binds both countries to commit to a common front on the global cocoa market with respect to research, policy formulation, pricing, anti-smuggling, and sustainability initiatives in their countries to support growers of the crop.

Delivering the keynote statement at the signing ceremony, Ghana's Foreign Affairs Minister, Hon. Shirley Ayorkor Botchway lauded the vision of the Presidents of the two countries which has led to the actualization of the Trade Accord and subsequent selection of Accra as the Headquarters.

"As a government, we pledge our unflinching support and cooperation to help the initiative achieve its objective. It is our ultimate aim that, in the end, cocoa farmers' income level will improve so that they can enjoy decent living standards", she assured.

The Minister for Food and Agriculture of Ghana, Dr. Owusu Afriyie Akoto, who doubles as the Chairman of the Steering Committee of the Initiative, said the two countries produce nearly two-thirds of the world's cocoa - a good reason for them to come together for a bigger voice within the global cocoa industry.

'Together, we should be able to tell the world that the \$120 billion industry for which we are getting only 6 billion is not fair. As Chairman of the Initiative. I will do everything within my power to ensure that the objective of this initiative is realised". he said.

Chief Executive of Ghana Cocoa Board, Hon Joseph Boahen Aidoo, in his statement disclosed that the establishment of the Secretariat is key to facilitate the coordination of efforts by the two countries for compliance to the principles and protocols of the LID.

'The day is coming when the Secretariat in Accra will be serving not only



Together, we should be able to tell the world that the \$120 billion industry for which we are getting only 6 billion is not fair

Ghana and Cote d'Ivoire, but all cocoaproducing countries in the West African sub-region and beyond. Already, the initiative is showing promise of becoming a bigger force within the global cocoa industry following advances by other cocoa-producing countries to join", he said.

The Director-General of Le Conseil Cafe Cacao, Mr. Yves Brahima Kone, said the calibre of personnel chosen to manage the affairs of the Secretariat is an indication of the strong desire by the two countries to protect the interest of their hardworking farmers.

Meanwhile, Mr Alex Arnaud Assanvo, a man with vast experience within the cocoa industry, had earlier been appointed as the Executive Secretary of the Secretariat.

SEED PRODUCTION DIVISION REVIEWS 2021 MID-YEAR PERFOMANCE

The Seed Production Division (SPD) of the Ghana Cocoa Board has held a 2-day Mid-Year Review workshop at Bunso Cocoa College in the Eastern region. The review was aimed at assessing the progress of work for the 2020/2021 cocoa crop year including targets, challenges and new strategies to be implemented for efficiency in the delivery of their mandate.

The review brought together a total of sixty staff made up of directors, managers, officers and other staff to share their experiences, brainstorm and device means of improving their work processes and efficiency.

The SPD has since 2018/2019 increased their seedlings production targets from 60 million through 78 million to 92 million for the 2019/2020 and 2020/2021 crop year respectively.

Dr. Emmanuel Agyemang Dwomoh, Deputy Chief Executive In-Charge of Quality Control and Agronomy (A&QC), in an address at the meeting, congratulated SPD for producing such huge quantities of seedlings, noting that it would support the Cocoa Farm

■ Rev. Dr. Emmanuel Ahia Clottey, Executive Director SPD

Rehabilitation Programme. According to him, availability of good planting materials contributes immensely to sustainable cocoa production.

He assured the staff that efforts were being made to address all bottlenecks in the operations of the Division.

'Management is taking steps to address all setbacks to your smooth and efficient running to ensure a much more robust supervision to improve the system", he added.

Dr. Dwomoh intimated that with rising difficulty in accessing fertile top soil for raising cocoa seedlings, the SPD had introduced the use of soilless materials such as coco peat in place of top soil and the replacement of poly bags with receptacles.

He charged the cocoa station officers to manage the stations as their own while maintaining cordial working relations with their staff. 'As Technical Officers, and agriculturists, let us constantly apply our knowledge in agriculture and be innovative enough to grow our sector", he said.

Rev. Dr. Emmanuel Ahia Clottey, Executive Director SPD, said his outfit was mandated to produce 6.5 million hybrid pods which were used for the production of seedlings and for distribution to farmers.

Addressing the participants, Dr. Francis Baah, Rector of Bunso Cocoa College who chaired the function, entreated the technical staff to also serve as rapporteurs and consistently churn out information in their fields of exploits for the benefit of all actors on the cocoa value chain. This, he added, would fully bring their expertise to bear on their work at all times.





■ A group photograph of some staff of SPD and dignitaries of COCOBOD ■

REGIONAL GRIEVANCE REDRESS COMMITTEE ON ENVIRONMENTAL AND SOCIAL MANAGEMENT SYSTEM INAUGURATED

A seven-member Regional Committee has been inaugurated by Ghana Cocoa Board to manage grievances on environmental and social issues that may arise in the Board's quest to implement its Productivity Enhancement Programmes (PEPS) within the cocoa sector.

Social The Environmental and Management System (ESMS) seeks to facilitate uninterrupted implementation of the Boards ongoing Productivity Enhancement Programmes (PEPs) which are all geared towards increasing productivity. The system will ensure that the implementation process conforms to the best environmental and social standards in all cocoa growing communities within the country.

Inaugurating the committee at Cocoa House in Kumasi, the COCOBOD Ashanti

Regional Administrator Mr. Edwin Prempeh commended the members for wholeheartedly accepting to serve on such an important but daunting committee.

'Let me say a big thank you for accepting to work hand-in-hand with extension officers in all growing communities to support and eradicate activities that may hinder the growth of our cocoa industry", He said.

Mr. Edwin Prempeh said, environmental issues and cocoa cultivation cannot be separated and that explains why Management is paying keen attention to activities that put the environment in danger.

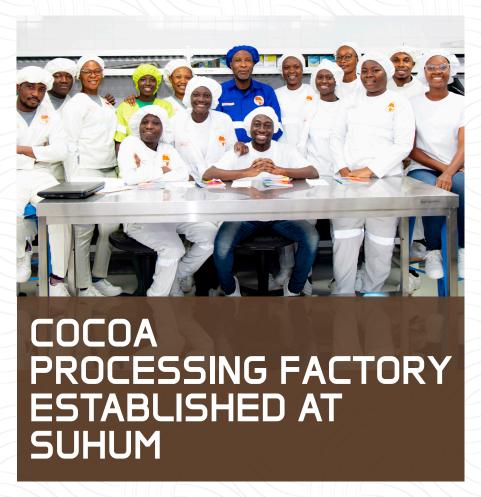
"Activities such as the application of unaproved agro-chemicals affect soil fertility, pollute the air we breathe and also endanger other species that contribute to the sustenance of the human race", he stressed, adding that members of the committee must do their best to execute the mandate given them.

Mr. Kwadwo Osei Danso, Regional Manager for the Cocoa Health and Extension Division (CHED) commended the team for their support and urged them to rally behind COCOBOD to successfully implement the PEPs.

The members of the Committee are: Mr. Kwadwo Osei Danso - Regional Manager (CHED), Mr. Samuel Buah - Regional PEPs coordinator CHED), Nana Adu Mensah Asare -Otumfo / Traditional Council Rep (Amakomhene), Miss Stacey Ofori -LBC's Rep (Omni Cocoa), Hon. Kwabena Nsenkyire -NADMO Regional Coordinator, Daud Abass -EPA Regional Rep, Nana S. Y. Akuoko - Regional Chief Farmer.



■ A group photogragh of Committee Members of the Environmental and Social Management System (ESMS) ■



As the call for the private sector to invest in local cocoa processing intensifies, a German investor has taken the lead to build a cocoa processing factory at Amanase, a farming community near Suhum in the Eastern Region, making it the first cocoa processing factory to be sited at the heart of a cocoa-growing community in Ghana.

The German owned Fairafric Ghana Limited led by its Chief Executive Officer, Mr. Hendrik Reimers was registered in 2019 and operated through tolling arrangements with some major local processing companies at Tema until a subsidiary of the company was finally established at Amanase, off the Nsawam Kumasi Road.

Entering the Ghanaian market

Explaining the motivation to establish the factory at a cocoa-growing area, the Plant Manager of Fairafric, Mr. Gabriel Sackey described Mr. Reimers as an ardent consumer of chocolates made from cocoa grown in Africa and further disclosed that on his visit to Ghana some years ago, he had the opportunity of interacting with cocoa farmers on their farms.

Fascinated by the intricacies of cocoa farming and what farmers go through to produce cocoa beans for processing into chocolates, he was encouraged to domesticate the entire cocoa value addition chain to give farmers a sense of belongingness and also create jobs for local folks.

Mr. Sackey disclosed that the company entered

into the Ghanaian market first by establishing tolling arrangements with Cocoa Processing Company Limited and Niche Cocoa for their products and as demand from customers increased, management of the company initiated a process to establish Fairafric Ghana Limited in March, 2020 and by October same year, the company began processing chocolates to tertiary stage for export, a feat he attributed to the congenial business climate which supports private sector growth.

Beans Supply Arrangement

Mr. Sackey explained that Fairafric produces only organic chocolates for the global market. He added that the company sources its cocoa raw material from the Cocoa Marketing Company (CMC). He further disclosed that, Yayra Glover Limited, a licensed organic cocoa cooperative with about 5,000 farmers in the Eastern region has demonstrated for the past fourteen years (14), its competence to produce and sell organic cocoa beans to CMC from which Fairafric, through third party arrangements, obtains raw material for its producing chocolates.

Factory Capacity

The factory currently employs 63 employees out of which 30% comes from communities around the catchment area. The factory can produce one ton of chocolate per hour or 10,000 bars of chocolates per hour adding that since its inception, the company had produced over one million bars of chocolates.

Mr. Sackey said, the estimated production capacity of the company for year one stood

at just 25% adding that each coming year has been designed to increase this by between 5-10%. He was optimistic that in the coming years, about 35 - 50 million bars of chocolates would be produced to enable the company meet high demands for their products. He also mentioned that the factory has just undergone FSSC 22000:2018, an international food safety management system that gives third party assurance of the system in place and awaits issuance of the certificate for conformity. The factory has also adopted a green energy policy and has installed a 250kva solar power system to support its energy needs.

Retail outlets

Mr. Sackey indicated that Fairafric chocolates are available in prominent supermarkets and mall outlets throughout Ghana and added that demand from customers in Europe remains higher. He said a chunk of their products is supplied mainly to shops in Germany, France and Switzerland.

Entrepreneurial Support

Speaking on efforts at developing entrepreneurial passion among employees of his outfit, Mr. Sackey said personnel of his outfit are regularly trained to adhere to Fairtrade requirements and also to seize opportunities the Africa Inter Continental Free Trade Agreement (ACFTA) presents, adding that, the factory's school for artisanal chocolate making offers opportunity for the youth to acquire hands-on knowledge to produce handmade chocolates. According to him, the first crop of students will soon graduate and would be creating job for themselves.

The future

Mr. Sackey described the future of Fairafric as promising and indicated that the addition of product lines is top on the agenda of management. The Plant Manager of the company described his staff as passionate about what they do and assured of more innovative products to actualize the company's mission and government's drive to increase local processing and consumption of cocoa.

Government's Policy on local processing

Meanwhile, Government and Ghana Cocoa Board, for the past four years, have set a target to ensure that 50% of cocoa beans produced annually is processed locally into various products to stimulate consumption.

The overall aim of this ambitious policy, which has already chalked tremendous feats since 2018, is to reduce the volume of raw cocoa beans exports while increasing volume of processed beans locally to guarantee a better price for the country's major cash crop. To help actualize this dream, the government secured the famous \$600million AfDB loan in 2019 and part of this amount is being applied to boost local processing and consumption of cocoa in the country.

Opportunities still exist for private sector involvement in local cocoa processing as government and COCOBOD have demonstrated enough commitment to support the private sector.

COTE D'IVOIRE -GHANA COCOA INITIATIVE IN PICTURES



■ Minister for foreign affairs and Regional Integration, Hon. Shirley Ayorkor Botchwey delivering the keynote address on behalf of the President of the Republic of Ghana ■



■ Minister for Food and Agriculture, Hon. Owusu Afriyie Akoto addressing participants at the ceremony ■



■ Hon Joseph Boahen Aidoo, Chief Executive of COCOBOD, addressing audience at the event



■ Mr. Brahima Kone Yves (Director General, CCC) delivering a statement at the signing ceremony in Accra



■ Mr. Ray Ankra, DCE (F&A) speaking at the event ■



■ M. Kobenan Kouassi Adjoumani, Hon. Minister for Agriculture and Rural Development, Cote D'ivoire ■



■ CE COCOBOD, Hon Boahen Aidoo (Middle) interacting with the Director Legal/Solicitor Secretary, Mr. Francis A. Opoku (Right) and Mr. Stephen Boafo (Left), Snr. Public Affairs Manager ■



■ Former Board Chairman of COCOBOD Hon. Hackman Owusu Agyemang being ushered in by Mr.Stephen Fiifi Boafo (COCOBOD)



■ (Middle) M. Kobenan Kouassi Adjoumani, Hon. Owusu Afriyie Akoto, and Mr. Alex Asanvo, Executive Secretary (Left) having a discussion during the cocoa break ■





B

■ An Ivorian Farmer at the event ■





■ Dr. Emmanuel Opoku, DCE (Ops), COCOBOD ■





REV. DR. EMMANUEL AHIA CLOTTEY RETIRES

Rev. Dr. Emmanuel Ahia Clottey, the Executive Director of the Seed Production Division (SPD), has retired from Ghana Cocoa Board after 31 years of meritorious service to the cocoa sector. He joined Ghana Cocoa Board (COCOBOD) in 1990 as a District Cocoa Extension Officer of the then Cocoa Services Division (CSD) at

1990-1999

In an exclusive exit interview, Rev Clottey recounted how he worked in those early days to intensify farmer education towards the establishment of new farms at the Nkawie District of the Ashanti Region.

'Within a few years, several new farms were planted and well maintained by farmers because the interaction with farmers was regular, participatory and good', he disclosed.

Rev. Clottey further explained that his efforts resulted in high farm yields with more cocoa farmers from Nkawie receiving awards at the district and regional levels with some farmers, progressing to pick up national best awards in subsequent years.

'I remember very well that CRIG even had to establish its verification trials on fertilizers and black pod disease at Nkawie because they saw the effects of the excellent extension work and supervision being delivered when I was in charge of the district,' he indicated.

Further studies and Secondment to MoFA (1999 – 2004)

Rev Ahia Clottey enrolled at the University of Ghana to pursue Master of Philosophy in Entomology because of his passion to study insect –pest of cocoa to improve upon his extension work and also enable him educate farmers better on best practices against insect pests. Having graduated in 2001, Rev Clottey came back to meet the period of restructuring and reorganization of the division's activities which required the Ministry of Food & Agriculture to absorb all extension programmes of COCOBOD, and subsequently he was sent to the



■ Rev. Dr. Emmanuel Ahia Clottey, outgoing head of the Seed Production Division (SPD)

Ashanti Regional Office of Ministry of Food & Agriculture on secondment as Subject-Matter Specialist on Cocoa where he facilitated various training programmes on cocoa until he was later re-engaged by COCOBOD and worked with the then Cocoa Swollen Shoot Virus Disease Control Unit (CSSVDCU) in 2004.

Re-Engagement and Work in the Eastern Region and CSSVDCU Head Office (2004-2006)

Rev. Clottey became the Akroso District Cocoa Officer in the Eastern Region and doubled as the Officer in charge of the Akim Oda District at the same time. According to him, it was around the same period that the CODAPEC programme was being scaled up in the cocoa industry so, he spearheaded the roll out of this initiative among other activities which included extension

education on the Cocoa Swollen Shoot Virus Disease Control programme in the two districts. He was later transferred to Accra as 'special assistant' to the then Deputy Executive Director of the erstwhile CSSVDCU, Rev Abeka Awusi during which he provided various specialized services to support the implementation of the CSSVD Control programme.

Working as Principal of Bunso Cocoa College and Appointment as Deputy Executive Director of CHED (2008 – 2017)

At this period, Rev had risen through the ranks to become a Principal Technical Officer and worked as the Vice Principal of the Bunso Cocoa College in the Eastern Region. He was in charge of coordinating training programmes for newly engaged staff of the CSSVCU, maintenance of demonstration farms, accommodation facilities among others.

Two years later, he became the Principal of the college where, together with the dynamic work force of the college, accelerated the renovation of lecture halls, guest houses, staff quarters, pantry to make the centre attractive to clients and students. Rev has also been named as having spearheaded the accreditation/affiliation processes for the institute to run Diploma in Cocoa and Coffee Agronomy and Extension programmes until his appointment as the Deputy Executive Director, Cocoa health & extension Division (CHED) in 2015. For some inexplicable reasons, he was transferred to head the Brong Ahafo Region in 2017 but called back to Accra after six months to lead a team of other experts to draft the policy document for the pilot scheme of the new phase of the Cocoa Rehabilitation Programme.

Appointment and Work with SPD as Executive Director 2018 - 2021

Rev. Ahia Clottey remained at CHED as DED in charge of Operations until November 2018, during which the Division initiated the phase (1) of the rehabilitation programme in the Western North and Eastern Regions. He was later appointed the Acting Executive Director of the SPD from November same year and confirmed on 1st October 2019.

At SPD, several achievements can be traced to his administration. He supervised the scaling up of number of seedlings produced annually from 60million to 78 million and later to 92 million in the 2020/21 crop year. Again, under his leadership, a new Cocoa Station of SPD was created while existing Seed Gardens have also seen remarkable expansion to meet increasing demand for planting materials. He also facilitated the adoption of new technologies such as the use of cocopeat, receptacles, galvanized poles, treated wood in raising seedlings in an environmentally friendly manner.

Rev has over the past 31 years, served as either a member or Chairman of over 35 committees tasked to provide suggestions and blueprints to improve the cocoa sector.

The send-off Programme, 2nd July 2021

At a ceremony held to officially end his service with COCOBOD, Hon Joseph Boahen Aidoo, described Rev Dr Ahia



Clottey as a germ and a gift to the cocoa industry and lauded his exemplary leadership and indispensable contribution in the implementation of the vision of extending Hand Pollination- a common practice of SPD to mainstream cocoa farming.

Hon Joseph Aidoo sincerely thanked him for not letting him down in all the appointments he offered him citing the rehabilitation of diseased farms and the yearly incremental rise in the number of hybrid seedlings from 60 million to 93 million in the 2020/21 crop year. He was grateful for his innovation and sense of zeal with which he manned all portfolios he headed.

'Rev you are going but not completely gone. When we need you, we will call on you, he concluded.

In his remarks, Rev. Dr. Emmanuel Ahia Clottey praised God for his grace through out his 31 years working experience in COCOBOD. He was eternally thankful to God for his life and wisdom to serve cocoa farmers. He was also grateful to various Chief Executives and staff he worked with over the years and urged employees of the Board to rally behind management in its pursuits to improve the cocoa sector. Rev. Clottey described the future of the cocoa industry as promising, citing attempts by management at strengthening various projects under the Productivity Enhancement Programmes.

He however believes that staff of COCOBOD must also work harder to complement the achievement of the overall aim of increasing productivity per hectare to over 1000kg. A feat, he thinks is possible if all staff will walk by his principle of Perfect Preparation Prevents Poor Performance as well as his belief in the fact that the Heavens Reward Excellence.

'My greatest joy is that I am retiring in good health to spend the rest of my life doing God's work - I pray for everyone,' he concluded.

There were goodwill messages from the Managements of CHED, QCC, SPD, CMC, Past former staff, and various Union Representatives as well as Directors of Units and Departments of the Board eulogizing his fraternity, passion and values towards work.









CHED EMBRACES THE USE OF CLIMATE SMART AGRICULTURAL TECHNOLOGIES

The Management of Ghana Cocoa Board (COCOBOD) has organized a two-day training programme for the leadership and technical staff of the Cocoa Health Extension Division (CHED) of COCOBOD on weather intelligence for cocoa productivity enhancement.

The training, which was held at CHED Conference Room, Accra was to educate management of CHED on how to access and interpret climate and weather information to inform the implementation of programmes.

In recent months, the effects of climate have caused below normal rainfall for the months of May and June, 2021 across the cocoa growing regions. This rainfall deficit has affected CHED in the implementation of key productivity enhancement interventions such as cocoa seedling transplanting, pollination and fertilizer application, hence the training programme for staff.

The training forms part of efforts by COCOBOD to integrate the tenets of Climate Smart Agriculture (CSA) into cocoa production activities in order to minimize the effects of erratic weather patterns on cocoa. The tenets of CSA comprise improving productivity, building climate resilience and reducing greenhouse emissions.

The training was facilitated by Mr. Fuad Mohammed Abubakar, a Principal Trader and Head of Crop Forecasting at the Cocoa Marketing Company GH Ltd. Mr. Fuad introduced participants to tropical weather, with particular emphasis on the rainfall and temperature patterns of Ghana with specific focus on cocoa-growing regions.

Touching on the relevance of weather intelligence for cocoa production and agriculture, the facilitator reiterated that cocoa pod development, as well as, pests and diseases attacks are influenced, to some extent, by the weather. As a result, COCOBOD's technical staff need to build their capacity to enable them use available weather information from short to medium term and seasonal forecasts in respect of rainfall, temperature and potential evapotranspiration (PET) to plan its activities.

further Mr. Fuad introduced participants to various climate/weather information platforms where they can access information and interpret it for decision-making regarding cocoa cultivation. Additionally, he walked them through how to access weather observations including precipitation, temperature and soil moisture to guide decision making on when to transplant, pollinate, fertilize, prune and also commence control of cocoa pests and diseases, notably blackpod and capsids.

He again explained that the training, is expected to expand participant's knowledge on how to remotely access local weather data to help inform the planning and implementation of productivity enhancement programmes and interventions by the Board. He advised regional heads to access and analyze weather forecast information from both the Ghana Meteorological Agency, the Climate Prediction Center (CPC) of the National Centers for Environmental Prediction under the US National Oceanic and Atmospheric Administration (NOAA), World Meteorological Organization (WMO) Station Explorer, the European Centre for Medium-Range Weather Forecasts (ECMWF) and other private forecast models.

He bemoaned the lack of adequate automatic weather stations across the cocoa landscape to facilitate localized ground observations to support reliable forecasting. He recommended that COCOBOD Management should subscribe to some of the private weather analytical solutions to enhance CHED's ability to adopt precision agriculture approaches in the cocoa sector.

He again stressed the essence for stakeholders in the agriculture ecosystem to integrate the tenets of

CSA in all their activities since over 95% of agriculture production is rainfall dependent and thus exposed to climate change risks. He therefore charged participants to put into practice, the knowledge gained to transform the cocoa sector into a robust climate resilient one so that farmers can achieve improved cocoa productivity and higher incomes despite the threats of climate change.



Mr. Faud Mohammed Abubakar (Facilitor. CMC)

REACTIONS FROM **PARTICIPANTS**

The Director in charge of Monitoring & Evaluation for CODAPEC/HITECH, Dr. John Gilbert Anim-Kwapong affirmed the essence of the training programme which provides insights into climate and weather variability and its impacts on the productivity enhancement interventions of the Board.

'With our work, it is very important because once you can get the forecast of what the climatic pattern will be like, then you can put in the necessary measures to mitigate the impact of the weather that may prevail because to be forewarned is to be forearmed, so when a bad day comes you are prepared and have the necessary safeguards to achieve optimal production. If you can't



■ A group photograph of Management of CHED at the training programme ■

maximize your productivity you can at least optimize it", he said.

Stressing on the relevance of the training programme, Dr Anim-Kwapong further explained that weather intelligence gathering would also provide information on resource management of agricultural farm inputs such as fertilizers and chemical application. With the application of folia fertilizers, if you have no information on rainfall within a period and fertilizer is applied, the fertilizer which would be washed away leading to waste, he emphasized.



■ Dr. John Gilbert Anim-Kwapong (DIR. CODAPEC)

Adding to the incorporation of weather intelligence mechanisms by organizations, the Technical Manager for Western South, Mr. Samuel Asare Ankamah described the initiative as a laudable effort by management which should be strengthened and made effective by the creation of trained weather desk experts at the regional and district levels of the operational scope of the Board.

The Deputy Technical Manager for CHED, Central Region, Madam Margaret Frimpong Ayerakwa commended COCOBOD management for its stride in adopting new technologies to facilitate work processes and recommended that the training is extended to cover district officers and community level extension agents to enable them disseminate weather information to cocoa farmers and also serve as resource persons to ensure its implementation.

THE FUTURE OUTLOOK FOR WEATHER INTELLIGENCE MANAGEMENT

Acknowledging the significance of weather intelligence management as a vital tool for cocoa productivity; the Deputy Executive Director in charge of Productivity Enhancement Programmes (PEPs), Mr. Farouk Nyameh, said that, technical field experts on GIS have been identified and would be trained in subsequent weeks



■ Madm. Margaret Frimpong Ayerakwa (CHED)

to equip them with the skills to present regular and timely updates on weather intelligence.

Going forward, the PEPs such as pruning, hand pollination and fertilizer distribution and application would be rolled out on area specific zones, as recommended, based on the weather reports collated by GIS officers from the weather intelligence platforms.

'The implementation of these PEPs would no longer be rolled out on national wholesale scale, but rather area specific." he stressed.



The implementation of these PEPs would no longer be rolled out on national wholesale scale, but rather area specific

COCOBOD GOES GREEN -ADOPTS NEW TECHNOLOGIES TO PROTECT THE ENVIRONMENT

Ghana Cocoa Board (COCOBOD) has adopted the use of coco peat and receptacles as new technologies for raising cocoa seedlings at nursery sites. The initiative is part of the Board's moves to streamline its core activities to align with best practices that protect and conserve the environment.

Coco peat is 100% soilless organic medium, produced from coconut husks with some trace elements which makes it a good substitute for topsoil, whereas the receptacles are plastic containers adopted to replace polybags, often used in raising cocoa seedlings.

Speaking on when the new technologies would be rolled out, the Executive Director of the Seed Production Division (SPD) of COCOBOD, Rev. Dr. Emmanuel Ahia Clottey disclosed that 25 out of the 32 Seed Production Division Stations across the country had implemented the novelty for the 2020/21 crop year.

'For a start, the division planed to raise 15% of the 92 million seedlings target for the 2020/21 crop year using the coco peat and the receptacles. This will be raised incrementally to enable us identify challenges with the use of the technologies and address them accordingly because it is the best way to go', he indicated.

Explaining the rationale for the new technologies, Rev. Clottey said polybags, which are usually used for raising cocoa seedlings, are not biodegradable and can, in the long run, reduce the quality of the ecosystem. He added that the use of the receptacles in seedlings production will ensure environmental sustainability because they are re-usable and also cost-effective. Rev. Clottey further indicated that over-reliance on topsoil can result in soil winning and cause considerable harm to the environment and life, hence the need to shift from the practice.

THE OLD SYSTEM OF RAISING COCOA SEEDLINGS AT NURSERY SITES

Every year, SPD raises millions of

cocoa seedlings for free distribution to farmers in the country. The process involves the use of polybags and topsoil normally obtained from places such as treated and abandoned old refuse dump sites. Although, there are always deliberate attempts by SPD to ensure that the polybags are properly disposed of after the seedlings had been transplanted, there are still some concerns on the environment because the bags are not easily decomposable. Again, collecting topsoil continuously is also not eco-friendly.



■ Cocoa nursery site ■

In most cases, the topsoil collected usually contains numerous debris like broken bottles, stones in addition to the presence of termites, bacteria and and fungus. Efforts at sieving and re-conditioning the medium physically and chemically before use are time consuming, laborious and expensive.

'Bamboo and palm fronds are often cut and used to erect the frame of the nursery shed. In addition to the imminent destruction of plant species and animal habitats due to the practice, the nursery structures built usually last for just a year and require new structures to be erected every year which is not cost effective at all,' he bemoaned.

THE NEED TO INNOVATE

Rev Emmanuel Ahia Clottey said modernization of the Division's activities is a prerequisite for transforming operations and achieving maximum impact. He hinted that all nursery sites at SPD's stations and those established on lands owned by COCOBOD now have permanent structures constructed with treated wood, galvanized poles and shade nets.

'We are unable to build such permanent structures at all places because some of the sites have not fully been acquired by COCOBD to enable us erect permanent shades which are durable and guarantee value for money, he

ADVANTAGES OF COCOPEAT AND RECEPTACLES

The cocopeat and receptables are not only ecologically friendly but also provide good condition for the proper growth of the seedlings.

The coco peat promotes high water retention; ensures good germination and fast seedling emergence.

The receptacles on the other hand have holes underneath which ensure good drainage and guarantee intact and healthy roots formation. Again, removing seedlings for transplanting is from receptacles achieved with minimum disturbances to the young plant which is these qualities are essential for high survival rate of seedlings.

GOING FORWARD

Rev. Clottey said his outfit and the Cocoa Research Institute of Ghana (CRIG) are working together to monitor the twin-technologies under certain parameters to gather adequate observations which will help to provide the necessary backstopping to improve efficiency.

Technology is obviously the way to go now given heightened and continuous concerns from environmentalists on the need to ensure biodiversity conservation in cocoa cultivation and for that matter agriculture,' he concluded.

CMC UNION EXECUTIVES INAUGURATED



■ A group photograph of the CMC Union Executives ■

A nine member newly elected Executives of the Cocoa Marketing Company (Gh) Ltd, Accra branch, has been sworn into office for a four year tenure.

The Officers are, Brother Sampson Kwaku Amoako_ Chairman, Brother Baffoe Gyan _ Vice Chairman, Brother Thomas Kpebessan _ Secretary, Brother Alex Kwesi Appiah- Assistant Secretary, Alexander Boateng _1st Trustee, Brother Ernest Kwabi-2nd Trustee, Sister Emelia Adomako Ansah_Executive Member, Sister Mabel Helu, Youth Representative, Sister Gifty Komladjei_ Women's Representative.

The Deputy General Secretary of The Industrial and Commercial Workers' Union (ICU) Ghana, Brother Emmanuel Benimah, who administered the oath of office at the Cocoa House, Accra, charged the newly elected officers to work assiduously in tandem with the Management of CMC to better the lot of the Company, and by extension, every staff.

"Those who voted you into office expect you to work to improve their welfare and you can only do so by partnering with your Management and you dare not fail".

On his part, the Managing Director of CMC, Mr. Vincent Okyere Akomeah expressed his happiness about the peace and harmonious relationship that has existed between the Union and Management of the Company over the years.

He further revealed that, a blend of some old and new members of the Executives portends a great future for the Union, since the new will learn from the old

Mr. Akomeah encouraged the few ladies among the Executives to strive to occupy the topmost positions of the Union in the not too distant future.

"Please, don't shy away from contesting for the topmost positions of the Union. Give women the space and they will perform with excellence 'he added.

He implored the new Executives to unite to make the Union more vibrant, promising to continue to operate an open door policy, which will inure to the benefit of all staff.

"If we want CMC to thrive, we have to bring the Union closer to Management and also give them space to operate, but within the laws".

Mr. Akomeah advised the officers to educate staff to appreciate the dangers that false information poses to the Company.

"We don't want false information to thrive, it is dangerous, please check it", he advised.

Some dignitaries present at the inaugural ceremony were the Deputy Managing Director of CMC, (Marketing) Mr. Fred Amponsah Doku. Other senior executive members were also present at the inaugural ceremony.







2021 NASPAC MEMBERS TRAINED ON ENTREPRENEURIAL SKILLS

As part of activities to mark the end of service for the 2020/2021 National Service year group of COCOBOD, the Human Resource Department of Ghana Cocoa Board (COCOBOD) has organized a three-day workshop to equip members with employable skills to make them financially independent after completing their programme with the Board.

The workshop, which was facilitated by a team of business experts from KBF Centre for International Studies, brought together over 250 participants to interact and discuss business opportunities in the country which can give them immediate jobs as they aim

for higher prospects.

Opening the training programme, the Director of Human Resource of COCOBOD, Mr. Randolph John Adei, urged participants to consider the platform as a means of generating fruitful discussions to promote their entrepreneurial vision. Mr. Adei charged them to ask relevant questions for the necessary assistance to develop their business plans among others.

Speaking on the topic "Entrepreneurship and Business Skills Development", Professor Michael Kwateng, CEO of KBF Centre for International Studies, used his personal experiences in life to explain the good and ugly paths of becoming an entrepreneur. Professor Kwateng said opportunities abound in Ghana for the youth to take advantage of and advised them to study the environment for such prospects.

'Our country is endowed with enormous business prospects from which you can pursue your ambition - it is up to you to see which area you want to venture and take the bold step" he indicated.

Professor Kwarteng further implored participants to build their communication and interpersonal skills and focus on turning every opportunity that comes their way into a business while aiming at venturing into the corporate world to build networks which can help them to become successful entrepreneurs.

The workshop presentations touched on other areas such as writing resumes, interview skills, networking skills and various sources of funds available to start a business.







THE RTI AND GHANA'S COCOA INDUSTRY

By Josephine Dake-Abrahams

Right to Information Act (989) was passed in 2019 and given Presidential assent on 21st May 2019 by his Excellency President Nana Addo Danquah Akufo-Addo. The Act gives the right to both Ghanaians and

foreigners to access nonexempt information from any public institution.

'The Right to Information Act (RTI) is to provide for the implementation of the constitutional right to information held by a public institution, subject to the exemptions that are necessary and consistent with the protection of the public interest in a democratic society, to foster a culture of transparency and accountability in public affairs and to

Other benefits of the coming into effect of this Act are;

provide for related matters".

- 1. IT WILL MAKE GOVERNMENT MORE RESPONSIVE.
- 2. IT STRENGTHENS THE INSTITUTIONS AND ENABLES THEM WORK EFFECTIVELY.

3. ENHANCES AND PROMOTES PUBLIC CONFIDENCE.

4. MAKES CITIZENS WELL INFORMED, AMONGST OTHERS.

The cocoa industry lately has been under the limelight because of the negative impacts of the Covid-19

pandemic, amidst other factors that bother on cocoa production, pricing, marketing, consumption and public accountability. Also in view of the position of Ghana as producer of best quality cocoa in the world, there is immense pressure on the industry to be nothing but the best and also keep its checks and balances in place.

The RTI will therefore make information on Ghana's cocoa industry easily accessible to people who need it.

Information is relevant upstream and downstream and RTI gives a legal

backing to all these players to access information from any public institution.

For instance, a famer can easily access any kind of information from the Agricultural Ministry or COCOBOD itself – Information on the total number of fertilizers distributed in his region; number of seedlings given out within a particular time; and others. Also, a supplier, customer or stakeholder could request any kind of information from COCOBOD or any of its divisions and subsidiaries.

There is a designated RTI Officer at the Public Affairs Department of Ghana Cocoa Board who will work with other schedule officers in the Public Affairs and Human Resources Departments to ensure that all inquiries which have to do with the RTI Act are appropriately addressed.

Training programs are also being gradually rolled out to ensure that all staff of the Board are abreast with the provisions of the Act.

Basically RTI is intended to give citizens an opportunity to look out for Ghana.

BENEFITS OF RTI

- MAKES GOVERNMENT MORE RESPONSIVE
- THEM WORK EFFECTIVELY
- ENHANCES AND PROMOTES PUBLIC CONFIDENCE
- MAKES CITIZENS WELL INFORMED, AMONGST OTHERS

QCC CALLS FOR COLLABORATION TO DELIVER HIGH QUALITY STANDARDS WITHIN THE COCOA VALUE CHAIN

The Quality Control Company Ltd. (QCC) of Ghana Cocoa Board (COCOBOD) has urged key stakeholders to rally behind the company to ensure the adoption and implementation of uniform quality control practices within the local cocoa supply chain to protect Ghana's enviable position as the beacon of premium cocoa the world over.

A Manager at the QCC, Dr. Ernest Felix Appiah, made the call at a two-day symposium on the company's Quality Management Systems (QMS) and its relevance on customer satisfaction held at the company's Training School at Tema. He said the system ensures consistency in the quality of cocoa sold both locally and internationally.

Dr. Appiah lauded the role of Licensed Buying Companies (LBCs) in guaranteeing the quality of cocoa beans at the farm gates for sale to external and local market and called on them to adhere to acceptable standards.

'It is critical for all stakeholders within the cocoa value chain to work together to ensure that the quality standards Ghana is known for is not compromised', he advised.



He said the QMS is purposely designed to ensure best quality control practices; increased and enhanced productivity, and evidence-based decisions to guarantee customer satisfaction.

'QCC is not resting on its oars following the international approval rating of its systems. We will continue to invest in the highest quality training programmes, personnel, equipment, and inspection services in order to bring satisfaction to our customers', he assured.

He tasked LBCs operating in various cocoa- communities to meticulously carry out their quality control mechanisms to support the company to

deliver world-class inspection services and promised frequent interactions with them on trends to help them improve efficiency.

'Let us carefully comply with acceptable standards and norms and I can assure you of our outfit's open system of communication. We shall give you feedback to improve upon how you can effectively check the quality of the cocoa beans at the community level', he indicated.

The symposium gave further insights into the workings of QCC's Quality Management System and its bearing on overall output for customer satisfaction and retention.



■ A group photograph of participants at the symposium ■

KENYAN HIGH COMMISSIONER TO GHANA VISITS CRIG



■ H.E. Eliphas M. Barine (Right) and Dr. Francis Padi (Left) examining a cocoa tree at CRIG ■

The High Commissioner of Kenya to Ghana, His Excellency Eliphas M. Barine and his entourage paid a working day visit to the Cocoa Research Institute of Ghana (CRIG) to familiarize themselves with the operations of the Institute.

The group discussed, with CRIG's Management, possible ways on how to generate more revenue into the pockets of local Tea and Coffee farmers and also to come up with a framework of Price Stabilization Mechanism in which they say they are impressed by the framework of Ghana.

The seven-member delegation was welcomed by Dr Francis Padi, Acting Executive Director and other management members of CRIG.

Briefing the group about the operation and activities of CRIG, Dr Padi said that the Institute is the backbone of research in the Cocoa Industry and the functions of the six Scientific Divisions and two Units of the Institute make CRIG a force to reckon with, internationally.

'We market our cocoa based on quality not quantity and if we don't follow the traditional practice, we will never get that quality we are known for", he emphasised.

Dr Padi stated that, CRIG research work and scientific advice to COCOBOD had motivated the Government of Ghana to launch the Tree Crops Development Authority to move all other cash crops to the level of cocoa and to set quality standards by 2030. He added that every year there is an international competition dubbed Salon du Chocolat in Paris for cocoa farmers, to celebrate their hard work and to inspire them adhere to the proper post-harvest practices to improve the quality of the cocoa beans.

The Kenyan High Commissioner to Ghana, H.E Eliphas M. Barine, commended Management, Research Scientists and Staff of CRIG for the crucial role being played to ensure that Ghana's cocoa remains the World's number one in terms of quality premium cocoa producer.

Diplomat Barine stated that the strong bond between Ghana and Kenya had existed since the dawn of time with mutual support in various sectors such as education, health and agriculture.

He emphasised the need for collaborative research in agriculture especially on cocoa and tea between Ghana and Kenya to sustain the crops as the leading foreign exchange earning agricultural commodities.

The Ag. Executive Director of the Cocoa Research Institute of Ghana (CRIG), Dr Francis Padi thanked the High Commissioner and his team. He was optimistic that, the outcome of the discussion would largely benefit both the Cocoa and Tea industries in both countries.

Present at the meeting were Deputy Executive Director of CRIG (General Administration), Mr Reginald Osafo Ofosu and Ag. Deputy Executive Director of CRIG (Coffee, Cashew and Shea), Dr Samuel Lowor. Mr John Mwaka, Dr Daniel Amanja, Mr Dennis Olila, Mr Philp Cheruiylot, among others from the Embassy.









The Impact of COVID-19 on Businesses: A Look at Ghana's Cocoa Industry

By Benjamin Teye Larweh

In December, 2019, a very strange disease began an exercise that would soon bring the whole world to a standstill. The fast rate of human-tohuman infection, with its associated high fatalities, prompted scientists across the globe to rise and work around the clock to prevent an eminent end to the human race before the anticipated biblical rapture.

Despite this swift response, the disease, later named Corona Virus Disease 2019 (COVID-19), succeeded in causing havoc to every corner of the world. As at August 17, 2021, 17:28 GMT, approximately 21 months after the outbreak, COVID-19 had affected 220 countries and territories and 2 international conveyances. A total of 207,784,507 confirmed cases and 4,370,424 deaths had been reported across the globe by the World Health Organization (WHO), with 111,232 confirmed cases and 930 deaths being recorded in Ghana.

efforts containment by governments and health authorities have yielded significant results, key among these being the introduction of the COVID-19 vaccine; but not before the pandemic had done its worst, affecting every economic, social and religious activity in the world. Even after the introduction of the vaccines, there seems to be no end in sight to the dreaded COVID-19 pandemic.

The impact and consequences of the pandemic on humanity appear far-reaching, visibly going beyond the spread of the disease and efforts to contain it. It must however be observed that the economic impact and consequences of COVID-19 are felt differently depending on the continent, country and the type of business entity from which one comes.

With the pandemic now contesting for an unenviable accolade as being the cause of the biggest recession in world history, resulting in more than a third of

the global population being placed on lockdown for mostly within the second and third quarters of 2020, concerns are rife regarding the possible impact of COVID-19 on the cocoa business with special focus on Ghana's cocoa sector.

According to Jon Walker, Senior Advisor, Cocoa Fairtrade International. on the path to sustainable cocoa. 'the COVID-19 pandemic is a large, unexpected, and frightening detour, laying bare the precariousness of many people in all societies, including farmers and workers in the global south who were already struggling to get by".

It is estimated that more than 850,000 Ghanaian families earn their daily living directly from cocoa farming in Ghana. Almost 2 million Ghanaians directly or indirectly depend on proceeds from the cocoa business for survival. All these people are on the cocoa value chain which spans from production, quality control, marketing, processing, manufacturing to consumption.

Averagely, cocoa brings in more than \$2 billion in foreign exchange to Ghana with associated social interventions in the areas of education, health, road infrastructural projects, among others. It is therefore not out of place to emphasise the age-old saying that cocoa is the mainstay of Ghana's economy.

Before the COVID-19 crisis, global demand for cocoa was growing at an average annual rate of 2 percent (2011-2019), reaching about five million tonnes per year, globally. Ghana's cocoa production had averaged 850,000 metric tonnes within the period with more than 80 percent of this being exported in the form of raw cocoa beans, cocoa liquor, cocoa butter, cocoa cake, cocoa powder or chocolate. With this growth, earnings from cocoa exports in Ghana was expected to increase in the 2019/2020 crop season.

Cocoa demand in Asia grew more than

8 percent in 2019 (as against the 1.3 percent world average), and projections for 2020 had predicted a deficit in the global chocolate supply between 30,000 to 50,000 tonnes. Following this pattern, cocoa prices as at the end of February 2020 were fairly favourable, providing a glimmer of hope for our cherished cocoa farmers amidst the expected implementation of the Living Income Differential (LID) pricing mechanism in October 2020.

The COVID-19 pandemic however truncated this projected growth in cocoa earnings. As the COVID-19 crisis moved to Europe and the rest of the world, the demand for cocoa changed radically. This pushed down prices for almost the entire month of March 2020: the lowest price recorded on March 20 was \$2,197 per tonne, followed by four consecutive days of increasing stability at \$2,266 per tonne.

One year down the lane, world cocoa business is not looking any much better. In fact the International Cocoa Organization (ICCO) in its Cocoa Market Report for July, 2021 indicated that declining cocoa beans prices on futures markets upheld the bolstering effect on cocoa powder prices and exerted downward pressure on prices of cocoa butter. Grindings data posted by main regional cocoa associations for the second quarter of 2021 indicated resumption in cocoa processing activities in Europe, Asia, and North America.

'Prices of the nearby cocoa futures contract averaged US\$2,195 per tonne and ranged between US\$2,122 and US\$2,295 per tonne in London whereas in New York, average price of the first position contract stood at US\$2,332 per tonne, seesawing between US\$2,242 and US\$2,425 per tonne", the report

Intermittent lockdowns in consuming countries, coupled with reduction in disposable incomes of individuals



A cross-section of stacks of cocoa beans in a warehouse

due to job losses and other reasons, has negatively impacted the cocoa business. Buyers of cocoa beans are therefore reluctant to risk making commitments in a situation of falling prices and dwindling demands and prefer to put their orders on hold.

This will obviously inhibit cash flow to producing countries, including Ghana, who export mainly raw cocoa beans. The impact of this on internal marketing and the overall socio-economic lives of farmers in particular and the cocoa industry in general is conspicuous.

Recent alleged agitations by Ghanaian cocoa farmers fuelled by the media and other actors on the cocoa value chain give credence to the reality of a negative impact of COVID-19 on Ghana's cocoa sector. Discussions are already underway to secure funding in the form of a receivable-backed syndicated loan facility from a consortium of local and international banks to facilitate cocoa purchases for the 2021/22 crop year.

Despite the current challenges brought about by the COVID-19 pandemic, government and management of COCOBOD have successfully managed to mobilize financial institutions, most of who are in distress, to put their resources together to ensure a successful signing of this year's facility. This is a major respite in the midst of global and national uncertainties.

It is hoped that the introduction of

the COVID-19 vaccines will help to incrementally improve the global economic system. Otherwise, further spread of the virus in consuming countries will plunge demand for cocoa products further and drive prices of the commodity on the world market to a record low. This may not be a good omen for Ghana's cocoa industry, especially, for the government and the industry regulator, considering farmers' high expectations for increased producer prices at the onset of every Crop Year. The result of low producer prices will be poor livelihoods for cocoa farmers, their families and their communities.

The sustenance of the cocoa industry depends on how effective we are able to control the Cocoa Swollen Shoot Virus Disease (CSSVD), replace aged and moribund farms, improve soil fertility and adhere to good agronomic practices. COCOBOD needs regular flow of income to effectively implement all the laudable productivity enhancement programmes. COVID-19 is a threat to these interventions. Funds for scientific research, effective extension services, input supplies and other important services in the value chain are all being negatively impacted by COVID-19.

But all hope is not lost. With Ghana's population hovering around 30 million, if every Ghanaian should consume at least 1kg of cocoa annually, there may be no need to depend on any foreign country or organization for our cocoa trade. The enormous

health and nutritional benefits of cocoa consumption should serve as motivation for all and sundry to make cocoa consumption daily habit and help us inculcate cocoa into our household diets. We also owe it a duty to continue to cautiously observe all the COVID-19 protocols and break the chain of transmission.

We are optimistic that the reduced demand for cocoa products in the key consuming countries is not permanent. Surly, COVID-19 will soon be brought under control and global economic activities will return to normal.

Whatever the case is, as long as COVID-19 stays with us, the survival of the cocoa industry will continue to be under threat. Every effort must be made to minimize the impacts of this pandemic on the backbone of Ghana's economy while governments and health authorities work to eradicate it.

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COCOA BEAN SHELL-**NUTRITIONAL AND** HEALTH BENEFITS (Pt 1)

By Dr. Edward O. Amporful, Chief Pharmacist-Cocoa Clinic.

Over the past few days my daily posts on the nutritional and health benefits of cocoa have focused on the cocoa bean shell.

The cocoa bean shell (CBS) is a byproduct of cocoa. It is used as mulch and biofuel. It seems that a lot has changed about the uses of the cocoa bean shell (CBS). I will first refer to a paper by Balenti´c et al titled 'Cocoa Shell: A By-Product with Great Potential for Wide Application", Molecules 2018, 23, 1404; doi:10.3390/molecules23061404.

The introduction to this paper makes interesting reading. Food industry waste often consists of inedible parts, so-called by-products. Today, there are huge quantities of by-products that are discarded, causing enormous economic problems by polluting the environment. Considering the growing world population and disappearing raw materials, and a real threat of reduced food sources, it is not surprising that awareness about the needs of preservation and re-usage of materials that are treated as a waste is rising.

Cocoa bean shell is an example of

by-product with high-value bioactive components and nutritional value.

The main raw material for the production of all kinds of cocoa products is dried and fermented cocoa beans, and cocoa bean shells are one of the by-products of cocoa beans obtained in the chocolate industry.

Cocoa bean shells are separated from the cotyledons during the pre-roasting process or after the roasting process.

A paper by Rojo-Poveda et al titled 'Cocoa Bean Shell—A By-Product with Nutritional Properties Biofunctional Potential" published in Nutrients 2020, 12, 1123, addresses the nutritional and health benefits of the cocoa bean shell (CBS). It is worthy of note that no more than a 5% of CBS is allowed on cocoa products (Codex Alimentarius).

Yet cocoa production generates substantial quantities of 'waste". About 90% is discarded as waste or by-products. CBS constitute about 10%-17% of the total cocoa bean weight. The production of one kg of chocolate would produce an output of 98 g of CBS.

The increasing demand for cocoa beans has led to an accumulation of this byproduct with attending disposal issue.

The nutritional composition of CBS does not differ markedly from that of cocoa beans, except for fats, which are much more present in cocoa beans, while fibers predominate the shells. CBS also contains considerable quantities of bioactive compounds, such as polyphenols, which are linked to many health benefits provided by cocoa.

Currently, the bioconversion of food processing residues into valuable products is receiving increasing attention with strategic policies to develop a bio-based circular economy. An area of intense interest is the CBS.

CBS presents a much lower percentage of fats compared to cocoa beans, which is substituted by a much higher amount of fibers. CBS also has a higher content of proteins, fats, and carbohydrates compared to other cocoa by-products, such as cocoa pods.

The main components found in CBS ash are sodium and potassium (7.2 g and 3.1 g per 100 g of CBS ash, respectively).

NUTRITIONAL AND CHEMICAL COMPOSITION OF COCOA BEAN SHELLS (CBS).

PARAMETER	AMOUNT
Energy (kcal/100 g)	122.00
Moisture (%)	3.60–13.13
Ash (g/100 g)	5.96–11.42
Proteins (g/100 g)	10.30–27.40
Fats (g/100 g)	1.50–8.49
Carbohydrates (g/100 g)	7.85–70.25
Dietary fiber (g/100 g)	39.25–66.33
Pectin (g/100 g)	7.62–15.59
Minerals	
Calcium (g/100 g)	0.23–0.44
Phosphorus (g/100 g)	0.58–1.00
Magnesium (g/100 g)	0.48–1.29
Potassium (g/100 g)	1.25–1.82
Sodium (mg/100 g)	16.00–192.20

Iron (mg/100 g)	27.60–80.50
Manganese (mg/100 g)	4.53
Copper (mg/100 g)	2.35–6.62
Selenium (mg/100 g)	0.21
Cobalt (mg/100 g)	0.10
Zinc (mg/100 g)	2.75–19.00
Chromium (mg/100 g)	0.67-4.86
Vitamins	
B1 (_g/g)	0.70–3.10
B2 (_g/g)	0.90–3.10
B6 (_g/g)	tr
D (_g/g)	tr-0.53
E (_g total tocopherols/g CBS fat)	1.02
Polyphenol content	
Total phenolic content	3.12–94.95
Flavanols	
Epicatechin (mg/g)	0.21–34.97
Catechin (mg/g)	0.18–4.50
Procyanidin B1 (mg/g)	0.55-0.83
Procyanidin B2 (mg/g)	0.23–1.38
Methylxanthines	
Theobromine (g/100 g)	0.39–1.83
Caffeine (g/100 g)	0.04-0.42
Volatile organic compounds (aromatics; _g/g)	4.92–16.10

Proteins constitute between 10.30% and 27.40% of the CBS dried weight. CBS contain all the essential amino acids, representing 44.7% of the total amino acids.

The fat content accounts for 1.50%-8.49% of dried CBS and is therefore considered a minor component of the by-product when compared to the approximate 50% fat content in cocoa beans. CBS fat is highly acidic and richer in the unsaponifiable matter than cocoa bean fat. Oleic, palmitic, capric, and stearic acids are the main fatty acids in both CBS and cocoa fats when considering the saponifiable fraction.

Carbohydrates constitute 7.85%-70.25% of the CBS dry weight. These values differ considerably depending on the fiber content. As regards

digestible carbohydrates, CBS contain none or small quantities of starch, mostly available starch and a very small quantity of soluble sugars. The non-digestible fraction is formed by pectic polysaccharides (45%), hemicelluloses (20%), and cellulose (35%), and constitutes the dietary fiber. Consumption of dietary fiber is important due to its contribution to proper intestinal transit.

The dietary fiber contained in CBS possesses several other biofunctions, such as reducing cardiovascular risks by reducing cholesterol and triacylglycerol levels or reducing diabetes effects by retarding glucose absorption. CBS fiber has a considerably high adsorption capacity for oil and cholesterol, decreasing their bioavailability during the gastrointestinal digestion process.

The pectin fraction of CBS fiber has interesting gelling properties, which are very useful in fields such as the food, pharmaceutical, or cosmetic industries. Together with fiber, polyphenols are the most interesting and studied compounds in CBS and are the main compounds responsible for its biofunctional properties.

Long-term intake of polyphenols could give several health benefits, as they possess antioxidant properties, act as free-radical scavengers, and reduce oxidative stress.

They can take part in anti-inflammatory processes, exert antidiabetic properties, or reduce the risk of several diseases such as cancer, chronic diseases, cardiovascular disease, and neurodegenerative disorders.

FARMERS PENSION SCHEME BEGINS AT NEW EDUBIASE



■ An official collecting data of farmers at the registration centre

The Pilot Phase for the implementation of the Cocoa Farmers Pension Scheme scheduled to be fully roll out in October 2021 has begun at New Edubiase in the Ashanti Region. The 10-day exercise is being used to test the planned operational framework designed for the scheme, sensitize farmers and simulate the registration process using a sample size of 2800 volunteer farmers drawn from 28 cocoa-growing communities within the New Edubiase Cocoa District.

The pilot exercise aims at providing hands-on experiences and relevant feedback which would be used to modify or enhance the modalities for the roll out.

The Chairman of the Implementation Committee, Mr Charles Osei–Akoto,in an interaction with volunteers at a registration center in New Edubiase, said to register with the scheme, cocoa farmers would complete enrolment forms at their preferred points of sale of produce for deductions to be taken from their sales and kept in a pension account.

'You will be required to show your Ghana Cocoa Card issued by COCOBOD during the CMS exercise and after that, you will be assisted to complete a form then your cocoa is weighed to ascertain the actual value. A 5% deduction is then made as your contribution any time you sell your cocoa', he indicated

MrOsei-Akoto further indicated that the farmer will receive an alert instantly on his phone to indicate that his/her account has been credited accordingly.

He said, government will also instantly credit 1% of the value of the cocoa sold

to the farmer's contribution. He urged the farmers to endeavor to voluntarily request for extra deductions to be made and paid into their account so that they can accumulate more savings.

Responding to some concerns raised by the farmers, a consultant to the scheme, Mr. Arnold Mensa-Bonsu, indicated that the scheme is mandatory but the farmer can make additional voluntary contributions and added that all cocoa farmers, regardless of age can sign on to the scheme. He explained further that a farmer will be due for retirement if he/she had made a minimum of 5 years contribution after joining at age 50 or older.

'Actually, there is no age limit to register. However for a farmer who joins at an age lower than 50, they will be eligible for retirement at 55 years,' he indicated.

He further indicated that a 103-yearold cocoa farmer at Adansi Atobiase, Opanyin Kwabena Nkrumah, who still sells cocoa showed up during the early hours on the first day of the exercise to go through the simulation



 Opanyin Kwabena Nkrumah happily flaunting his cocoa pension ID Card

exercise within 10 minutes to complete the process. He advised the youth who are into cocoa farming to seize the opportunity to register with the scheme at early age and contribute for at least 15 years to enjoy a more decent pension.

The Ghana Cocoa Board Law 1984 (PNDC Law 81) of 1 enjoins the Board of Directors of COCOBOD to implement a contributory insurance and welfare scheme that provides decent pension for cocoa farmers.

Furtherance to this provision, December, 2020, H.E. Nana AddoDankwa Akuffo-Addo, President of the Republic Ghana launched the Cocoa Farmers Pension Scheme to improve the welfare of cocoa farmers in the country.

Nana Addo tasked the Ghana Cocoa Board (COCOBOD) and the National Pensions Regulatory Authority to work out modalities for the implementation of the scheme sooner rather than later.

As pre-requisite to the smooth implementation of the scheme, there was the need for a credible data on cocoa farmers in Ghana to be established. For almost a year now, the Board has been building a strong and robust database on farmers across the country through the Cocoa Management System (CMS).

With the great strides chalked in some regions including the Western South and Ashanti Regions where the CMS registration exercise has been very successful carried out, there is some justification for a full roll out of the Cocoa Farmers Pension Scheme in October 2021, starting from the regions where the CMS has provided cleaner register.

