

**JOEL SHARES HIS STORY**  
Pg3



**CORONA VIRUS** Pg5



**MR MOSWEU GIVES AN  
UPDATE ON BRAHMAN  
HEIFERS DONATED BY  
HE DR MOKGWEETSI  
MASISI** Pg9



**THE MINISTER PAYS  
COURTESY CALL TO  
BUAN** Pg11



## **BUAN GRADUATES HORTICULTURE INCUBATION PROJECT**

*Botswana University of Agriculture and Natural Resources (BUAN) has engaged five of its graduates in a horticulture incubation project which started in January 2020.*



## **EDITOR'S NOTE**



***Ms Onkgopotse Moreri***

Due to the COVID-19 pandemic, it is without a doubt that we are living in an unprecedented global situation, as we live these challenging and uncertain times. The BUAN community urge all stakeholders and their families to keep safe, wash hands and to social distance.

Our staff and students are stepping up to the challenge in such a remarkable manner! Because of our concern for the well-being of our University community, we are working around the clock to shift to remote learning and have also released some of our workforce to work from home. It has been truly inspirational to see all of us working together to ensure the well-being and continuity in our students' education paths.

The University is aware that most of you are on the front lines of this crisis, helping those most in need through an anxious and vulnerable period, and we are confident you are prepared to meet those challenges. The skills and training you have acquired from BUAN have prepared you to now lead the nation towards sustainable food security, to confront fear and anxiety and most importantly to develop solutions and interventions that will help us weather this storm.

Things are indeed running effortlessly, depicting who we are as a University and the direction we are taking as a family and working towards fulfilling your commitment to BUAN and the community at large. I'd like to remind you to practice social distancing; to regularly wash your hands and sanitize, to take care of yourselves so you can continue to help others.

## **EDITING TEAM**



***Ms Tirelo Mothupi***



***Ms Baikgantshi Motsumi***



***Mr Jerry Seleke***

**JOEL SHARES HIS STORY!**



My name is Joel Ntshupang, a proud graduate of BUAN who completed BSc Soil and Water Conservation Engineering in 2018. Upon completion of my studies I started my vegetable production business in a backyard garden but through the help of BUAN, I managed to expand and improve my business under the **Agriprenuer** programme.

I was selected to enrol in the programme in 2019 after outcompeting other candidates in screening tests which included entrepreneurial development training, presentations and proposals. Agriprenuer has significantly developed my expertise in vegetable production and introduced me to other very passionate entrepreneurs like Thabo Pheto and Aubrey Makwatse who continually contribute immensely to the success of the project.

The **Agriprenuer** programme is an initiative which was formed through partnership between BUAN and LEA which aims at cultivating the agricultural entrepreneurship in BUAN graduates. The programme runs for 12 months and includes training of the participants through short courses, mentorship and provision of land as well as

highly subsidised business activity necessities.

Under the programme I managed to produce a number of products including mustard spinach, peppers, butternuts and seedlings. I have managed to supply various customers ranging from the general public to large supermarkets and just on the 28th May 2020, the project delivered 180 1kg bags of tomatoes to Spar. The business is currently growing cabbage, tomato and leafy vegetables. BUAN has done a lot in producing other highly skilled and qualified young farmers like myself and for that I confidently applaud the University for such initiatives and hope that other institutions could adopt such models.

I urge all the youth who have started small agricultural businesses to keep on striving through all the challenges they go through and never to consider quitting as an option since food production is essential and can be a sustainable business. Those who have the desire to start but have not started yet, there is no better time to start than now!!!

**SAFETY HEALTH ENVIRONMENT (SHE) CORNER !!**



associated with the workplace. It also ensures that the University’ compliance with all environmental standards and regulations are adhered to.

Though the University had been operating for several years without a SHE department, Mr Josaya indicated that it is beneficial to have one. Its primary benefit is to prevent incidents such as injuries, illnesses, and harmful environmental releases for sustainable management of organizations. The aim is to demonstrate to employees that employers care about their well-being by ensuring that work is performed in a safe and protected atmosphere. It should be noted that it is a duty and moral responsibility of the University to look after the employee’s and ensure their protection.

A well implemented SHE Program improves employee productivity and quality of University products. Therefore the SHE team will identify, remove, reduce, and otherwise control hazards and risks which may be experienced by the University. He stated that BUAN needs to subscribe to the following legislations;

Public Health Act which guides the university on notification of certain diseases, provide for the protection of foodstuffs, protection of water supplies and generally to make provision for public health.

Food Control Act - An Act to ensure the provision of clean, safe and wholesome food to consumers.

Waste Management Act - An Act to minimize pollution of the environment, to conserve natural resources and to cause the provisions of the Basel Convention to apply in regulating the trans-boundary movement of hazardous wastes and their disposal.

Environmental Impact Assessment Act - An Act to provide for environmental impact assessment to be used to assess the potential effects of planned developmental activities.

Atmospheric Pollution (Prevention) Act - An Act to provide for the prevention of the pollution of the atmosphere through industrial processes.

Building Control Act - An Act to regulate authorization of building constructions.

Radiation Protection Act - An Act to provide for the safe uses of atomic energy and nuclear technology.

Explosives Act - An Act to provide for the control of the manufacture, importation, sale, transport, storage, use and disposal of explosives.

Fire Service Act - An Act to provide for fire prevention.

Prior to transformation, the University operated without a SHE department. As part of transforming to being a Vibrant World-class University, we now have a SHE department. In an effort to understand what it means to have a SHE department as a University the Communications and Marketing department had a one on one interview with Manager, SHE Mr. Shadrack Josaya. He started off by explaining what the abbreviation SHE stands for, which is;

S – Safety; Refers to things that pose a risk to injury.  
H – Health; Refers to things that can make people ill, such as airborne diseases, biological pathogens, radiation and/or things that can harm as a result of such exposure.  
E – Environment; Refers to environmental releases and spills.

He said, “Safety, Health and Environment is responsible for the observance and protection of occupational health, safety rules and regulations along with environmental protection”.

It’s a term used to refer to laws, rules, regulations, professions, programs, and workplace efforts to protect the health and safety of employees and the public as well as the environment from hazards

**CORONA VIRUS**

Corona viruses are a large family of viruses which may cause illness in animals or humans. The most recently discovered coronavirus causes coronavirus disease COVID-19. This new virus and disease were unknown before the outbreak began in Wuhan, China, in December 2019 (WHO 2020).

**How Does the Coronavirus Disease Spread?**

COVID-19 is primarily spread from person to person. An individual can be infected from respiratory droplets when a person coughs, sneezes or talks. Most of these droplets fall on nearby surfaces and objects such as desks, tables or telephones.



**Stop the spread adhere to social distancing protocols**

**Signs and Symptoms of Corona Virus**

The most common signs and symptoms include respiratory symptoms that is, fever (above 37.5), cough and shortness of breath. In more severe cases, infection can cause pneumonia, severe acute respiratory syndrome and sometimes death.

In generally most people recover from the disease without any treatment. Supportive management of signs and symptoms such headache, fever and cough Most symptoms of Flu and COVID-19 are similar however they have some differences

- The symptoms for COVID-19 can develop between 1-14 days while for flu it is 1-4 days of infection.
- Shortness of breath is more common with severe cases of COVID-19 as opposed to flu.

**Prevention Methods**

The best way to prevent the spread of COVID-19 is through practicing hand and respiratory hygiene. This includes handwashing with clean water and soap or the use of alcohol-based hand sanitizer.

The use of face masks is another means to reduce the spread of the virus as it traps the spread droplets from one person to the other. It is important to avoid touching the mask and the eyes/mouth as this may facilitate the spread of the disease.

All individuals with flu like symptoms are advised to stay at home and seek medical attention to avoid the possible spread of the disease.

Cover the mouth when coughing or sneezing with flexed hand or tissue and ensure distance of 1-2 meters between individuals

*Remember to...*



**Use hand sanitisers**



**Wash your hands**

### **GENERAL WELLNESS AT THE WORKPLACE**

It is the responsibility of all employees to prevent the spread of COVID-19 in the workplace. The employer needs to consider how best to decrease the spread of COVID-19 and lower the impact in the workplace. This should include developing measures to:

- prevent and reduce transmission among employees,
- maintain healthy business operations, and
- Maintain a healthy work environment.

Availability of clean water and soap is a top priority within the institution, therefore all employees are encouraged to wash their hands regularly.

In order to prevent the risk and spread of the virus all employees, visitors and students will undergo a mandatory routine temperature checks at entry points.

All health checks should be done in a way that helps maintain social distancing while also providing multiple screening entries into the institution.

All frontline employees will be trained on basic COVID-19 skills in accordance with MOHW guidelines

Availability and provision of personal protective equipment (PPE) for all frontline employees.

In order to prevent frequent gatherings, the institution will utilize the use of tele-networking for the meetings and sharing of information.

As a precautionary measure and in line with COVID-19 legislation to prevent and reduce transmission among employees;

- All employees who have flu like symptoms (headache, fever, cough, sneezing) should notify their supervisor and stay home. Sick employees should call the MOHW call centres for further management.
- All employees who become sick while on duty or upon arrival will be isolated and managed accordingly.
- All Employees who are well but who have a sick family member at home with COVID-19 should notify their line supervisors.
- To prevent stigma and discrimination of employees, students and visitors all health screenings will be done in a private room.
- Ongoing health education will be done via SHE office/ Clinic and Student Welfare Office.



**Wear your mask**

**COVID-19 COMPLIANCE(PACKAGES A & B AT BUAN MAIN CAMPUS)**



**DISPLAYED SIGNAGE ON WASHING OF HANDS AT PACKAGE "B" SITE**  
All site entrances for both packages have educational materials on personal hygiene and proper washing of hands displayed at their entrances.



**INSTALLED HAND WASH BASIN AT PACKAGE B - PAVED WALK WAY**  
Hand wash basins have been installed at Package "B"- (Hostels and Library). This handbasin is installed next to the paved walk way adjacent to the hostels.



**PACKAGE A - ENTRANCE TO SITE SIGNAGE ON COVID - 19**  
Signage has been improved at the site with COVID - 19 Messages on washing of hands installed at the entrance.



**ON GOING INSTALLATIONS AT SCIENCE LABS**  
Additional hand wash basins and elevated water tanks are being installed at the new science labs.



**ADDITIONAL STAFF TOILETS being INSTALLED AT PACKAGE "A"**  
Five additional toilets are currently being installed for package "A". This will help to ease congestion and aid social distancing.



**ADDITIONAL PORTA CABINS FOR OFFICE SPACE AT PACKAGE A**  
• Additional 3 porta cabins have been acquired to help to decongest the working space at package A  
• An additional handwash basin is installed in front of the offices.

**EXPECTED RESUMPTION OF CIVIL WORKS AT CONSTRUCTION SITES**

The Contractors finalized all installations and booked for inspections by council or DHMT(District Health Management Team). The inspections were carried out and they were given the go ahead to resume works.

**BUAN GRADUATES HORTICULTURE INCUBATION PROJECT****Fresh Produce**

Botswana University of Agriculture and Natural Resources (BUAN) has engaged five of its graduates in a horticulture incubation project which started in January 2020. Department of Business Development offers mentoring in a form of technical advice, marketing and selling of the produce. These graduates use basic crop production technologies which utilise less land to produce higher yields of good quality produce as well as using less water through the drip irrigation system. It is through this project that our graduates are demonstrating that a profitable or high performance farming is achievable only if proper technologies are put into practice.

Crops planted were cabbage, tomatoes, green peppers and green mealies in a total two hectares. These produce were sold to retailers such as Spar, Square Mart, Save rite, BDF and to individuals through the BUAN Farm Shop.

The University is already in discussions with relevant stakeholders to develop a value chain system that will support food production in Botswana for sustainable food security.



**MR MOSWEU GIVES AN UPDATE ON BRAHMAN HEIFERS DONATED BY HE DR MOKGWEETSI MASISI**



On the previous Newsletter the Business Development Department reported on the donation of two Brahman heifers from His Excellency the President of Botswana, Dr. E. M. Masisi. On this issue, they present an update on the what has been done since their arrival. Upon arrival the animals were kept at Estate Management Unit (EMU) kraals in Sebele.

The health inspection was carried out on the animals by the vets in our institution as well as the status of the kraals, feeding and drinking facilities. Pregnancy testing was also done and they both tested negative. A committee was formed with the mandate of how to multiply these animals. The committee chaired by Dr. R Chabo consists of Prof. P. Kgwatalala (Head of Department Animal Science), Dr. S. Ramabu (Head of Department Veterinary Sciences), Prof Waugh and Mr N.P. Mosweu.

We had the opportunity to discuss the committee’s plans with one of the its members, Mr N. P Mosweu who is also BUAN’s livestock supervisor. He said that the first thing that the committee has to consider is how they will multiply these animals. “There are many ways of multiplying the animals like use of natural service, artificial insemination, embryo transfer etc. in coming up with a method to use one must consider the economic aspect thus will it be viable to use this method as compared to other methods, said Mr Mosweu.

In this regard the method of choice was to use embryo transfer. He said that, “the two heifers will be super ovulated; inseminated and eggs collected (flushed) then can be transferred into the surrogate cows or stored”. For easy of understanding he explained some of the terms used in artificial insemination. Super ovulation; the processes to have the female animal produce more eggs than the normal count in each estrus, or simply put it allows producing a greater number of embryos than the normal cycle in female animals by use of hormones.

Embryo transfer: is a way of producing as many calves from one cow or we can simplify it by saying it’s a process by which an embryo is collected (flushed) from one female (donor) and transferred to another female (recipient/ surrogate) to complete the gestation (pregnancy). This process works by using hormone to super ovulate a cow (donor) which is then artificially inseminated. After some time the embryos are flushed into the uterus, sorted, graded before they can be implanted into the surrogate or frozen for long term storage.

Surrogate: this is the female animal that maintains the pregnancy of another female. As stated above it is used to complete the pregnancy of the donor female. It does not affect or alter the genetic makeup of the embryo it is maintaining.

**THE BOTSWANA UNIVERSITY OF AGRICULTURE AND NATURAL RESOURCES (BUAN) AND THE LOCAL ENTERPRISE AUTHORITY (LEA) MOU**



The Botswana University of Agriculture and Natural Resources (BUAN) and the Local Enterprise Authority (LEA), signed a Memorandum of Understanding as a declaration of their commitment to cooperate in the field of education and entrepreneurship.

The two organisations have been working closely together prior to the signing of this particular MOU.

By engaging in this MOU, it means that both organisations' stand will be to broaden the scope of their activities in pursuit of enhancing curricular for training in agriculture and natural resources, as well as in entrepreneurship development which will be accomplished through promoting incubators and improving training of BUAN graduates.

Dr Jasper Rees, the Vice Chancellor of BUAN said that, Botswana needs to open up for business orientated training, which will create more opportunities for young people, and this MOU will provide access for entrepreneurship opportunities especially in horticulture and leather technology. He said that there is a need to invest in extensive research because one may have a Doctorate in a particular discipline but that does not make one an expert in technology as it constantly changes.

In addition to Dr Rees' thoughts on investing in extensive research, Dr Recious Moatshe, Chief

Executive Officer of LEA said that LEA has adopted a new business model which is designed to be flexible such that it can cope with the changes that are imminent in the business sectors, hence having identified BUAN as a strategic partner.

The collaboration will focus on skills development in the agriculture and natural resources sectors; capacity building and provision of targeted interventions to develop the SMME sector; provision of business advisory, mentorship and training needed to capacitate BUAN students and graduates; research and development as well as provision of facilities to benefit both LEA and BUAN business objectives.

Following the signing of this MOU, LEA and BUAN's technical teams will implement all initiatives they have signed up for and ensure an impactful outcome.

The agreement assumes the following conditions for collaboration:

- Support and advice LEA on curriculum development and training in areas of agriculture and natural resources.
- Provision of technical support to LEA assisted enterprises, in order to close identified technical gaps.
- Provision of facilities for LEA assisted enterprises wherever feasible.

**THE MINISTER PAYS COURTESY CALL TO BUAN**



The Minister of Agricultural Development and Food Security, Mr. Edwin Dikoloti paid a courtesy call to BUAN Farm on the 16th June 2020. This was an opportunity for the Vice Chancellor, Dr. Jasper Rees, to discuss with the Minister the possibilities of expanding the use of the drip irrigation system, which is currently used by the two student incubation programmes: the Israel Incubation horticulture project and the Agripreneur project near BUAN campus main entrance along Francistown A1 road.

The drip irrigation technology is very effective and a success story for the two mentioned projects as it minimizes irrigation and loss of water as well as yielding highly production of vegetables. BUAN wishes to expand the technology by implementing it at the Notwane Farm which currently only uses the pivot irrigation system, in order to expand the area under irrigated production to 82 hectares. The aim is grow multiple crops that will grow in all seasons, and to use the farm to build small businesses belonging to the training entrepreneurs, and yield larger production of vegetables, thus contributing to food security. BUAN aspires to partner with the Ministry in order to venture in this technology across its available land.

The aim is to train entrepreneurs in the drip irrigation and business development for graduates to be able to build their own businesses outside BUAN while still maintaining the relationship with the University. The University strategy is to expand this training model in order to enrol more graduates into the programme.

The model aims to introduce the graduates into commercial farming and create a critical mass of skilled agricultural entrepreneurs to improve agricultural productivity and reduce over-reliance on food imports. Therefore, BUAN requires significant financial resources to build infrastructure, acquire equipment and for the operational cashflow of the programme.

This programme will not only achieve development of young farmers, but it will produce significant tonnage of horticultural produce that will move the country towards self-sufficiency.

The Minister was shown the farm portions where the horticultural model would be implemented, and was engaged in a discussion about how the entrepreneurship training would be undertaken.

He also had the opportunity to discuss the cattle projects at Notwane, both for dairy cattle, where the requirement to expand and develop the dairy herd and production technologies in order to address the shortage of milk production in Botswana. He also was given the outline of the plans for the two Brahman heifers donated by the President in February 2020 which will be used to develop a breeding herd, using reproductive biology technologies for in vitro fertilisation and embryo transfer technologies to increase the rate of reproduction rapidly, using surrogate mothers from the BUAN beef herd.

COURSES	DATE	DATE
Agrochemicals Management	6 - 17 July	2 - 13 November
Flower Arrangement	6 - 10 July	9 - 13 November
Livestock Health	31 August - 4 September	
Landscaping	31 August - 4 September	2 - 6 November
Sheep and Goat Production	31 August - 4 September	16 - 20 November
Indigenous Chicken	7 - 11 September	
Nursery Seedlings and Tree Production	7 - 11 September	
Vegetable Production	14 - 18 September	
Soil Fertility and Fertilizer Management	7 - 11 September	
Mushroom Production	21 - 25 September	
Soil and Rain Water management in Agriculture	21 - 25 September	
Pig Production	5 - 9 October	
Lawn Establishment and Management	5 - 9 October	
Layer Chicken Production	5 - 9 October	
Wormhole Siting Drilling, Equipment and Maintenance	12 - 16 October	
Fodder Production	12 - 16 October	
Fish Farming and Management	19 - 23 October	
Chainsaw Operation and Management	19 - 23 October	
Woolkeeping	16 - 20 November	
Tractor Maintenance	16 - 20 November	
Broiler Chicken Production	23 - 27 November	



COURSE FEES:
Agro-chemicals - P4080.00 per person without Accommodation
<b>OTHER COURSES</b>
P2030.00 per week without accommodation
P3555.00 per week with accommodation (Standard sharing)
P3855.00 per week with accommodation (Executive sharing)
P4655.00 per week with accommodation (Executive single)
P4055.00 per week with accommodation (Standard single)
*Fodder and Flower Arrangement courses have an extra standard fee of P500

Registration Forms may be collected from BUAN at CICE or may be downloaded at

[www.buan.ac.bw](http://www.buan.ac.bw)

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