



ZIMBABWE

# Farming Today

ISSUE 4

JUNE 2021

Rabbit producers  
association ZICORBA  
making waves

The new face of farming:  
Davidzo Chizhengeni

Looking at going into  
blueberries? **Factors to consider**

Tobacco sector insights



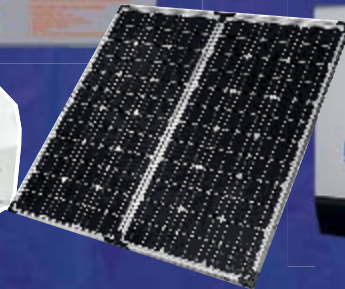
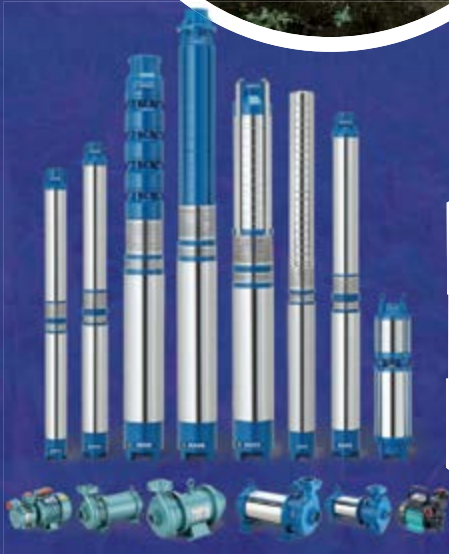
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BRANCHES

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## To Our Valued Farmers

What a year this is turning out to be. Our national maize yield is estimated to be coming in at a record high, with predictions around 2.7 million tonnes - which works out to be a staggering 200 per cent higher than the 2020/21 yield. Two poor rainy seasons had drastically lowered crop yields and finally on the back of above average rains this season, we are expecting a bumper harvest of our staple crop. This will go a long way towards

achieving food security at a household level. The pivotal role that our weather plays in crop production brings to mind the very important issue of climate smart food production and the role genetics and crop choices play in working towards that. Whilst Government are spearheading this drive, farmers too, need to play their part in working towards building a vibrant agricultural sector. Together, this can be done.

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# Control of Woody Plants as a Management Tool for Improving Pasture Productivity on Extensive Rangeland

by Ferdie Jordaan Technical manager: IVM UPL South Africa: +27 83636 7368

**When we talk about bush encroachment, we need to have a clear understanding of what the term means.**

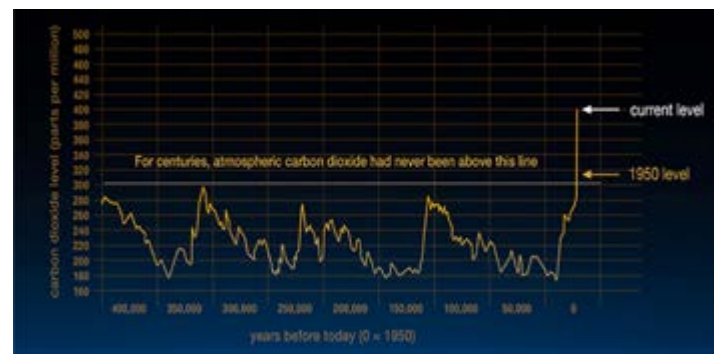
- In recent decades, across large tracts of southern Africa, ranchers and wildlife managers have been noticing an increase in woody vegetation.
- Shrubs and trees have invaded grasslands, transforming them into savannahs.
- Savannahs have become more densely wooded, sometimes impenetrably so.
- Anecdotal evidence and time series photographs indicate that this trend accelerated in the 1980s, and by the end of that decade bush encroachment was a commonly used term for what was happening in rangelands and wildlife areas across the subcontinent.

Just for clarity – a savannah is a mixed woodland ecosystem characterised by trees being sufficiently widely spaced so that the canopy does not close. The open canopy allows enough light to reach the ground to support an unbroken herbaceous layer, consisting primarily of grasses.

While useful, this definition fails to mention the main problem associated with too many trees, namely a lack of moisture to sustain a decent grassy layer. The fact is that trees use more water than grasses and offer very little in terms of usable fodder in return. It is no exaggeration to suggest that trees cause a continual drought as far as grasses are concerned. The evidence speaks for itself.

Clearly, bush encroachment is not a stock farmer's best friend and we need to understand the possible causes if we want to manage it. Bush encroachment is a multi-faceted phenomenon that is not well understood, with many theories trying to explain its root causes. These include some (or all!) of the following: rainfall frequency and intensity, where saturating, regular rains seem to encourage seedlings establishment; the exclusion of fire and browsers; other changes like erection of artificial fences and water points; fixed grazing patterns, and so on. We should not underestimate the ability of woody plants to extract moisture from soil at shallow and deeper levels – something grasses cannot do. Trees and shrubs seem to enjoy an unfair advantage in this regard. Lately, some scientists believe rising CO<sub>2</sub> levels in the atmosphere may be playing a critical part, with trees benefitting more from rampant atmospheric CO<sub>2</sub>, used in the process of photosynthesis, than grasses.

## CHANGES IN ATMOSPHERIC CO<sub>2</sub>



## THE IMPACT OF BUSH ENCROACHMENT

- By outcompeting grasses for water, nutrients, and light, trees begin to take over the landscape. That is bush encroachment!
- Bush encroachment costs Namibia's small economy as much as \$170 million per year (2013). (*The Surprising Role of CO<sub>2</sub> in Changes on the African Savanna ADAM WELZ • JUNE 13, 2013*)
- Reduced carrying capacity - less grass & poorer species composition
- Increased feeding costs
- Decreasing profitability
- More soil erosion
- Borehole water levels drop due to water consumption by trees

# EVIDENCE OF BUSH ENCROACHMENT

The images below, taken at locations all over southern Africa, provides ample evidence of woody plants winning the competition against grasses.



*Savannah turning into a forest – Ladysmith, South Africa*



*Mopani-veld, Bulawayo*



*Pasture near Otavi – Namibia*



*The shallow root system of Black thorn - Senegalia mellifera (previously Acacia mellifera) is exceptionally well suited for survival in arid regions with infrequent rainfall.*

**TABLE 1: The ability of common arid region woody and grass species to extract available moisture from soil**

Species	Height (m)	Transpiration rate: ℓ water/day	Transpiration (ℓ water) Woody: 1 000 plants/day Grasses: 100 000 plants/day	Number of days to utilise 25,4 mm
Black thorn <i>Senegalia mellifera</i>	2,5	64,8	64 800	4
Silver cluster-leaf <i>Terminalia sericea</i>	2,8	16,6	16 600	15
Raisin bush <i>Grewia flava</i>	1,2	7,7	7 680	33
Wool grass <i>Antephora pubescens</i>	0,19	0,344	34 400	7,5
<i>Eragrostis lehmanniana</i>	0,21	0,075	7 500	34

Table 1 shows clearly how excessive water consumption by woody plants, while contributing very little to grazing capacity in the case of grazers can, in effect, cause a drought.

**TABLE 2: Effect of bush encroachment on grass production & farm economy – Ellisras, 1990/91 season**

Season& rainfall	Location	Treatments: (% of woody plants re- moved)	kg DM (grass) / ha	ha / LSU	LSU / 3500ha
	Ellisras	100	1 928	5,4	648
1990/91 (461 mm)	Ellisras	50	1 086	9,6	365
	Ellisras	0	369	28,3	124

Table 2 indicates that trees have a major effect on grass, directly affecting carrying capacity, meat production and ultimately profitability. While the benefits of controlling woody vegetation, or preventing trees from dominating in savannah pastures, is apparent, it is not advisable to remove all trees. In some climatic regions, beneficial

relationships have been proven to exist between trees and grasses, but what long term effect the removal of all woody vegetation from what is supposed to be a savannah would have, is undetermined at this stage.

**TABLE 3: 18 month result on grass production of commercial aerial application of Limpopo 200 GG on the farm Matla Mamba, Thabazimbi, South Africa**

SAMPLE DATE	SAMPLING Grass harvested /m <sup>2</sup>	TREATMENT (LIMPOPO 200 GG – APPLIED NOV 2017)	UNTREATED CONTROL	YIELD (KG/HA)		RATIO: TREATED vs UNTREATED
				TREATED	UNTREATED	
4/6/2019	Average of 2 samples	185 g/m <sup>2</sup>	39 g/m <sup>2</sup>	1850	390	4,74 : 1
21/5/2019	Average of 2 samples	161 g/m <sup>2</sup>	29 g/m <sup>2</sup>	1610	290	5,55 : 1

- Applying 5kg Limpopo 200 GG in an area that was heavily encroached by a range of indigenous woody species, improved grass yield (dry matter) by at least 4,74 to 5,55 times, not taking into account that the species composition was vastly improved in the case of the treated sites.
- It has to be borne in mind that the summer of 2018/19 had been a poor one in terms of rainfall on Matla Mamba, with only 125mm received for the entire summer (far below the long-term average of about 450mm p.a.), of which about 60% turned out to be significant downpours of 10mm or more. The rest was too little to be of value as far as improvement of grass production was concerned.

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# Tobacco Sales Season Starts Amid Viability Concerns

This year's tobacco marketing season in Zimbabwe started with a bang in April. This year, trade expectations for final yields hover around 200-210 million kg (worth USD 500 million at an estimated average price of USD 2.50 per kg), however the tobacco growers lobby body Zimbabwe Tobacco Association (ZTA) estimates that the final yield may be lower, close to last season's final yield. During the 2020 season, a total of 183 million kg valued at USD 452.3 million were delivered through the contract and auction floors.

This selling season should be shorter, as the crop was ready for marketing much earlier due to the impact of the wetter growing season. Small scale deliveries are expected to peak in May and mostly end in mid-June, while commercial deliveries may continue into late July. Delivery volumes to both

contract and auction floors have been consistently higher so far this season.

"Farmers will deliver as the growing season has gone so quickly this year and as a result, there are enough tobacco volumes ready for when sales start. The crop grew faster because of wet weather and ripened quickly so farmers had to reap quickly. Furthermore, cash flows are tight, and money has been spent on back of a poor growing season last year," ZTA CEO Rodney Ambrose commented before the selling season began.

Prior to the start of sales, the Government of Zimbabwe, through the Reserve Bank of Zimbabwe (RBZ), reviewed the export retention rate for sales proceeds to a 60/40 forex/local currency split, up from last season's 50/50 split. However, growers had hoped for this to be around 70%-80%, to allow

for covering of production and retooling costs. Following this, the ZTA warned that most of local growers might find themselves in a vicious debt trap.



Growers receive only part of their earnings in US dollars with the remaining share being paid in Zimbabwean dollars at an exchange rate, hovering around ZWL85:USD1 while the market rate, at the start of the season until day 35, had sat at around ZWL125:USD1.

To add to growers' viability concerns, Statutory Instrument 127 was gazetted on May 30, 2021, and this Act further compounded worries about the future, both short and long-term of the national crop and its 146,000 producers. The implications of this Act are such that the USD costs of production will go up to compensate for an inflated interbank official rate and with the flattening curve of tobacco prices in the USD, the outlook is not good for our tobacco producers.

In an interview with Zimbabwe Farming Today, ZTA's Ambrose said that with nearly all farmers, big and small, relying on contractors for inputs, when the selling season started the majority of sales volumes would be through the contract floors, and there would not be much tobacco sold through auction as not much production is self-financed. Auction volumes currently account for seven per cent of the market.

For contracted growers, there is no initial hesitation to deliver to sell as they are paying back US-based loans - which usually continues until May. "In June, once growers start clearing debts, the issue of the retention rate will be of concern and it is hoped that the RBZ will have reviewed the retention rate."



## *Other Sector News*

Stakeholders in Zimbabwe's tobacco sector are also debating if minimum auction prices should continue to determine the pricing of contract tobacco. As the market

balance has shifted, compared to when the initial system was set, there are fears that such conditions are putting many growers at a disadvantage. Alternatively, others are cautious that removing the minimum price could result in price manipulation by contractors who account for nearly 95% of total sales volumes.

The Tobacco Industry and Marketing Board (TIMB) appointed its Technical Services Executive, Meanwell Gudu, to replace its outgoing CEO, Dr Andrew Matibiri retired from the body, after 16 years at TIMB and prior to that, many years within the industry.

There are five decentralised sales and delivery points serving areas with high volumes of tobacco growers. These are Marondera, Rusape, Karoi, Mvurwi and Bindura. This is in line with the Government's drive towards devolution but was hastened with the onset of Covid-19 and its associated containment protocols last year. Forty five per cent of the crop is now marketed outside of Harare.

## *World Supply and Demand Outlook*

After an almost equal balance of supply and demand in 2020, world supply is expected to rise on the back of slight increases in crop production from major producers such as Brazil, USA (as export restrictions to China ease), India (one province) and Zimbabwe. Demand dropped further than estimated in 2020 due to the COVID pandemic, however is expected to level out in 2021, as markets start to stabilise.

Good prices are expected to be paid globally this season, which may cause a further increase production in 2022, with weaker prices to follow and production may fall in 2023 -24. Overall, tobacco production remains in a downward trend.



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# Youth Leading the Way in Agriculture



*Davidzo's yard with moringa seedlings and azolla in foreground*

With more and more Zimbabweans starting up small-scale, small livestock businesses, and the majority being run single handedly as intensive backyard projects in a very limited space, there has equally been a rise in demand for someone with technical expertise to provide technical consultation on the finer points of nutrition and husbandry and to troubleshoot any problems encountered along the way. Enter Davidzo Chizhengeni.

Chizhengeni, a young University of Zimbabwe Animal Science graduate, finished his formal studies two years ago and started professional life as a self-employed animal husbandry and feeds consultant focusing on pigs, sheep, goats, fish and chicken. A year into his working life, the Covid-19 pandemic struck and with it, a national lockdown with severe disruptions to life as we all knew it. This did not deter Chizhengeni. An energetic, driven individual, he has taken the pandemic in his stride and has, despite a year of disruptions, managed to continue on his chosen path. Indeed if anything, Covid-19 has fuelled the fire within him, as he builds his brand KVD Livestock Consultancy, through social media and word of mouth.

A trip to the dusty, bustling streets of high density township Mufakose, past the tobacco sales floors and ZFC's Aspindale fertiliser factory, takes me to Chizhengeni's work base - his home. He lives with his parents and family and the property's yard is bursting with a nursery full of young moringa, aloe vera, leucaena and other plants. There is also an aquaponic project feeding off a pond for tilapia, a vermiculture composting unit (on the boundary fence so that neighbours can conveniently dispose of their "marara" - maize husks and other vegetable waste - over the fence), a bath-size pond to grow Azolla and a shade house habitat for his black soldier flies! This is a person with lots of irons in the fire and he himself admits he will wake up in the night with a new idea of something to try. He says he never stops researching and learning in pursuit of excellence.

The projects are all connected, feeding into one another and all to do with animal nutrition and ultimately human nutrition too. With the primary focus on developing and providing affordable, alternative animal protein, Chizhengeni is developing a number of options for people looking



to make a profitable backyard-based business. Comfortable with all forms of social media, Chizhengeni exploits the various platforms and numerous WhatsApp chat groups to network and promote his business and many a job comes from his social media posts. His client base is also built on word of mouth and a typical week's work can see him travel, from Hwedza to Mvuma. As these projects are for the most, self-funded, budgets are very tight and running costs are kept to a minimum to allow for viable profit margins. This is what drives Chizhengeni's focus. In particular, one fascinating project he is researching

and developing is the use of Azolla as a protein supplement in animal feed. Azolla, a pondweed indigenous to China and the Philippines, has the potential to change the way in which we look at high protein food supplements for small livestock. The floating weed is nitrogen fixing which means its medium, the water also becomes a highly nutritious liquid fertiliser. There is no waste. Chickens and fish love the Azolla - when there, I saw for myself the feeding frenzy when Chizhengeni flicked some Azolla onto the surface of his bream pond. In turn, water from the bream pond feeds his aquaponic lettuce providing both highly nutritious food for his family and the practical, hands-on experience to share with clients.

In Africa, Azolla is a little-known plant, and Chizhengeni came across it through online reading and obtained some from someone in Zambia. Results, and it has to be said, mistakes learned from this and the other projects provide Chizhengeni with invaluable practical experience to back up his learning that informs his day job as a consultant.

Davidzo Chizhengeni's dream is simple: to expand his project base onto a 1-2 hectare plot which will provide him with more than enough space to develop and expand his business. He represents the new face of agriculture in Zimbabwe. His youth belies an abundance of experience already accrued and he is an example to be admired and applauded.



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# Winter Wheat Expectations High

With the onset of the winter cropping season on the back of above-average summer rains, wheat hectareage predictions are being made in the region of 85,000 ha. Overall cereal production is expected to rebound strongly this year after two years of harvests impacted by low rainfall and imports are forecast to fall steeply this year in light of this.

Zimbabwe's annual wheat needs amount to close to 400,000 tonnes annually, with most in recent years being imported from South Africa and other countries. The 2020 national yield weighed in at 150,000 tonnes, below half of domestic requirements according to FAO/GIEWS Country Cereal Balance Sheet.

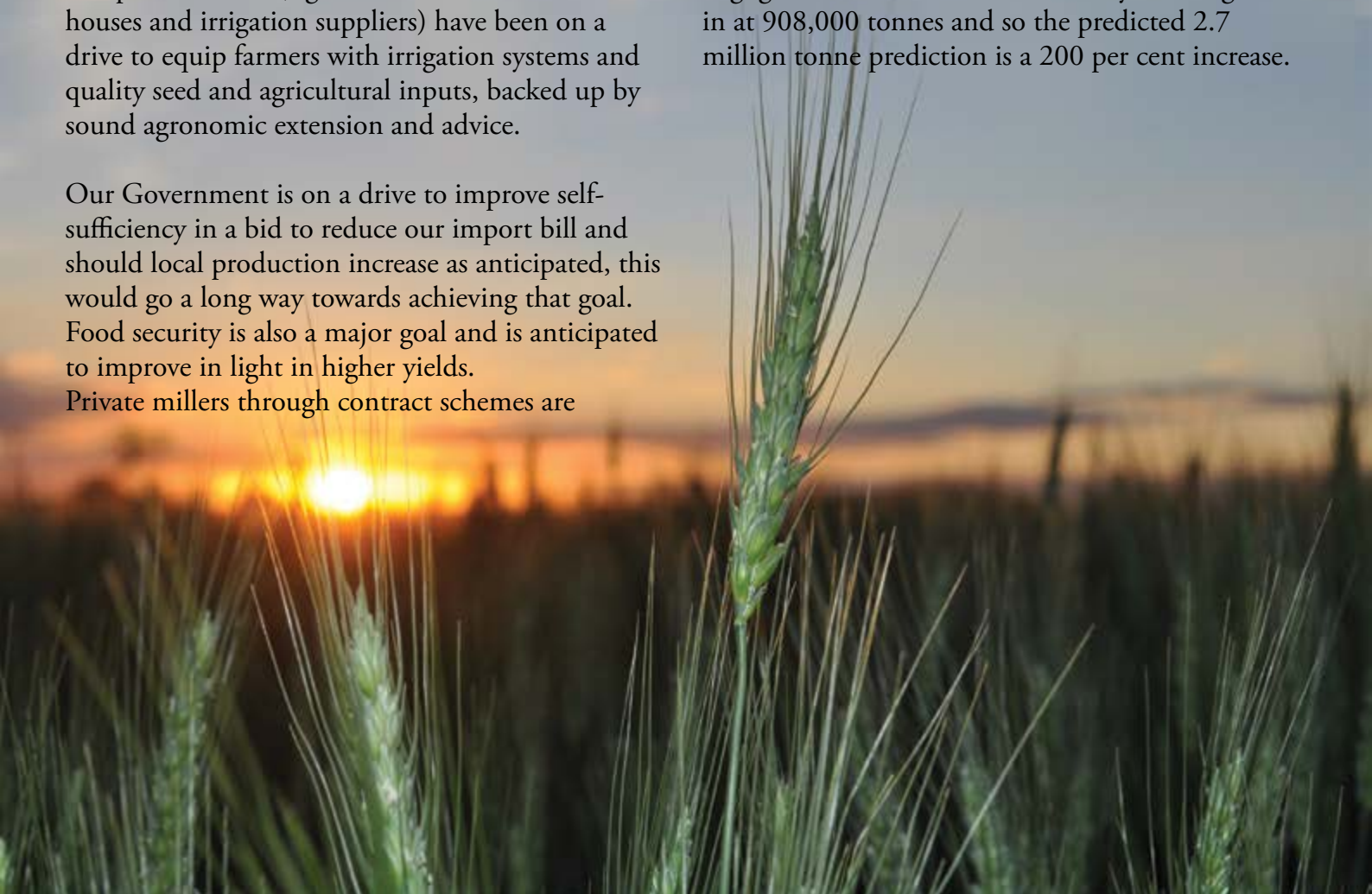
This year's hectareage and yield will ultimately be determined by irrigation inputs and Good Agricultural Practices (GAP) and both the public and private sector (Agritex, seed and chemical houses and irrigation suppliers) have been on a drive to equip farmers with irrigation systems and quality seed and agricultural inputs, backed up by sound agronomic extension and advice.

Our Government is on a drive to improve self-sufficiency in a bid to reduce our import bill and should local production increase as anticipated, this would go a long way towards achieving that goal. Food security is also a major goal and is anticipated to improve in light in higher yields. Private millers through contract schemes are

targeting 15,000 ha, and the remainder is being funded by CBZ and the Presidential Programme. Government has pegged the producer price for premium grade at ZWL52,534.61/tonne and the standard grade at ZWL43,778.84/tonne. "The premium price is 20 per cent above standard grade to reward quality," Minister of Lands, Agriculture, Fisheries, Water and Rural Resettlement, Dr Anxious Masuka recently said.

On the back of the rainy season, Zimbabwe National Water Authority (ZINWA) records show that major dams have the irrigation capacity for over 230,000 ha of irrigation.

Maize yield estimates are around 2.7 million tonnes. Zimbabwe last year accounted for 40 per cent of South Africa's maize exports but with such a high domestic yield, our import requirements should be negligible. The 2019/2020 national yield weighed in at 908,000 tonnes and so the predicted 2.7 million tonne prediction is a 200 per cent increase.



# Strengthening Rural Livestock Productivity Through Use of ICTs

By James Kabinda

Livestock production is one of the major agricultural activities in Zimbabwe. The sub sector contributes to national food supply, converts rangelands resources into products suitable for human consumption and is a source of income to both the farmers and the country. Roughly 80 percent of the livestock in Zimbabwe belongs to small-scale livestock producers. Shortage of technical services has resulted in low smallholder livestock productivity, amongst other limitations. The extension worker to farmer ratio is low, making it difficult for small holder livestock producers to access the much needed technical extension especially at critical times. Many farmers have complained about the unavailability of extension staff in their locality for consultation or advice. Livestock producers need information on livestock diseases, nutrition, treatment and control of diseases, breeding techniques and markets for their products, among many other information needs. These information needs may be grouped into: agricultural inputs; extension education; agricultural technology; agricultural credit; and marketing. All this information has to be made available, accessed and used by the livestock producers in order to increase productivity and hence improve their livelihoods. It is therefore necessary to improve farmers' access to such information at any given time. One promising area to do agricultural extension to reach large number of farmers is using Information and Communication Technologies (ICTs). Development of the livestock sector, therefore, could contribute to reducing poverty level substantially. The main objective is the promotion of a market-driven livestock sector



able to support the income levels of the poor livestock producers.

## *What are ICTs?*

The abbreviation ICTs stands for Information and Communication Technologies. ICT is an umbrella term that includes any communication device or application, encompassing; radio, television, cellular phones, computer and network hardware and software and so forth, as well as the various applications and service associated with them, such as video conferencing, TV shows and distance learning.

## *Importance of ICTs in livestock production*

ICT-based agricultural extension brings incredible opportunities and has the potential of enabling the empowerment of farming communities. With the availability of ICTs, the scheme for an increasing number of extension staff may no longer be exclusively valid. Moreover, the use of ICT to improve information flow and to connect people within the rural areas has proved that illiteracy of farming communities may no longer be an excuse to negate some form of extension system.

## *Different ICTs and their potential to boost livestock productivity*

There are quite a number of ICT innovations available for small holder livestock producers to access the needed technical information that could help them become more technically efficient in their livestock enterprises. Examples of these technologies include; telephones or mobile phones, television, radio and the internet.

These technologies can be very useful in providing various types of information to the livestock producers depending on their information needs. Over the years there has been an increase in the development of agricultural mobile applications, as mobile phone technology advances. Mobile phone applications enable farmers to access farming information via their mobile devices. The advent of smart phone technology has strengthened mobile application development, though smart phone penetration is very low in the small holder sector. In Zimbabwe, developers have come up with mobile applications such as Kurima Mari, Agrishare and Novatek Poultry app (to name a few) to help capacitate the agriculture extension system and as a whole agriculture extension. These apps are available freely on Google Play Store and some on Apple Store. Here is an overview pertaining to the aforementioned mobile applications;

- Kurima Mari is for all farmers and extension agents, bringing the information and contacts they need to improve and increase production in farming. It has specific information on crops and livestock, direct links to the experts in your area and tips on how to reach the market.
- AgriShare is an app to hire or rent out agricultural equipment between farmers and equipment manufacturers securely and with ease.
- Novatek Poultry app provides broiler and layer management guides with important information for getting educated on poultry production.

As most small holder farmers may not be in possession of smartphones, interventions like the (Short Message Services – SMS) based extension have been formulated to cater for such groups. Information delivery is through message alerts and regular push notifications sent to their mobile phones. SMS extension services do not require that the recipients have access to the internet. Examples of SMS based extension providers include; EcoFarmer product by Econet, eSoko and Infobip.

### *Use of ICTs in agriculture extension*

Agricultural extension, which depends to a large

extent on information exchange between and among farmers, and a broad range of other actors on the other hand, has been acknowledged as one area in which ICTs can have a major impact. ICTs have become progressively incorporated into the dissemination of agricultural information throughout Zimbabwe. Traditional forms of ICTs such as radio and television have become more widespread in advisory service provision by producing programs that feature agricultural information for example Murimi waNhasi TV show that airs on ZBC. The agriculture ministry in Zimbabwe has attempted to incorporate ICTs into the delivery of information and have established district information centres providing agricultural information. Many NGOs and research organizations have also attempted to facilitate technology transfer in the agricultural sector.

### *Challenges of ICTs in agriculture extension*

Nevertheless, though use of ICT in extension delivers numerous key benefits in relation to traditional media, ICT projects also come with a range of challenges including; technological dependence; lack of available telecommunication infrastructure in many rural and remote areas; capital cost of technologies, high cost of on-going access and support; essential need for capacity building; often difficulty in integrating with existing media, and local communication methods and traditions and often lack of involvement of all stakeholders in planning, especially women and youth.

### *Conclusion*

The diffusion of ICTs in the agricultural sector provides the necessary digital opportunities for productivity increase, income generation, decrease in regional disparity, and improving market linkages. However, ICTs alone cannot uplift the livelihoods of rural communities, there is need for rightful integration of differing value chain factors which include policies, technology and market opportunities.

#### *About the writer:*

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# Vet Services Issues Poultry Disease Alert



The Department of Veterinary Services has recently issued a high alert warning to Zimbabwean poultry producers following reported cases of the Highly Pathogenic Avian Influenza (HPAI) in neighbouring South Africa.

**“We encourage all our stakeholders to follow set protocols on importation of poultry products. Strict biosecurity measures should be adhered to across all poultry farms,”**

the statement reads. There is pandemic potential for this virus in southern African countries according to the FAO and official control measures can disrupt trade in poultry products from affected areas. The virus is highly contagious and deadly for poultry.

A press statement from the Government reads: “The Minister of Lands, Agriculture, Fisheries, Water and Rural Resettlement wishes to inform the public and stakeholders that the Republic of South Africa confirmed an outbreak of Highly Pathogenic Avian Influenza on a commercial chicken-layer farm in Gauteng Province, South Africa.

Avian Influenza is a highly infectious and contagious viral disease affecting several species of food producing birds (chickens, turkeys, quails, guinea fowl, etc.), pet birds and wild birds. It is a transboundary disease that can be spread via migratory wild birds and mechanical vectors, such as contaminated vehicles, cages and clothing, and through international trade in poultry and poultry products. The disease can be transmitted to humans through exposure to infected birds or

handling of infected carcasses. Avian flu has the potential to develop into a global pandemic that can be as devastating as the Covid-19 pandemic. The Minister further advises the public and stakeholders that Zimbabwe is currently not importing any poultry and poultry products from the Republic of South Africa. The highest possible risk of introduction of the disease into Zimbabwe will be from migratory birds and illegal trade of live poultry and poultry products. For the avoidance of doubt and confusion, importation of poultry and poultry products from South Africa remains suspended.

The Department of Veterinary Services continues to monitor the situation and will advise of any changes on this position. The public and stakeholders are requested to be vigilant and to report any deaths of domestic poultry and wild birds to their nearest Veterinary Offices.”

An outbreak of a highly contagious strain of avian flu (H5N8) last occurred in Zimbabwe in June 2017 and was recorded at Irvines, one of Zimbabwe’s biggest egg and chicken producers. The company had to cull 140,000 birds at their farm, in line with requirements set by veterinary authorities in Zimbabwe and this amounted to an entire flock on its farm. The outbreak is thought to have killed about 7,000 birds before the corrective measures were put in place. Luckily it was contained as it had the potential to decimate our industry. Although the company managed to contain the outbreak, Zimbabwe’s neighbouring countries were swift to act, instituting bans to prevent contagion spreading across the region. The outbreak reportedly originated from migratory waterfowl. (Source: The Poultry Site Digital).

“Migratory birds, poultry flocks or poultry products coming into Africa from affected regions (mainly currently in Western Europe) could be carrying the virus (and) this poses a threat to poultry flock health, farmer livelihoods, and food security on the continent,” a report from disease control and pre-emption body Africa CDC says.

Prevention methods include hygiene, quarantine, all-in/all-out production and to minimise contact with wild birds.



# Market Considerations for our Blueberry Farmers

Blueberries have become popular as a healthy and ready-to snack fruit. With trends indicating further growth in consumption of the super fruit, the growing demand is being met by a growing increase in supply, with increased hectareage being planted in countries such as South Africa, Mexico, Peru, Morocco, Spain and Zimbabwe, to name but a few. However, it is important to monitor supply and demand carefully. There may still be a margin for further expansion in markets, but as a producer it is crucial not to overestimate the market and to secure steady sales and a ready market.

Zimbabwean farmers have over the past two years, been planting blueberries under green housing and in open fields and plantings have exploded with an estimated 350 ha currently under blueberries, according to Twine and Cordage's Mike Mallett. That adds up to a significant investment into the commodity and production is geared towards supplying lucrative overseas markets, primarily the EU and Europe. Export opportunities into Dubai are being investigated too. As blueberry production requires scale and professional cultivation to maximise returns, it is important to invest in cultivation, varieties and packing to cope with global competition from other producing countries.

In 2017, according to figures from Eurostat, 66,000 tonnes were imported from all over the world into Europe and at the time at an average price of just above 6.45 Euros/kg. In 2019, imports topped 113,000 tonnes at an average of just below 5.90 Euros/kg. Based on current growth, it is estimated by Canadian blueberry breeder Fall's Creek that it is "safe to assume Europe can absorb an additional supply of 80,000 up to 150,000 tonnes from abroad five years from now, which is double the current demand. Global production volumes and retail promotions will determine how much blueberries will finally be sold in the market." The United Kingdom, although behind the United States and

Canada, currently leads the consumption in Europe with more than double the European average. (Source: *International Blueberry Organization*.)

Overproduction and market speculation are concerns for farmers and investors. A capital intensive project to start up, with cost considerations including buying the licenced plant stock, land clearing, greenhouse tunnels, pots and the growing medium, drip irrigation, plant nutrition, compliant plant health and protection chemicals and finally post-harvest considerations including a packhouse with refrigeration, many farmers here have managed to secure investment partners to finance their farming operations.

As blueberry cultivars are researched and developed over time by plant breeders, they are the intellectual property of those plant breeders and as such, the plants cannot be grown or sold without the permission of the breeders. Buying root stock cultivars from a particular company also means producers have to pay royalties and marketing fees to the parent companies. Infringements may result in destruction of crops if agreements are violated.

As blueberries are a health food, the impact of Covid-19 pandemic on their demand has been minimal, and the main obstacles have been logistical, mainly being lockdowns resulting in delivery and supply chain delays. As a blueberry exporter, if Zimbabwe is able to manage its production, packaging and logistics well, supply to the European market should be able to smoothly continue.

There are also regulations covering phytosanitary and quality considerations and these stringent conditions need to be met by producers in order to maintain high quality standards. Fresh blueberries must comply with general requirements for fresh fruit and vegetables. Pesticide residues are one of

the crucial issues for suppliers particularly in the case of blueberries as they are directly consumed. To avoid health and environmental risks, the European Union has set maximum residue levels (MRLs) for pesticides and other contaminants such as heavy metals, in and on food products. Buyers in the United Kingdom and several EU member states such as Germany, the Netherlands and Austria use even lower maximum residue levels than those established by European legislation. This market information is shared by the Centre for the Promotion of Imports (CBI).

The European Food Safety Authority recommends good agricultural, hygiene and manufacturing practices to reduce contamination in berries. Clean water and equipment is needed in the cultivation and processing of blueberries. Food safety authorities can withdraw imported berries from the market or stop them from entering the EU if salmonella, norovirus, E. coli or other bacteria are present. Blueberries must go through plant health checks before entering or moving within the EU and they require a phytosanitary certificate guaranteeing they are properly inspected, free from quarantine pests, within the requirements for regulated non-quarantine pests and practically free from other pests and in line with the plant health requirements of the EU.

Other regulations are that Europe almost exclusively requires Class 1 blueberries as a minimum.

The newly formed Berry Growers Association, part of the also newly formed Horticultural Development Council, was set up as a lobby body, with a pivotal role to represent growers within Zimbabwe's export horticultural sector. As more and more farmers here put in blueberries, the association has a vital role to play in maintaining a reputation for a high standard of production on the international market. Although membership is voluntary, becoming a member has its advantages and expert advice and networking with fellow producer and supplier members is a major consideration in what is a relatively new and fast growing high value agricultural sector. The association also serves to bridge the private-public sector gap and government indeed encouraged the formation of the association. Berry grower Daniel Fowler heads the association, with approximately 20 growers and trade members support.



There is already an export market in existence and it is a fast growing industry. Prices can depend on gaps in supply, with our Southern Hemisphere seasons being beneficial to fill in northern hemisphere growing season.

### *Cultivation Considerations*

Bees are critically important for good fruiting and plants like lavender, basil etc can be grown in the same area to attract them. It is suggested that growers start with what suits their budget.

Insurance for the crop is a sensible option especially in hail and frost prone areas. There is no set rule on whether to cover the growing area with hailnet/tunnels but you must remember that as bees play a massive role in pollination, they need ideal conditions in which to work which means raising the netting or tunnels to at least 4.2m.

Water quality is a most important agronomic consideration and farm water needs analysis before use. Irrigation is necessary and a farmer should not proceed without consulting an irrigation consultant and preferably one who has done berries before. The computer-controlled fertigation unit is the most important to ensure optimum nutrient delivery. The plants need up to six litres per plant per day during peak periods with water delivered at least eight times a day. Pipelines need to be lifted off the ground as you are picking every three days and up to 15 pickings per plant so the dripline is vulnerable if exposed.

A specially formulated growing medium (substrate) for potted bushes offers ideal growing conditions and can increase yields over a shorter period of time. A blueberry bush will fruit after seven months of being planted and will last for up to 10 years depending on the production method. A soil planted bush may last up to 20 years or more.



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**Kutsaga Research – Maximizing Economic Value**

# Innovation in Horticulture, Agriculture and Livestock.

## Corpcord Investments - About us

We design, manufacture and automate a range of products and machines for various industries. Mainly focused on agricultural uses, we would like to make an impact on how farm processing views food security in communities and at facilities dedicated to communities, as now more the ever the need for self sufficiency has never been more clear.

Consultation and communication is key to building our customer relationships. Meeting with the relevant people and noting exactly what the customer wants to achieve is where we start the process and where we can put an offer forward relating to technologies available to achieve these goals, and how we can integrate into the already existing infrastructure and processes the customer has in place.

### *Processing for Industry*

Turnkey solutions are often a vital part of site and project planning, with the right advice we can help you with a solution tailored to your application and budget.

We can provide dryers to the horticultural industry for products such as paprika, tea and herbs, as well as dryers to the agricultural industry for maize, wheat, soya, sorghum and other oil seed products.

We assist in product handling, relating to product coming off the farm for processing - for example agricultural trailers and chaser bins, to the product moving around the processing plant in the form of bucket elevators, augers and

conveyors where required.

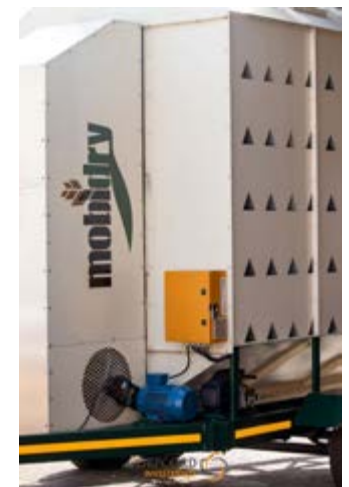
Process sorting tables and cleaning stations are important to ensuring your product is premium from start to finish, no operation is the same and we can help you ascertain the right solution. Automated weighing and dispatching of products helps to keep a keen eye on the losses and can help to regulate the process.

Livestock handling, feeding and watering. Spray race, squeezes and crushes, neck clamps, kraal fences manual and automated feeding and watering troughs. These are the solutions can offer for cattle, goats, pigs and other large livestock. We can assist smaller livestock with housing, automated watering, feed weighing systems, feed monitoring and more.

Turn your manure into reusable resource, mixing and cleaning trommels available. We also manufacture root vegetable cleaning trommels, and more.

We manufacture each item per customer order and specification, everything is made locally in Msasa. In our experience no customer is the same and neither are your requirement is as simple as they may be, we will ensure you are getting the product(s) that you need.

*Please contact us for more information at  
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# Landmark Artificial Insemination Deal for Zimbabwe

Recently formed rabbit producers association ZICORBA (Zimbabwe Commercial Rabbit Breeders Association) under the guidance of president Regis Nyamakanga, is on a concerted drive to commercialise the production of what has previously been a somewhat neglected and informally produced protein source, namely rabbit meat. Under the guidance of ZICORBA, rabbit breeders have an opportunity to capitalise on providing a quality product for both local and export markets. A clean, white meat, this



The Zimbabwe Commercial Rabbit Breeders Association (ZICORBA) has joined hands with top South African veterinary technologists to offer artificial insemination (AI) on rabbits, in a landmark development which will thrust Zimbabwe amongst the very few countries in the world using artificial insemination on rabbits.

is a healthy option for consumers but until now, production has been on an informal basis. The association is setting production and quality standards as well as educating and empowering producers. One of the exciting developments geared towards this is an export-approved rabbit abattoir with a capacity to handle one tonnes of rabbit meat per day, currently under construction in Harare, and due to be completed shortly.

In a chat with *Zimbabwe Farming Today*, Nyamakanga outlined the latest in a series of bold moves to formalise the breeding programme.

France and South Africa are among the few countries in the world that practice artificial insemination on rabbits.

ZICORBA president Regis Nyamakanga confirmed in an interview with *Zimbabwe Farming Today* his organisation was planning the first ever artificial insemination for rabbits in Zimbabwe in October this year, making it the first rabbit breeding programme using AI in Africa, outside South Africa.

“We have been in discussions with a top South African veterinary andrologists and artificial insemination technicians to deliver the first artificial



insemination on rabbits in Zimbabwe as we move to revolutionize rabbit breeding in the country,” Nyamakanga said.

“As part of this programme, we will soon take delivery of the state-of-the-art artificial insemination apparatus once we

have concluded the funding arrangements for them,” the ZICORBA chief said.

Nyamakanga said the idea of introducing artificial insemination was to boost production at reduced cost.

**“We are looking at artificial insemination as an option to reduce the buck numbers, and**

**consequently production cost. With artificial insemination, we will be selecting the best productive male rabbits (bucks) for semen donors,”** he said.

The aim was to serve between 20 and 40 does (female rabbits) with one collection of semen, the plan being to inseminate up to 80 does within an hour after semen collection. The conception rate is expected to be between 70 percent and 80 percent.

“We will be working with South African Veterinary Technologist, Henk van der Laarse CEO of Vriesit Andrology Laboratories, SA, to deliver AI on rabbits in Zimbabwe starting October this year. This will also include training of ZICORBA members on rabbit breeding using AI.

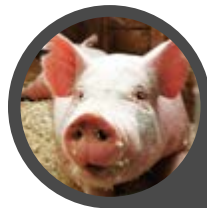
“The training will cover breeding methods, semen collection, diluting semen and insemination of does,” Nyamakanga said.



## HORTICULTURE



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Bringing plant potential to life

# Post-Harvest Grain Pest Management with ACTELIC GOLD DUST®



Why go to all the trouble and expense of Good Agronomic Practices (GAPs) to ensure maximum yield at harvesting and then neglect post-harvest technology adoption?

The new frontier in GAPs is the adoption of relevant modern effective solutions for post-harvest yield protection.

Studies report that 25-35% of grain yield loss for small scale farmers happens due to poor Post-Harvest Management Practices. The good rains experienced in this season coupled with the Government programmes to achieve Food Security, Pfumvudza and Agro-Yield, the nation is poised for a bumper harvest of maize, sorghum, groundnuts, beans and cowpeas crops. Because there will be plenty, some farmers may not value the need to properly store and protect the harvests. However, it is essential that the harvest be dried, shelled and stored for up to the 2022 harvest. Here are some tips to think about for the protection of harvested grains.

## Insect control and management includes:

- Drying the cobs,
- Shelling as soon as possible
- Cleaning the storage area before filling
- Protecting the grain before the arrival of insects by mixing grains and storage chemicals well
- Storing the treated grains in clean bags.

Some farmers do so by fumigating but the vapour from fumigating tablets is very harmful and needs professionals to apply.

Syngenta's Actellic Gold Dust has no such hazard as one does not necessarily require the total sealing of structures or bags in which it has been applied.

When the grain is transported using conveyor belts, and stored in bins or silos, Actellic Gold Dust can actually be applied directly on the moving grains

**Syngenta's Actellic Gold Dusting powder is the safest and most effective recommendation for controlling storage pest and it has the advantages of:**

1. Pro-Longed protection giving you peace of mind for at least 12 months without re-treating due to the superior formulation technology in Actellic Gold dusting powder.
2. Very Short Pre-Consumption Period of just 7 days post treatment before you can consume your grains.
3. Safety to the user and the consumer because it is a green triangle chemical.
4. Effective against the Larger Grain Borer as well as other storage pests.
5. Curative and preventive action that controls existing infestations and gives protection against re-infestation for at least 12 months.

Technical name	Common name
<i>Prostephanus truncatus</i>	Large grain borer
<i>Oryzaephilus surinamensis</i>	Saw toothed grain beetle
<i>Sitophilus granarius</i>	Grain weevil
<i>Tribolium castaneum</i>	Red flour beetle
<i>Rhyzopertha dominica</i>	Lesser grain borer
<i>Sitophilus oryzae</i>	Rice weevil
<i>Sitophilus zeamais</i>	Maize weevil
<i>Ephestia cautella</i>	Tropical warehouse moth
<i>Lasioderma serricornis</i>	Tobacco beetle
<i>Cryptolestes ferrugineus</i>	Rust red grain beetle
<i>Plodia interpunctella</i>	Indian meal moth
<i>Trogoderma granarium</i>	Khapra beetle



ACTELIC Gold Dust is effective against OP-resistant strains (e.g. those resistant to malathion) 1



## ACTELIC GOLD DUST, A 15665 B spectrum

Stored product	Typical pests	
	Technical name	Common name
MAIZE, RICE, SORGHUM, WHEAT, PEANUTS, PULSES	<i>Ephestia cautella</i>	Tropical warehouse moth
	<i>Lasioderma serricornis</i>	Tobacco beetle
	<i>Oryzaephilus surinamensis</i>	Saw toothed grain beetle
	<i>Cryptolestes ferrugineus</i>	Rust red grain beetle
	<i>Plodia interpunctella</i>	Indian meal moth
	<i>Sitophilus granarius</i>	Grain weevil
	<i>Tribolium castaneum</i>	Red flour beetle
	<i>Trogoderma granarium</i>	Khaphra beetle
	<i>Rhyzopertha dominica</i>	Lesser grain borer
	<i>Prostephanus truncatus</i>	Larger grain borer



# ACTELLIC GOLD DUST

## Use recommendation

Methods of treatment and use rates on farm:  
**5 steps** to clean and safe maize storage

1



Shell maize as soon as it is dry.

2



Pour a bag (100kg) of clean maize onto clean floor.

3



Sprinkle 50g of Actellic Gold Dust onto maize.

4



Mix Actellic Gold Dust with maize by shifting the pile from one spot to another. Repeat this 3 or 4 times.

5



Store the treated maize in a clean bag or in another container and close it.

## SIMPLE, SAFE & USER FRIENDLY HANDLING ON FARM

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packaging



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