



ZIMBABWE PLANT BREEDERS ASSOCIATION



TOP NEWS OF THE MONTH

ZIMBABWE CAPACITY BUILDING TRAINING WORKSHOP ON INTERNATIONAL OECD SEED CERTIFICATION



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The Department of Crops Research under ARISS held field days showcasing wheat technologies, GAPs, and the performance of the heat and drought-tolerant variety (Save) at Innovation Platform sites in Masvingo, Mutasa, and Nyanga.



TAAT (TECHNOLOGIES FOR AFRICAN AGRICULTURAL TRANSFORMATION) WHEAT FIELD DAYS

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The Tobacco Research Board (TRB) t/a Kutsaga Research Station's - Genetics Biotechnology and Bio-innovations Division has made a significant breakthrough in understanding drought adaptation mechanisms in industrial hemp.



UNVEILING GROUND-BREAKING RESEARCH ON HEMP DROUGHT ADAPTATION

1. ZIMBABWE CAPACITY BUILDING TRAINING WORKSHOP ON INTERNATIONAL OECD SEED CERTIFICATION



The training workshop was officially opened by the Permanent Secretary, Ministry of lands, Agriculture, Fisheries, Water and Rural development, Prof. Dr. Obert Jiri who underlined the importance of seed security as the success factor in Agriculture contributing to food security, rural transformation and ultimately economic growth particularly in Zimbabwe, and by extension in Africa. He noted that farmers need to trust the products (seeds) reaching them, and the OECD seed standards are a sure tool to achieve this. The Permanent Secretary expressed commitment of the government Zimbabwe to ensuring an enabling regulatory environment for innovation and seed trade.

He was accompanied by the chief director of the Department of Agricultural Research Innovation and Specialist Services (ARISS), Dr. Dumisani Kutwayo. The private sector was represented by the chairman of the Zimbabwe Seed Association (ZSA) Dr. John Makoni while Ms. Mazvita Shumba represented Bayer Crop Science. Also present was Ms. Catherine Lang'at of the African Seed Trade Association (AFSTA)- the continental body which brings together the seed industry.

During his presentation, Mr. Edmore Mtetwa, head of the Seed Services Institute, noted that Zimbabwe currently has 113 active seed inspectors—25 from the government and 88 from the private sector. Thirty inspectors will participate in the two-week workshop, which aims to:

- Understand international OECD Seed Scheme standards
- Build technical capacity in both the public and private seed sectors
- Promote collaboration and networking

The training contributes to the African Union-led African Seed and Biotechnology Program (ASBP) which is a strategic framework for the development of the seed sector in Africa especially the component on seed quality assurance and certification, seed policy and regulations as well as research, variety development and seed production. AFSTA leads the private sector cluster of the ASBP.

The lead trainers, Gerry Hall (UK), Eddie Goldschagg (South Africa) will be supported by Nathan Phiri (Zambia) and Simon Maina (Kenya). AFSTA wishes them the best and looks forward to a successful workshop! Such private-public partnerships will continue in the continent in the coming years.



For more details contact Catherine Lang'at catherine@afsta.org, +254 779 655129

2. TAAT (TECHNOLOGIES FOR AFRICAN AGRICULTURAL TRANSFORMATION) WHEAT FIELD DAYS

The Department of Crops Research within the Directorate of Agricultural Research, Innovation, and Specialist Services (ARISS) recently held field days showcasing advanced wheat technologies, Good Agronomic Practices (GAPs), and the performance of the heat and drought-tolerant wheat variety, Save, at Innovation Platform sites in Rupike (Masvingo), Jombe (Mutasa), and Nyamubarawanda (Nyanga) irrigation schemes.

Dr. Dumisani Kutuywayo, Chief Director of ARISS, presided over the event and emphasized the importance of revitalizing summer wheat production by utilizing heat and drought-tolerant varieties, along with other locally available wheat varieties. He highlighted the Ministry's focus on achieving wheat-based food security, with a goal of cultivating 120,000 hectares in the ongoing winter wheat season. Dr. Kutuywayo also stressed the importance of involving smallholder farmers, who make up the majority of Zimbabwe's agricultural producers, in wheat production efforts.

The promotion of heat and drought-tolerant summer wheat varieties aligns with the Ministry's Agriculture and Food Systems Transformation Strategy, which aims to ensure food and nutrition security while contributing to national development in the face of population growth and climate change, as outlined in the National Development Strategy 1 (NDS 1).

FOOD SECURITY: EVERYWHERE, EVERYDAY.



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3. ZPBA HONORARY MEMBER DR. JOE MUSHONGA GETS ANOTHER RECOGNITION FOR HIS WORK



‘President Mnangagwa recently honoured Dr. Joseph Nyika Mushonga, (81), a renowned plant breeder with the prestigious commendation medal for for his lifetime contribution to the development and release of traditional grain crops in the country.’
Read more [The Herald - Breaking news.](#)

4. UNVEILING GROUND-BREAKING RESEARCH ON HEMP DROUGHT ADAPTATION



The Tobacco Research Board (TRB) t/a Kutsaga Research Station has made a significant breakthrough in understanding drought adaptation mechanisms in industrial hemp (*Cannabis sativa* and *Cannabis indica*), a versatile crop increasingly recognized for its industrial and medicinal applications. The newly published research, titled "*Genotype-specific Morphophysiological Adaptations and Proline Accumulation Uncover Drought Adaptation Complexity in Hemp*," led by a team of scientists in the Genetics, Biotechnology, and Bio-innovations (GBB) Division at Kutsaga, highlights the unique drought resilience mechanisms of various hemp genotypes. These findings could revolutionize hemp breeding and cultivation, particularly in drought-prone agroecological zones, such as Natural Regions III-V of Zimbabwe and other semi-arid tropical areas of Southern Africa.

The study, published in *Frontiers in Plant Physiology*, examines three different hemp genotypes—*Cannabis indica* (MP) from Switzerland, *Cannabis sativa* (AQ) from South Africa, and *Cannabis sativa* (ZB) from Zimbabwe. These genotypes were subjected to varying water conditions, ranging from well-watered to moderate and severe drought scenarios. The research uncovered genotype-specific adaptations, revealing that each strain employs distinct strategies to cope with water stress.

Key findings include:

- **MP (*Cannabis indica*)** demonstrated a robust ability to maintain high photosynthetic performance and efficient water use under drought stress, making it exceptionally resilient in managing water deficits.
- **ZB (*Cannabis sativa*)**, the Zimbabwean strain, exhibited superior drought recovery capabilities by maintaining proline levels, an essential amino acid involved in osmotic regulation, which highlights its efficiency in resource allocation under stress.
- **AQ (*Cannabis sativa*)** from South Africa displayed conservative water-use strategies, making it ideal for cultivation in water-limited environments.

This ground-breaking research, funded by the TRB, was done in collaboration with various institutions and also provided a platform for training of postgraduate students. It emphasizes the importance of developing hemp varieties tailored to specific environmental conditions, particularly in regions susceptible to drought. The insights provided will inform future hemp breeding programs aimed at enhancing crop resilience, sustainability, and productivity.

The research fills a critical gap in understanding how different hemp genotypes respond to water-limited environments. These findings contribute significantly to global efforts in promoting drought-resistant crops, essential for ensuring food security and sustainable agricultural practices in the face of climate change.

Additionally, hemp is presented as a potential game-changer for industrial applications in Africa and beyond, given its diverse uses in textiles, construction, and medicinal products. As global demand for hemp continues to grow, this research positions Zimbabwe as a leader in developing resilient hemp varieties suited for arid and semi-arid regions.

For more information, contact: Dr. Kumbirai Ivyne Mateva *Email:* kmateva@kutsaga.co.zw

For full access to this publication, visit *Frontiers in Plant Physiology*: [Frontiers | Genotype-specific morphophysiological adaptations and proline accumulation uncover drought adaptation complexity in hemp \(*Cannabis sativa* and *Cannabis indica*\) \(frontiersin.org\)](https://www.frontiersin.org/journal/10.3389/fpls.2024.12345).

5. LOWVELD TRIP AND TOUR: A UNIQUE AGRITOURISM EXPERIENCE



LOWVELD TRIP AND TOUR

20-21 September 2024

NOT TO BE MISSED !!!

- Departure Friday (6-7am)
- Touring ZSAES & CIMMYT fields
- ZSAES & CIMMYT presentations

Zimbabwe Plant Breeders Association
Innovative - Creative - Classic

CIMMYT
International Maize and Wheat Improvement Center

ZSA
EXPERIMENT STATION

All preparations are complete for the upcoming Lowveld Trip and Tour on September 20-21, 2024, with the Zimbabwe Sugar Association Experiment Station (ZSAES) and CIMMYT ready to welcome participants. This tour promises to be an exceptional opportunity for agricultural professionals, researchers, and enthusiasts to gain firsthand exposure to innovative agricultural practices and cutting-edge research.

Tour Highlights:

- **Sugarcane Breeding and Seed Multiplication:** Participants will have the rare opportunity to explore the breeding techniques and seed multiplication processes that drive the sugarcane industry, including a tour of the processing factory.
- **CIMMYT Screening Facilities:** Witness the state-of-the-art screening facilities at CIMMYT, aimed at addressing climate change and resource scarcity.
- **Networking Opportunities:** This tour provides an ideal platform to network with like-minded professionals from across the region, fostering collaboration and knowledge exchange in the agricultural sector.
- **Event Details:- Dates:** September 20-21, 2024; **Departure:** Friday (6-7 AM)

Be part of this not-to-be-missed agri-tourism event that combines education, innovation, and practical experience in one of Zimbabwe's key agricultural regions.



WHO IS ZPBA

ZPBA IS A MEMBERSHIP-BASED, NOT-FOR-PROFIT, NON-POLITICAL, PROFESSIONAL ASSOCIATION OF ZIMBABWEANS BASED LOCALLY OR ABROAD ACTIVE OR INTERESTED IN PLANT BREEDING AND/OR PLANT BREEDING-RELATED FIELDS (E.G. SEED AGRONOMIST, SEED INSPECTORS, SEED TECHNOLOGISTS, GENETICISTS, GERMPLASM CONSERVATION SPECIALISTS, BIOTECHNOLOGISTS, MOLECULAR BIOLOGISTS, ETC.) LAUNCHED ON THE 26TH OF JANUARY, 2016 AT HOLIDAY INN, HARARE WITH FINANCIAL ASSISTANCE FROM FAO.

ZPBA IS LEGALLY REGISTERED AS A TRUST IN ZIMBABWE: REGISTRATION NUMBER 1791/2018. THE ZPBA BOARD OF TRUSTEES CONSISTS OF THE ELECTED EXECUTIVE COMMITTEE OF THE ZPBA WHO ARE BOUND BY THE TRUST DEED AND THE ZPBA CONSTITUTION.

MEMBERSHIP BENEFITS INCLUDE

PROFESSIONAL AND PERSONAL DEVELOPMENT; SHARED COSTS ON HUMAN RESOURCE DEVELOPMENT; NETWORKING; TIMELY COMMUNICATION (ESPECIALLY FOR EVENTS, INTERNSHIPS, JOB VACANCIES, SCHOLARSHIPS); VOTING RIGHTS; DISCOUNTED RATES FOR EVENTS; SENSE OF PRIDE IN THE PROFESSION AND INDUSTRY

WANT TO BE A SUBSCRIBED MEMBER?

WHAT ARE YOU WAITING FOR, VISIT [APPLY FOR MEMBERSHIP - ZIMBABWE PLANT BREEDERS ASSOCIATION \(ZPBA.ORG.ZW\)](http://ZPBA.ORG.ZW). PAY YOUR SUBS AND RECEIVE YOUR UNIQUE MEMBERSHIP ID.

THANK YOU SUBSCRIBED MEMBER

THANK YOU TO MEMBERS WHO CONTINUE TO PAY THEIR SUBSCRIPTIONS AS WELL AS THOSE WHO SUPPORT FUNDRAISING INITIATIVES. YOUR CONTRIBUTIONS MAKE IT POSSIBLE FOR YOUR ASSOCIATION TO KEEP GOING.

CONTACT US:

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YOUTUBE:

[HTTPS://WWW.YOUTUBE.COM/CHANNEL/UC6YF7YVUJHJNCMUJUJT5KGW](https://www.youtube.com/channel/UC6YF7YVUJHJNCMUJUJT5KGW)

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