



FARMER'S DAY: INNOVATION THROUGH TECHNOLOGY

PRESS STATEMENT

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Technological innovations have greatly shaped agriculture over the years. From the introduction of climate-resilient and yield-enhancing seed varieties to Global Positioning System (GPS) driven farming, technology has allowed us to develop new ways to make agriculture more efficient and productive. This year, Zambia celebrates Farmer's day under the theme **"Innovation through Technology"**. This theme reminds us of the critical role that science and research continues to play in the development of technologies critical for enhancing agricultural efficiency and productivity.

Agriculture remains one of the best options to transform the Zambian economy and attain economic growth, especially as it is a source of livelihood for over 60% of our population. However, there remains a sense in which the sector has not been fully exploited. Several challenges remain including; **low production and productivity; mono-cropping (maize); inadequate delivery of extension services; high dependence on rain fed agriculture; limited access to markets; underdeveloped value chains due to a lack of fully developed agro-industries; inadequate access to agricultural finance and credit and the experience of natural disasters such as droughts and floods as a result of climate change.**

Forms of innovative technology that can and are being used to address some of the challenges above include but are not limited to:

The use of sensor technology is increasingly being applied by farmers to understand their crops at a micro level, reduce environmental impacts, and conserve resources. Sensors can monitor soil temperature and offer critical knowledge of soil health which helps farmers use irrigation waters more efficiently, minimise on wastage and lower costs.

The use of mobile technology has given farmers access to mobile apps that can, amongst others, help them collect information about their fields and obtain weather updates. Additionally, mobile technology has provided farmers with easier access to extension services and has also become an important tool to enhance farmers' access to better paying agricultural markets.

- The use of drones to combat pests. This technology uses intelligent automatic spraying of fields instead of labor-intensive manual spraying.
- The use of GPS technology. Although not widely used in Zambia, tractors equipped with GPS technology and automatic steering systems are being used to improve the planting of seeds on farms, thereby reducing wastes and costs. Additionally, GPS guided drones are being used to perform tasks such as crop spraying and livestock monitoring.
- Irrigation developments have allowed farmers to move away from a dependence on rain-fed agriculture. Irrigated farming has also increased yields and promoted a shift to farming crops which require more water but give better financial returns.
- In livestock and fisheries, the use of **exotic breeds has enabled genetic improvements to accelerate**. Various additives and supplements have been identified to accelerate weight gain, increase digestibility of feedstuffs or reduce the amount of feed required. Genetic improvements have led to the enhanced food conversion ratios in animals.
- In the crop sector, biotechnology has also led to improved yields, reduced vulnerability of crops to environmental stresses and increased the nutritional qualities of food crops.

In consideration of the theme "Innovation and Technology", Policy Monitoring and Research Centre (PMRC) believes that one key policy option which could aid in the successful implementation of the above mentioned technologies is to enhance private sector partnership for joint action aimed at financing research and development as well as technological transfer in the agricultural sector. In this regard, it is worth noting that the 2022 National Budget included a significant increase in the funding of research and

development under the Ministry of Agriculture from K5,957,500 in 2021 to K25,146,955 in 2022. The continual timely disbursement of these allocated funds will be critical in promoting research and innovation in the sector.

PMRC is also delighted to note that the 94th Agriculture and Commercial Show is taking place this year after having been postponed for the past two years as a result of the COVID-19 pandemic. We are glad that the theme "Innovation Through Technology" has been maintained because the show is an important platform where some of the technologies mentioned above can be showcased. Furthermore, the Agricultural and Commercial Show is a place where innovation and the exchange of ideas can be promoted among a wide variety of stakeholders, both local and international.

Best wishes to all of Zambia's farmers, and a fruitful Farmers Day Commemoration.

For more details, interviews or queries about this PMRC Media Statement
Please contact;

SYDNEY MWAMBA
Acting PMRC Executive Director

POLICY MONITORING AND RESEARCH CENTRE

Corner of Nationalist & John Mbita Roads, opposite Ridgeway Campus gate
10101 Lusaka, Zambia
Tel: +260 211 269 717 | +260 979 015 660
<https://pmrczambia.com>