

A stylized world map in shades of orange and brown, positioned at the top of the slide. The map is centered and shows the continents of Africa, Europe, and parts of Asia and South America. The background behind the map is a grid pattern.

THE POTENTIALS OF INFORMATION AND COMMUNICATIONS TECHNOLOGIES IN THE TRANSFORMATION OF AFRICA'S AGRICULTURE: CHALLENGES AND OPPORTUNITIES

BY

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OBJECTIVES OF PRESENTATION

The major objectives of this presentation, amongst other things, are to:

- Spotlight the main features of Africa's agriculture;
- Examine potential roles of ICTs in the transformation of Africa's agriculture;
- Discuss current challenges associated with ICTs as tools for sustainable agriculture in Africa; and
- Proffer pertinent recommendations.



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The main Features of Africa's Agriculture

- Lack of a dominant farming system on which food security largely depends;
- Predominance of rain-fed agriculture as opposed to irrigation agriculture;
- Heterogeneity and diversity of farming systems and the importance of livestock;
- Key roles of women in agriculture and in ensuring household food security;
- Lack of functioning competitive markets;
- Under-investment in agricultural research and development (R&D) and infrastructure;
- Dominance of weathered soils of poor inherent fertility;
- Lack of conducive economic and political enabling environments;
- Large and growing impact of human health on agriculture;
- Low and stagnant labour productivity and minimal mechanization;
- Predominance of customary land tenure.





THE MANIFESTATION OF ICTs IN AFRICAN AGRICULTURAL VALUE CHAIN MANAGEMENT

Using ICT to Improve	Why	Example
Access to market information	To help farmers find out about market prices. This helps them make decisions concerning when to harvest, how to negotiate with intermediaries, etc. Often combined with other information, including weather forecasts	<ul style="list-style-type: none"> •Esoko (various countries in sub-Saharan Africa). *Manobi (Senegal) *Infotrade (Uganda) *Zambian National Farmers' Union MIS (Zambia).
Distribution and supply chain management and traceability	To increase efficiency and predictability, reduce spoilage, etc. To record improvements along the value chain, respond to quality standard requirements, and assist large buyers track, manage, pay and reward small producers.	<ul style="list-style-type: none"> •Application across dairy sector (Kenya) •Dunavant Cotton (Zambia)



THE MANIFESTATION OF ICTs IN AFRICAN AGRICULTURAL VALUE CHAIN MANAGEMENT (Continues)

<p>Financial Services (mobile payments, mobile banking)</p>	<p>To make financial transactions more accessible, faster, and safer, in addition to making it easier to save and link to financial services.</p>	<ul style="list-style-type: none"> •M-PESA (Kenya and Tanzania) •Mobile Money (Ghana, Uganda, Zambia) •Standard Chartered Bank (South Africa Division; Loan Appraisal, M&E Software) •WIZZIT (South Africa)
<p>Farm extension services, access to sector experience, research, and other resource information</p>	<p>Using ICT to deliver better farm extension services (utilization of best agriculture practices, research, weather, climate, etc.)</p>	<ul style="list-style-type: none"> •Grameen Applab Community knowledge Workers (Uganda) •Farmer voice radio project (Kenya) •Radio (Mali and others)
<p>Commodity Exchange/Warehouse receipt systems</p>	<p>To provide transparency in price discovery and to facilitate better prices and efficiencies between buyers and sellers. It avoids moving crops themselves, reducing spoilage, transportation and transaction costs.</p>	<ul style="list-style-type: none"> •Ethiopia Community Exchange (ECX) •Uganda Commodity Exchange (Warehouse receipt system) •Zambian Commodity Exchange (ZAMACE) •SAFEX (South Africa)



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during the conference

THE CHALLENGES OF ICT IN THE TRANSFORMATION OF AFRICA'S AGRICULTURE

Emergent Challenges include:

- Dearth of physical and social infrastructure;
- Low levels of literacy;
- Endemic poverty; and
- Ill-informed policies.



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RECOMMENDATIONS

- Integrate ICT into agriculture sector strategies and agriculture into National e-strategies;
- Provide the right mix of Universal Access and Universal Service features to expand access to ICT;
- Exploit economies of scale to reduce the per capita expenditure on ICT at the community level; national level and across African countries;
- Use low power and solar-power devices;
- Apply the most efficient mix of channels and devices-radio, television, mobile phones, computers, fixed lines and print media
- Integrate ICT into Agriculture education systems; and
- Empower rural communities through development of core skills.





THANK YOU

