Feature

e-Agriculture in the Caribbean - A Concept Come of Age

By Atiba Phillips

In recent years, there has been renewed emphasis on promoting agricultural production as well as food and nutrition security. Given that the demand for, and supply of food, will continue to be affected by population growth, rapid urbanization, shifts in dietary patterns, and climate change, improving agricultural production is likely to remain high on the policy agenda of country governments for the foreseeable future. In many ACP countries, agriculture accounts for upwards of 50% of gross national product, and in some more than 60% of the population is engaged in agriculture. Notwithstanding the significant impact that the sector has on developing economies and society, there is still a greater need to equip the various actors within the agricultural sector – the policy institutions, agri-business practitioners, farmers, researchers, and investment promotion agencies - with the tools which they need to develop modern and "best practice" strategies, plans, projects and methods which can assist in advancing the sector and as such allow the sector to meet the growing demands being placed on it by modernization and development.

Key Challenges Facing the Sector
Small Firms
In the Caribbean, Micro, Small and Medium Sized Enterprises (MSMEs) continue to dominate the agricultural sector and make a significant contribution to the Region's economic growth, food security and employment. Small firms, however, have traditionally faced many, sometimes crippling, challenges due to their restricted size and reach. In the agricultural sector, many small farms are poorly serviced, fragmented, located on less productive soils and lacking basic production infrastructure. Small farmers also continue to face high transaction costs associated with marketing their produce.

Ageing Population
There has been, over time, an insufficient emphasis on translating agriculture issues,

policy and business into formats, language and delivering them on platforms and to devices which are engaging and understandable to non-traditional stakeholders, especially youth. Additionally there has been the phenomenon of parents discouraging children from pursuing a livelihood in the sector. As a result of these and other factors, youth involvement in the sector remains astonishingly low. This means that the section of the population which is most ICT savvy and eager to adapt work processes to take advantage of innovative production technologies, is underrepresented in the sector. Consequently, an ageing farmer population is an issue which impacts not only the leverage of technology within the sector, but the sustainability of the sector as a whole.

Inadequate Institutional Capacity
On a Regional level, there is an insufficient ability to attract funding to the sector, partly due to the lack of capacity among Regional actors to develop policy, business plans, strategic plans, project proposals etc., which can aid in the advancement and modernization of the sector. Engagements with key actors in the sector reveal:

• A lack of understanding and adherence to standard formats and guidelines for international project funding, resulting in poor uptake of available programmes from international agencies by Regional organisations and in particular small farmers;
• Insufficient availability of mentor organisations / programmes which can assist small firms and entrepreneurs to develop robust business plans and other documentation required to access capital and or otherwise take their operations to the next level;
• A lack of a monitoring and evaluation components built into existing policy frameworks;
• Failure to consider adequately on-going reforms in trading partner countries and

competition from countries selling similar products in the same markets.

Sharing of Information:
There are a plethora of agriculture organisations in the Caribbean – from Government Organisations to NGOs, industry associations and farmers groups, professional associations and research bodies as well as youth and activist groups. These groups may have similar challenges or work on similar initiatives but do not necessarily share information on their work, their aspirations or interests, their successes or research with other actors within the industry. There is no mechanism or sustainable forum to facilitate on-going collaboration between organisations, or to discover new organisations or opportunities which may become available to the sector.

How ICTs can Help
In general, there is a lack of understanding of the role that ICTs can play within the industry, to increase the productivity and dynamism within the sector as well as to better enable the engagement of critical stakeholders, not traditionally (or currently) associated with agricultural endeavour. ICTs can be a key driver and facilitator in connecting the actors along agricultural value chains and in disseminating critical information to large populations on the need to sustainably secure the Region's food and nutrition requirements.

Sample Applications of ICTs in an Agricultural Context:
• ICT can be a tool to translate agriculture issues, policy and research into formats and language which are understandable and engaging to youth (as well as other stakeholders along the agricultural value chain, and persons not presently involved in Agriculture).
• ICT training and tools can be leveraged to build capacity to develop policy (and other) template documents according to

international agency requirements
- The adoption and usage of ICT platforms for quickly collating, disseminating or exchanging relevant and timely information among value chain stakeholders, can:
  1. Facilitate increased availability and accessibility of agriculture research to all members of the value chain
  2. Facilitate greater, more timely and effective collaboration among value chain players

Existing Initiatives
Governments and agricultural support institutions across the Caribbean have indeed sought to develop ICT initiatives that benefit the value chains in their own jurisdictions.

A few of these initiatives include:
- National Agricultural Market Information System (NAMIS)- Trinidad & Tobago http://www.namistt.com
- Jamaica Agricultural Marketing Information System (JAMIS) www.ja-mis.com
- Market & Enterprise Information System (Guyana Marketing Corporation) http://www.newgmc.com
- mFisheries Application Suite http://cirp.org.tt/mfisheries

In the main, these initiatives seek to develop and promote investments in the agri-food sector by providing timely information for making sound strategic, investment, management and policy decisions by all stakeholders. They collectively seek to provide different types of services - from daily commodity prices, to virtual shopping cart and mobile applications – along with an extensive archive of market information from previous years. Despite these efforts, many actors in the sector, especially the smallholder and subsistence farmers of the Region, are not at all aware of the existing ICT services.

Furthermore, those who are aware of these service offerings may not be inclined to use them because the information is not presented in forms or modalities which they can easily consume.

The Way Forward
On October 12, 2012, a one day workshop hosted by the Caribbean Agricultural Research and Development Institute (CARDI), brought together expert ICT and agriculture representatives from the CARICOM region. These experts explored the possibilities of a Caribbean e-Agriculture Strategy which will synergise agriculture and ICT in a more structured manner. This strategy will recognise the real and current challenges leading to low ICT uptake in the agriculture sector, and will seek to address these challenges to the benefit to all Regional agri-stakeholders. The workshop was one of the scheduled activities for the 2012 Caribbean Week of Agriculture (CWA), the premier event on the Regional agriculture calendar. The Region awaits the projected outcom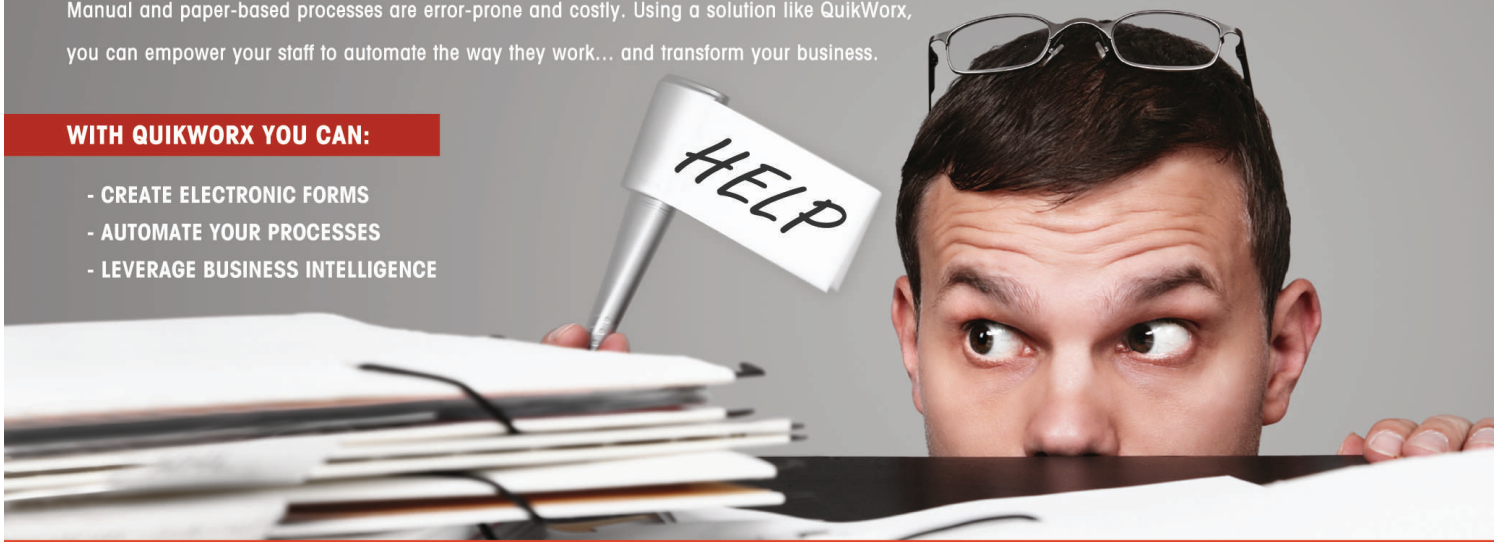e of this signal ICT and agriculture collaboration.