Trends in agriculture

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2. End hunger, achieve food security and improved nutrition and promote sustainable agriculture

2.3 By 2030, **double the agricultural productivity** and incomes of small-scale food producers, in particular women, indigenous peoples, family farmers, pastoralists and fishers, including through secure and equal access to land, other productive resources and inputs, **knowledge**, financial services, markets and opportunities for value addition and non-farm employment

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1. **Technology adaptation.**

"This almost can't be avoided,"
"Technology is being inserted into the base model of almost everything required to put a crop in the ground, and harvested."

We focus on:

M-Farm

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Trends in agriculture

M-Farm
connecting farmers

- The M-Farm system provides farmers a group selling service where they can connect with other farmers from the neighborhood to jointly market crops in greater volume, helping rural farmers access large-scale local and international markets.
- Farmers often need to have large quantities of produce available in a short time frame in order to sell to exporters and large-scale retailers.
  Farmers also get connected to suppliers and, through collective buying power, get significant discounts on farming inputs such as seeds, fertilizer

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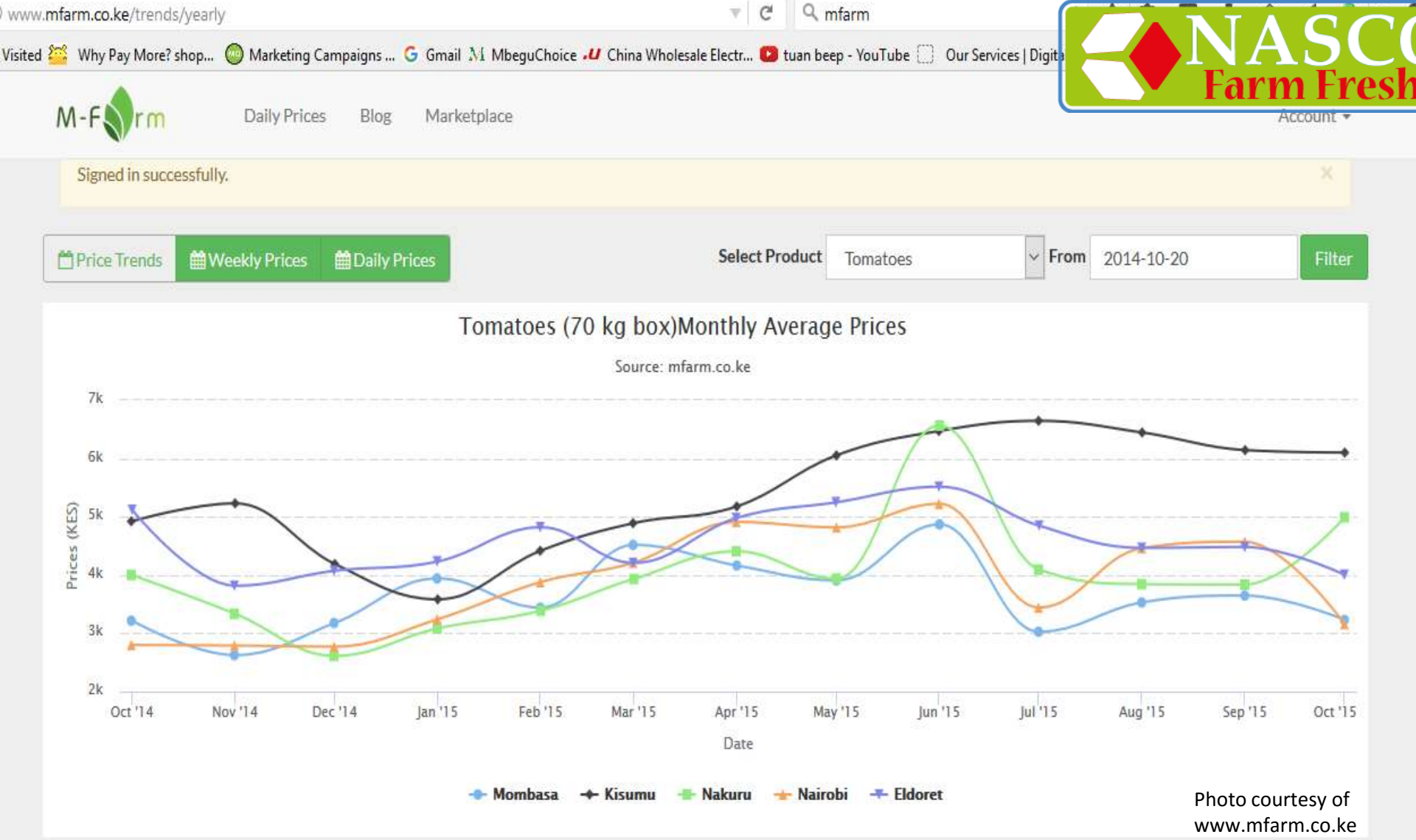

Photo courtesy of www.mfarm.co.ke

MFarm gives farmers transparent market price information, aggregates their farm input needs and creates market linkages.

Farmers can inquire about the current prices of different crops in specific markets throughout Kenya. Up-to-date market information empowers farmers as they bargain for a fair price with middlemen and purchasers.

2. **Big data.**

- Big data is still a buzzword – and rightly so – but the challenge right now is figuring out how to get this data to work for a farmer at the local level,
- Converting data to actionable solutions is what needs to happen to make all this technology worth the investment," he says. "Without solutions, just viewing data is pretty much worthless. This process takes a tremendous amount of time, filled with frustrations, trial and error. But when data becomes actionable, it becomes very powerful and worth the effort.
- Bob Gore, a writer for techwire, suggests that precision agriculture may even become a mandatory practice in the future.
- "Precise as in timing, location, amount and compliance reporting," he says. "Grasp the potential here? Especially for integration and real-time data flow."

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3. **Biologicals.**

- Many of the major chemical companies are focusing their attention on using biological organisms to battle weeds, insects and diseases.
- How these products control pests will be vastly different than what we are used to using for chemical control, and will require a different mindset.

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4. Regulations.

- This is the most frustrating trend in agriculture.
- **Global GAP (Good Agricultural Practises) for Export crops**
- "Immense pressure is being put on farmers to track the origin of all commodities and products grown for consumption," he says. "The technology and paper trail that this will require will vastly change how and what gets accomplished on a typical farm operation in the future. The cost to producers and consumers will be a huge burden as well."
- Some of these regulations are already upon farmers.
- It will take one or two years to create the regulations and new databases, but, suffice to say, farmers are now strictly accountable for water management.

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5. **Demand**.

This trumps all the rest.

- If the population of the world does hit 9 billion people by 2050, the demand to supply enough food, fiber and energy to supply the world will be a daunting task. There is no reason to doubt that production agriculture is in the driver's seat as we look forward into the future.

4R Principles of Crop Nutrient management

- Besides good farming practices, farmers must follow the 4R (right) principles of nutrient management.
- These are
  - right seeds,
  - right planting season (early planting),
  - right spacing and
  - right plant population.

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