

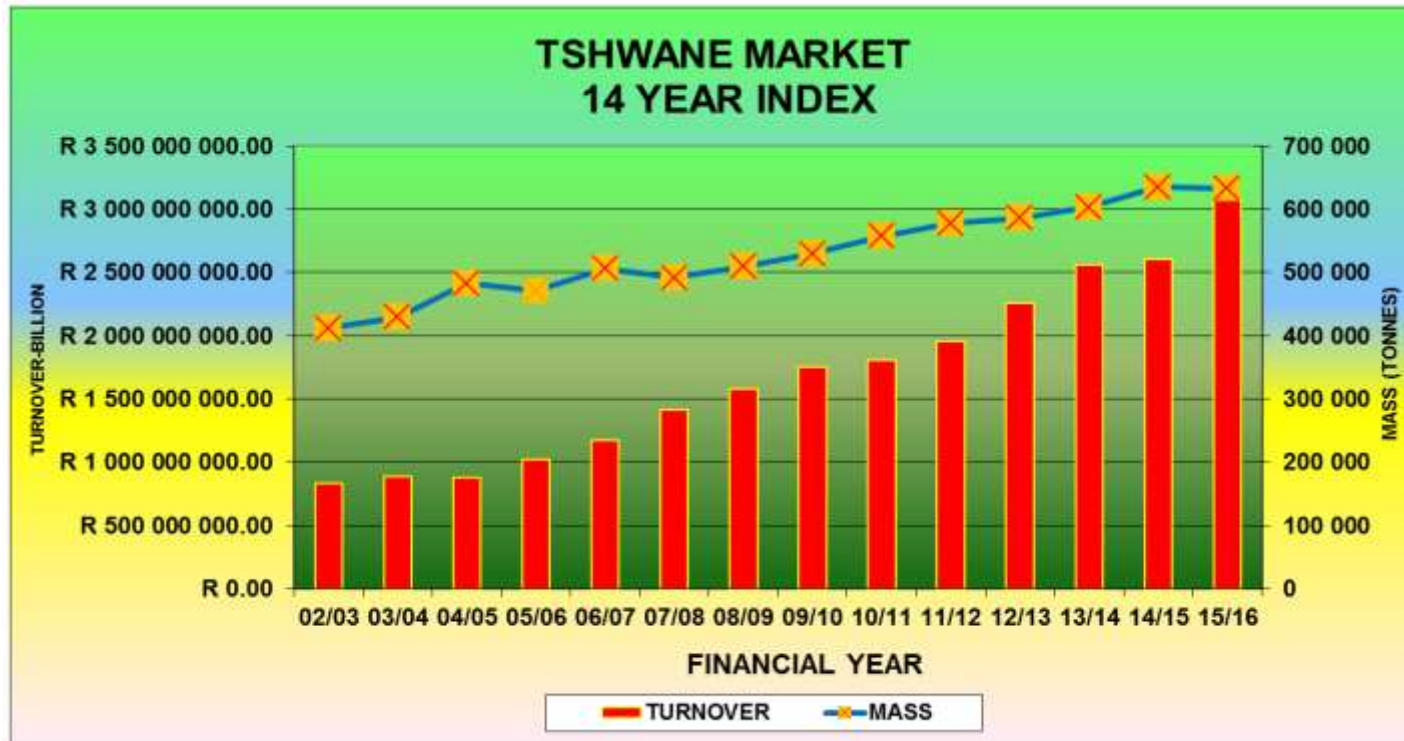


Food Waste Industry-meets-Science workshop

15 February 2017

Presentation by Francois Knowles
Tshwane Market

Tshwane Market Performance



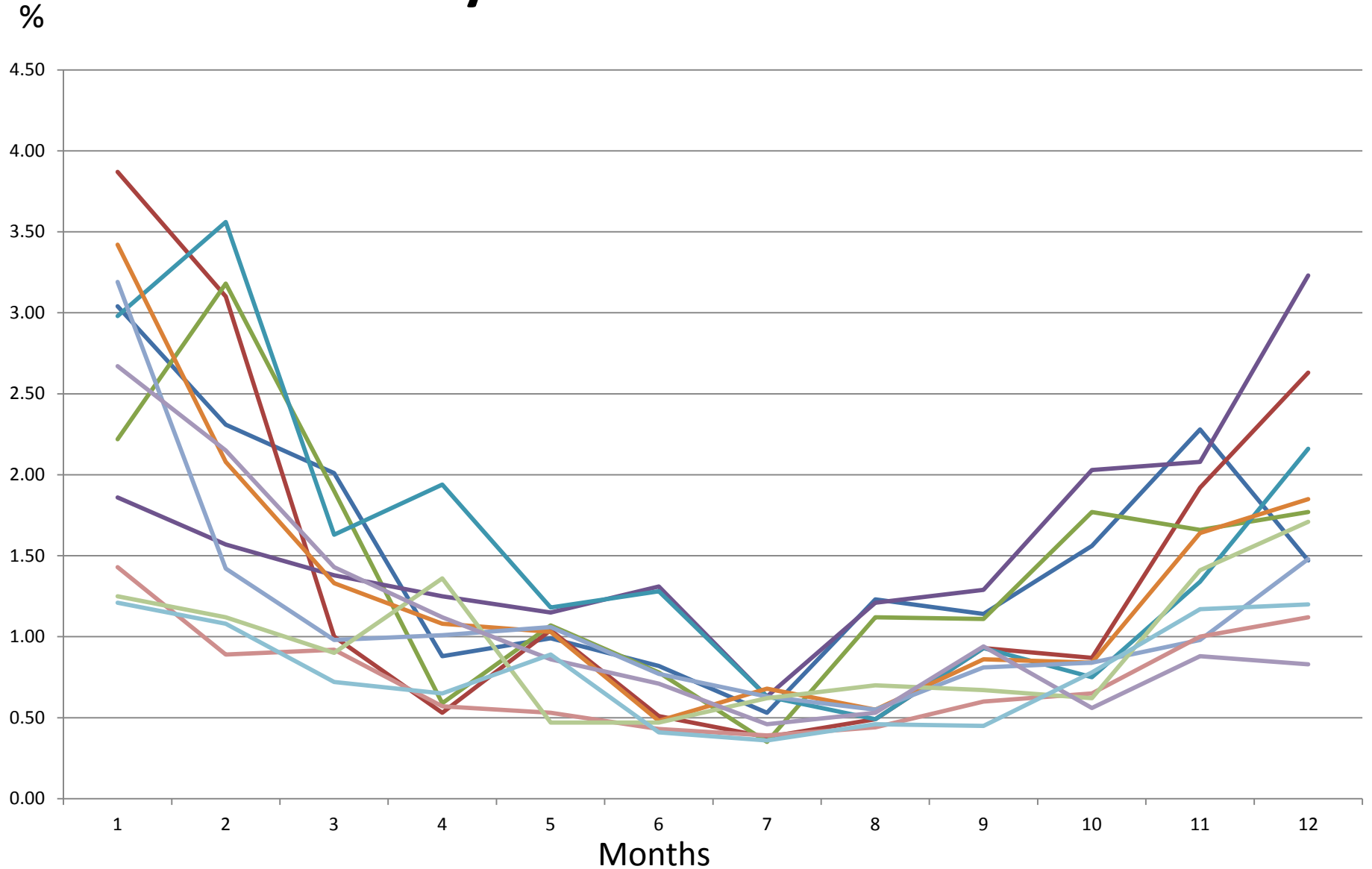
Financial Year	Turnover	Mass	Average growth per year in Turnover	Average growth per year in Mass
2015/2016	R 3 088 975 031.32	633 209	14.09%	2.86%

Overview of current food waste activities

- Food waste = organic waste (packaging included)
- Quality – visual (Health Inspectors) – 6/7
 - Voluntary Surrender
 - Sales person in the agency voluntarily surrender produce to be discarded – that they consider to be unfit for human consumption
 - Order of seizure
 - EHP find produce not fit for human consumption; the EHP will declare same as such
- Service rendering in terms of Statutory requirements
 - City of Tshwane: Market By-laws (Promulgated – 4 June 2008) – Section 10
 - Health Act (Act 63 of 1977) – power to EHP (Health Inspectors) – Art 53(1)
 - Foodstuffs, Cosmetics & Disinfectants Act (Act 54 of 1972)
 - Art 2(1)(b)(i) any person such as an agent is guilty of an offence “**if he sells or imports for sale, any foodstuff or cosmetic which is contaminated, impure or decayed, or is in terms of any regulation deemed to be, harmful or injurious to human health**”,
- Residue testing (Effective?)
- Best practises (handling x 15)
- Profiling
- Training (post harvest, farm visits)
- Baseline – established in 2000 (0,7 – 1,7%) – 7500 tonnes p/a

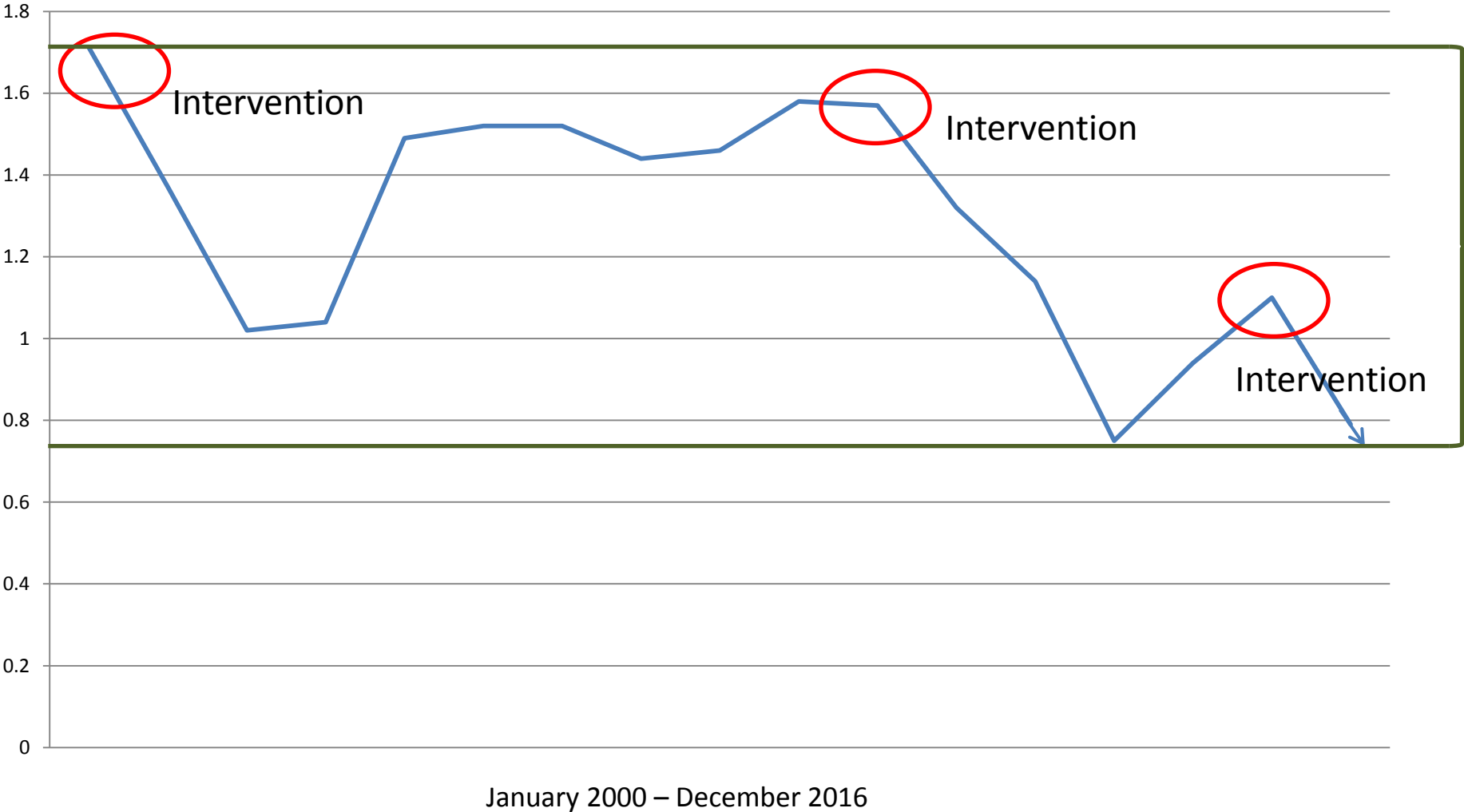
Overview of current food waste activities

January 2006 – December 2016



Overview of current food waste activities

January 2000 – December 2016



Obstacles to food waste management

- The market is **not** a hospital for sick and dilapidated fruit and vegetables
- Production planning/point of origin – fishing in a pond
- Supply and demand
- Contamination – risk to personnel
- Cost of removal - transport (ROI)
- Continuity & speed
- Market approach
 - Zero to landfill
 - Effective 1 July 2015 all discards quantified
 - @ Market average price
 - Estimated loss – R120 million 2015/2016
 - More or less 80% loss for the farmer

Opportunities for reducing food waste

- Animal feed (contamination)
- Waste to energy
 - Bio-gas (“Clean waste”)
 - HTC (Hydro Thermal Carbonization)
 - Methane gas
- Drying of over ripe products
- Recycling
- Composting (Space)
- Reduction in consumption patterns
- Incentives – voluntary??
- Partnerships (Academia & job creation)
- Combinations/All elements of the value chain

Academic projects

- University of Pretoria
 - Enactus Programme (Fruitful Living Project)
 - Research
 - OHS – 8 study projects (1 PhD)
 - Process flow studies
 - Plant pathology (2 Masters students)
 - Waste minimization and reduction (1 PhD)
- Unisa (Masters)
 - “An investigation of quality and compliance of agricultural food products in the Tshwane metropolis in terms of the Agricultural Products Standard Act”
- Tshwane University of Technology (M-Tech)
 - “Energy efficiency technology and energy saving potentials for the cooling facilities in the fruit cold chain”
 - EHP – induction – market as a case study
- Local Schools
 - Tshwane Expo

Current gaps in knowledge

- Perception (Dealing with waste is not sexy..)
- We know what is required. Who does what?
- Ownership – household level
- Plastic bags (Min Valli Moosa) – legislation
- Environmental courts
- Product knowledge
- National pride?

Thank you

