

QUALITY CONTROL ON RAW MATERIALS



BRETT ROSENDAAL

SA AGRICULTURE – PROTEIN CONSUMPTION

ANIMAL PROTEIN CONSUMPTION 2009		
	kg/c/y	%
Chicken	31.83	50
Eggs	8.16	13
Beef	15.77	25
Pork	4.17	7
Mutton and Goat	3.21	5
	63.14	

- **R 30.151 BILLION** or 48% of all animal products (2009)

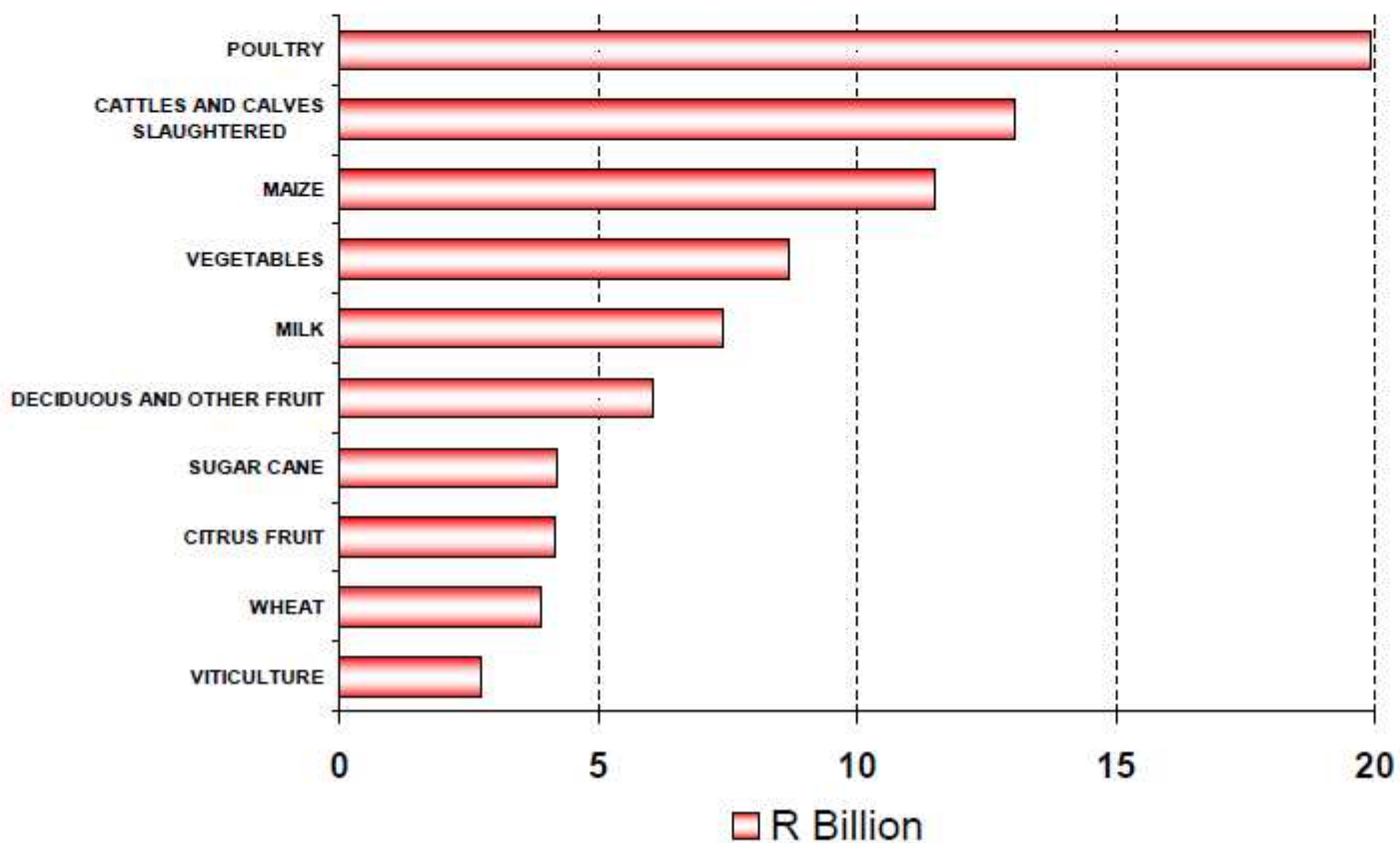


SOUTHERN AFRICAN POULTRY ASSOCIATION
SUIDER-AFRIKAANSE PLUIMVEEVERENIGING
Founded 1964 / Gestig 1964

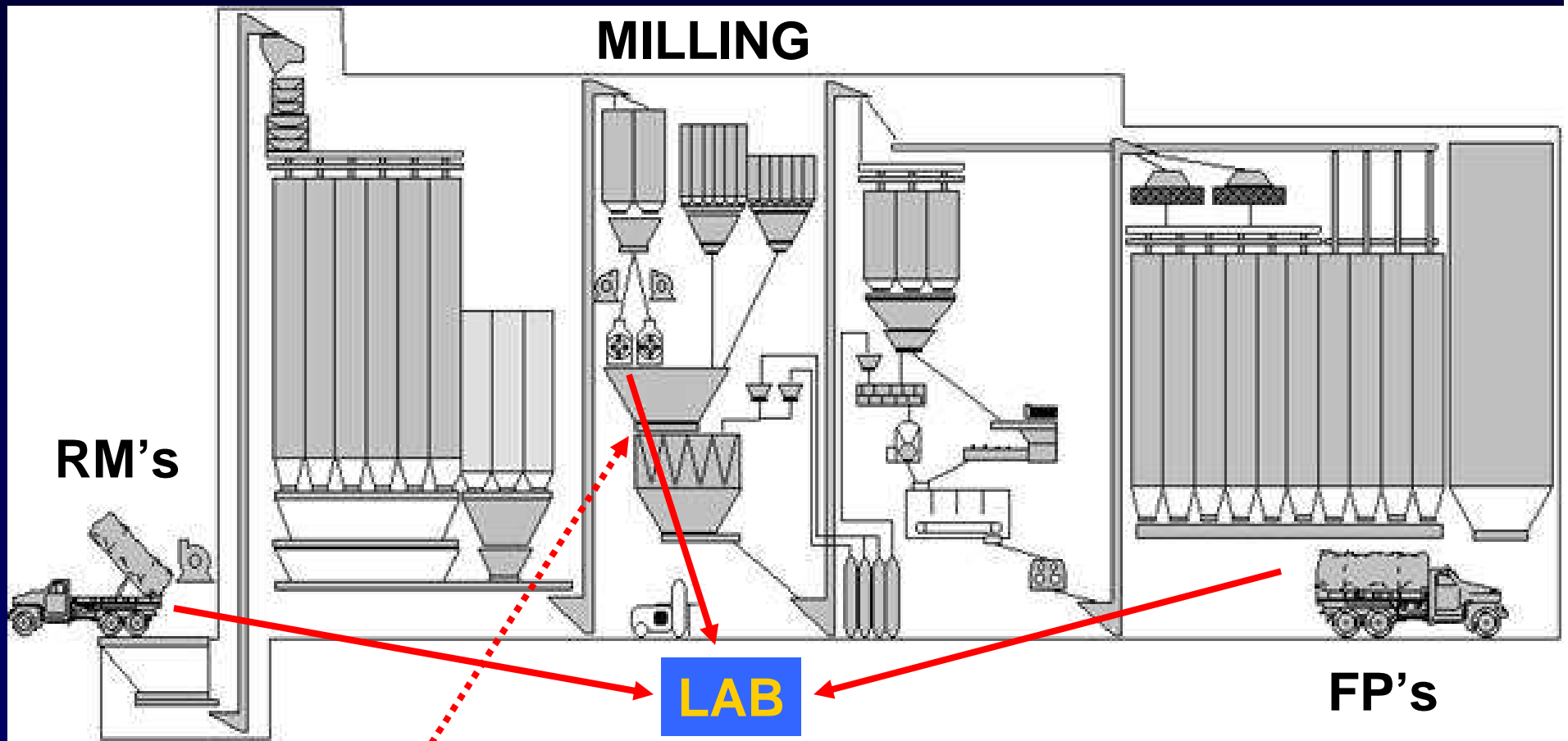
WORLD POULTRY, LOCAL AND INTERNATIONAL - PROSPECTS AND CHALLENGES BEYOND 2010

LOCAL: GROSS INCOME FROM AGRICULTURE

GROSS INCOME FROM AGRICULTURAL PRODUCTS IN 2007



THE PROCESS



SUPPLIERS

OPTIMISATION

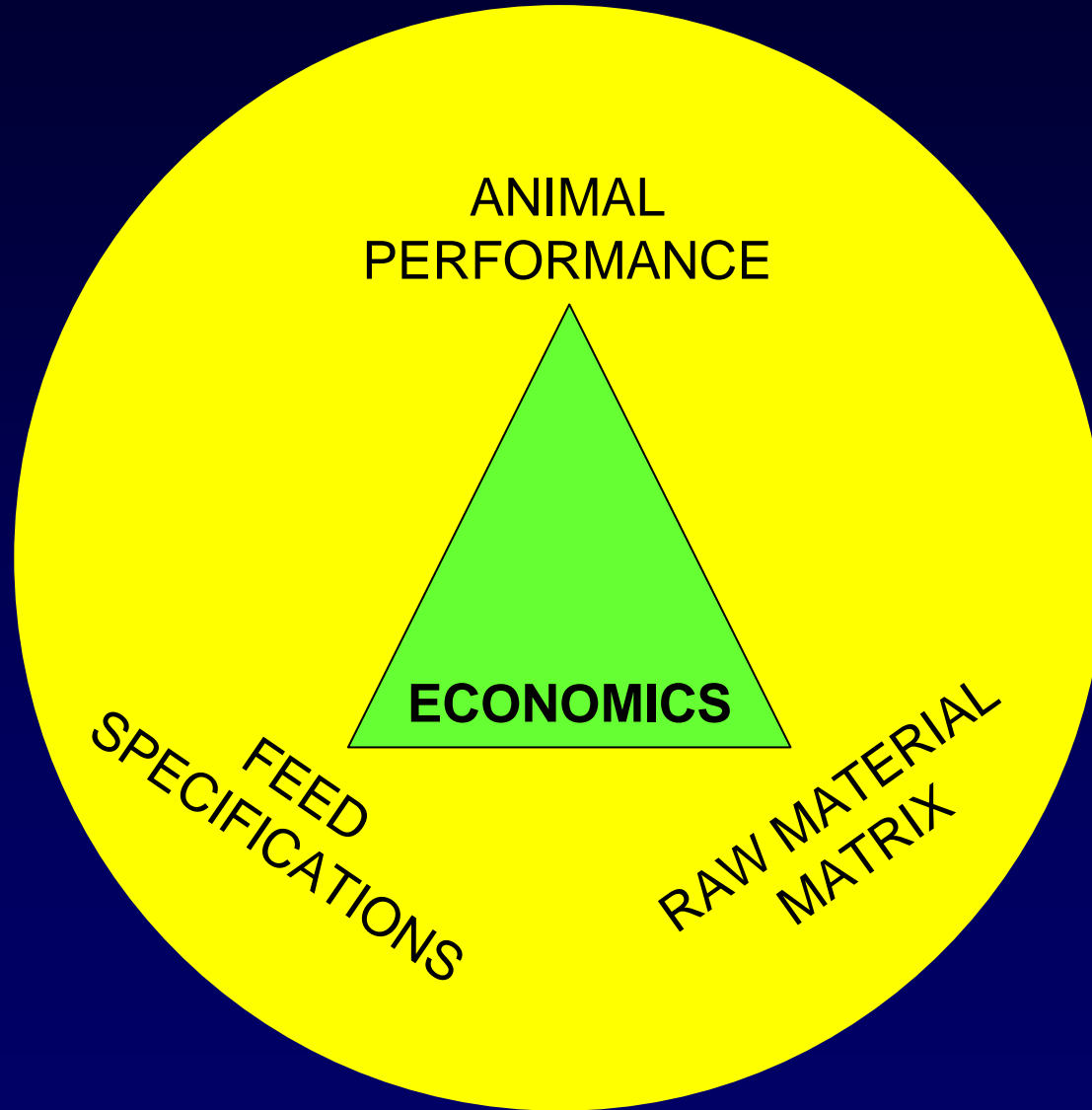
CUSTOMERS

THEORETICAL

+/- NUTRIENT

ACTUAL

THE PROCESS

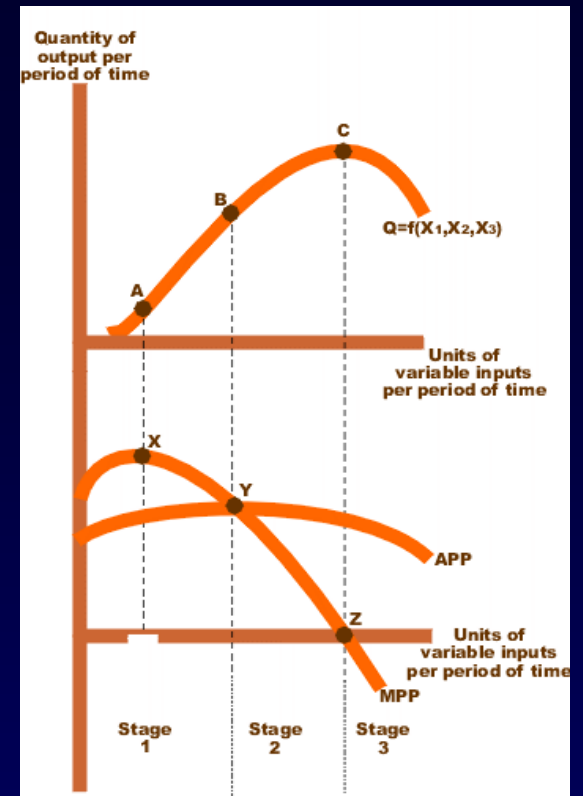


THE PROCESS

- 1. ECONOMIC EVALUATION**
- 2. NUTRIENT VALUE**
- 3. FACTORS INFLUENCING NUTRITIVE VALUE**
- 4. STORAGE CONDITIONS**
- 5. HANDLING CONSIDERATIONS**
- 6. SAMPLING**
- 7. FEED SAFETY**
- 8. SYSTEMS**

1. ECONOMIC EVALUATION

- COST OF NUTRIENTS
- USAGE / VOLUME PER UNIT TIME
- SAVING
- MILLING CONSIDERATIONS
- PHYSICAL IMPACT ON DIET
- SUBSTITUTES / ALTERNATIVES



2. NUTRIENT VALUE

- **NUTRITIONAL COMPONENTS: QUALITATIVE**
 - **MOISTURE**
 - **PROTEIN**
 - **CARBOHYDRATES**
 - **FATS & FATTY ACIDS**
 - **MINERALS – MACRO/TRACE**
 - **VITAMINS**
- **FEEDSTUFF QUALITY: QUANTITATIVE**
 - **DIGESTIBILITY OF AMINO ACIDS**
 - **ENERGY UTILIZATION**
 - **AVAILABILITY OF MINERALS**
 - **VITAMINS IN FEEDSTUFFS**

3. FACTORS INFLUENCING NUTRITIVE VALUE

- **NON STARCH POLYSACCARIDES**
- **SECONDARY PLANT METABOLITES**
- **VISUAL AND TACTILE CUES PERCIEVED**
- **EFFECTS OF PHYSICAL PROCESSING**
- **ADDITIVES**



4. STORAGE CONDITIONS

- **GRADE**
- **SILO SPACE AND AVAILABILITY**
- **MOISTURE**
- **PRODUCT ROTATION**
- **CLEANING**
- **NUTRIENT DETERIORATION**
- **ADDITIVES**



5. HANDELING CONSIDERATIONS

- **BULK / BAGS / LIQUIDS**
- **FLOWABILITY**
- **FURTHER PROCESSING**
- **USAGE**



6. SAMPLING

- **UNCERTAINTY**
- **STATIC LOTS VS DYNAMIC LOTS**
- **BULK VS TEST SAMPLE**
- **SAMPLING VARIABILITY**
- **SAMPLE PREP VARIABILITY**
- **ANALYTICAL VARIABILITY**
- **SAMPLE SIZE**



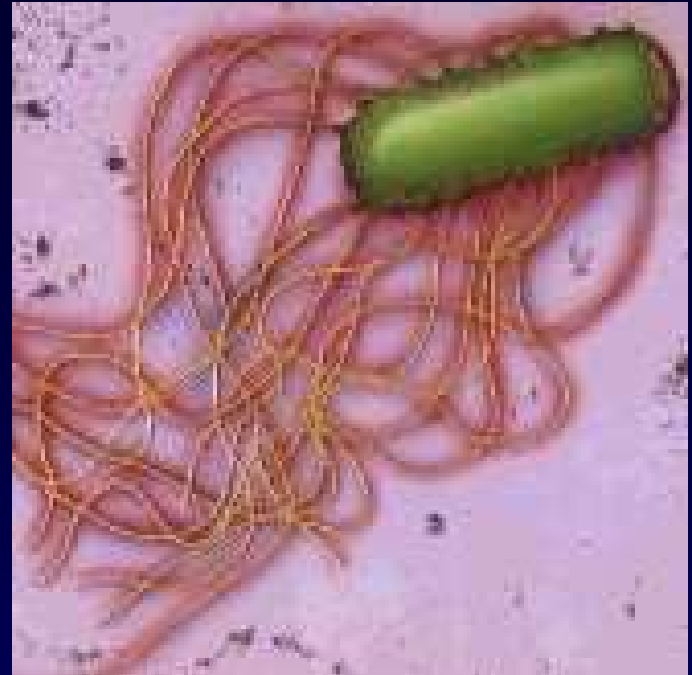
7. FEED SAFETY

- **CHEMICAL CONTAMINANTS**

- i. **HEAVY METALS**
- ii. **PESTICIDES**
- iii. **MYCOTOXINS**
- iv. **PCB's & dioxins**

- **MICROBIOLOGICAL CONTAMINANTS**

- i. **TOTAL ENTEROBACTERIA COUNT**
- ii. **TOTAL MOULD COUNT**



8. SYSTEMS

- **QUALITY**
 - i. **GMP**
 - ii. **ISO 9002 (2008)**
 - iii. **FAMI QS**

- **FEED SAFETY**
 - i. **ISO 22000**

- **TIMS**

Playing Chicken

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Avoiding Arsenic
in Your Meat