IFA Crossroads
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Product Quality along the value-chain

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Introduction

- Main Factors affecting the product quality
- Compaction and Contamination
- Factors contribute to compaction
- Source of contamination
- Mitigating Quality Dispute
Factors Affecting Quality

- Water and Humidity
- Contamination
- Mechanical Stress
- Segregation
- Deterioration Phenomena

Product Quality – Compaction and Contamination

- the major consideration of product quality.

- **Compaction**
  The inherent properties of a fertilizer and its interaction with the environment.
  - The particle condition is the important physical parameters
  - Compaction or caking: particles of fertilizer adhere together at the surface.
  - Compaction or agglomeration - revert to a free-flowing condition
  - Caked cargoes can cause delay discharge/handling operations and extra cost to reprocess
Product Quality – Compaction and Contamination

- **Contamination**
  Outsides influences.

- **Impact:**
  - Destruction of the chemical composition
  - Formation of lumps & dust
  - Variation in spreading properties
  - Contamination of the field
  - Cargo rejection

Factors contribute to Compaction

- Too fresh from production
- Insufficient anti-caking compound
- High humidity
- Severe temperature changes
- Excess storage or transport time
- Excess quantity of fines/dust
- High pressure build-up in deep cargo holds
- Mechanical Stress
- Segregation
Source of Contamination

- Vessel’s hold/hatches – rusty/previous cargo/leakage
- Container’s leakage
- Weather condition, water and humidity – rain/snow
- Violent sea conditions
- Water ingress
- Condensation
- Lining in the vessel ‘s hold/trucks with plastic sheet
- Stockyard – poor/dirty floor conditions
- Handling equipments - rusty /previous cargo
- Inaccurate handling causing Cross contamination/foreign materials (e.g. plastic, wood, etc)

Mitigating Quality Dispute

- Improvement on Product Quality
  - Anti-Caking treatment
  - Store product in clean and dry floor
  - Establish correct handling routines and procedure
  - Improve bag quality – use new bag

- Engage reputable international independent inspection company
  - Pre-shipment inspection
  - Loading/discharging facility inspection at terminal
  - Vessel’s hold/Container cleanliness inspection
  - Loading/discharge supervision
  - Sampling and analysis
  - Draft Survey
Why is a Cargo Inspector Needed?

Cargo control by an experienced Inspection Company reduces the risk of unexpected complications and gives assurance to the interested party that the **Quantity** and **Quality** of the material actually shipped corresponds to the contractual specifications.

- To sum up:
- **COMMERCIAL** and **CONTRACTUAL** Risk Minimization

Purpose of an Inspection

- To protect the interests of our client
- To provide an independent report of inspection
- To inform our client of developments - **as they occur!**
- To **anticipate** and respond to unusual situations