

IFA Crossroads Asia-Pacific 2012

Product Quality along the value-chain

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WHEN YOU NEED TO BE SURE

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Introduction

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

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Factors Affecting Quality

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

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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



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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

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Factors contribute to Compaction

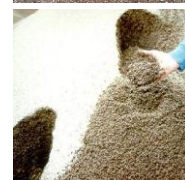
- Too fresh from production
- Insufficient anti-caking compound
- High humidity
- Severe temperature changes
- Excess storage or transport time
- Excess quantity of fines/dust
- High pressure build-up in deep cargo holds
- Mechanical Stress
- Segregation

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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)



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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

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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**

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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

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