

Quality Systems Approach
to
Organic Production

Presented at the
1st African Organic Conference 2009

by

Andre Leu

CHAIR

Organic Federation of Australia

Vice President

IFOAM



Competing on the World Market

- African organic products have to compete with products from around the world
- Low price is just one of the competitive factors and is over rated in getting sales
- Chasing low prices to get market access is not the best way to earn a premium.

Consumers are Used to High Quality

- These return the highest prices to their producers and exporters.
- It is very important that products are packed and graded to the consistent standards
- It is also very important that there is a reliable supply -empty shelves means customers (wholesale and retail go elsewhere)
- This will give higher returns from the world markets



Presentation

People buy with their eyes - they return for the taste

Quality Assurance Systems

- HACCP or similar systems
- KEEP IT SIMPLE and EASY TO DO
- CONTINUOUS IMPROVEMENT

- Producer and Post Harvest Market Systems Approach

- These should be developed by the producer groups

- Not market imposed – negotiate with market

- Avoid markets that do not negotiate – they will cost you money



High Quality.

- Starts with the production systems
- Needs to be free of insect damage, blemishes, marks stings etc
- Poor quality is difficult to grade into high quality produce
- Needs to have shelf life
- Needs to be treated with care to avoid bruises, browning, sap damage, overheating during harvest and post harvest



Healthy Soil is the Key Principle to Quality Organic Production

- Organic carbon, particularly humus is critical to successful soil health
 - Aids both drainage and water retention
 - Buffers the soil pH towards neutral
 - Minerals ions adsorb to carbon based colloids
- Encourages soil microorganisms that make minerals bio-available
- Encourages beneficial soil microorganisms to prevent soil pathogens
 - Humic and other acids make inorganic minerals bio-available

The Other Key is a Balanced Mineral Rich Soil

Complete soil analysis based on Albrecht or similar

The required nutrients are obtained as:

Ground minerals

Lime, dolomite, gypsum, rock phosphate, basalt quarry dust

Soluble minerals

Trace elements and naturally mined potassium sulfate.

Organic forms

Legumes, manures, organic mulch and naturally occurring free bacteria for nitrogen.

These are composted to speed up the process of turning the minerals into plant available forms.

High Quality.

Mineral deficiencies such a lack of calcium cause:

- Skin rots
- Jelly flesh
- Fungal diseases
- Insect attacks
- Leaf and fruit discoloration
- Post Harvest Breakdowns
- Calcium needs boron - which is low in tropical soils

Silica

- Essential mineral
- Low levels in many tropical soils
- Protects against pests and diseases
- Increases grain yields

Healthy Soil: the first principle in controlling pests and diseases in organic systems

Research that shows that healthy crops are less affected by pests and diseases.

Most of the pests are controlled through a number of bio control strategies.

Major bio-controls

- Ants
- Insect eating birds
- Ladybirds (*Cryptolaemus spp*)
- Green lacewings (*Mallada spp*)
- Hover flies (*Syrphidae*)
- Spiders
- Assassin Bugs
- Wasps

Insectaries

- **Refuges of flowering plants are known as insectories**
- **Small flowering plants are encouraged to grow throughout the orchard**
- **Nectar and pollen are essential to the adult stage of many beneficial predators**
- **Research has shown that they breed thousands of beneficial organisms**





Industry Quality Control Standards

- Export quality fruit must be practically free of defects, good colour and have an excellent flavour.
- First class fruit (non export) has some small defects however it must have a very good taste.
- The use of the cool chain, good quality control systems and fast transport

Harvest and Post Harvest

- Keep produce cool (out of the sun and hot sheds)
- Keep fresh produce moist to stop drying out
- Handle with care to prevent bruising and other damage
- Prevent sap damage at harvest
- Do not over pack so that the bottom produce is damaged
- Use packaging that increases shelf life and prevents transport damage
- Use packaging that make products look appealing

Harvesting

Harvesting maturity is determined by size, colour and flavour

Suitable maturity for both long shelf life and good eating quality



Packing

The fruits are graded manually or mechanically

Simple solutions work well



Transport

- Fruits are normally shipped by refrigerated transport to retain the colour, prolong shelf life and ensure an excellent taste.
- Local fruit is transported by truck.
- Export fruit is air freighted and the time from harvest to being sold at the export market is 3 days.
 - Day 1 - Harvest and Pack
 - Day 2 - Inspection and Airfreight
 - Day 3 - Selling at market to the customer

Export tropical fruit has to be airfreighted due to short shelf life



Producer Marketing Organisations

The key to developing successful supply chains is establishing successful producer marketing organisations

- Many small farms are more effective than a big farm
- Consist of producer members
- Can be multi commodity –good for smallholder poly systems
- Can access multiple markets – local, national and international
- Many producers means more reliable supply

Producer Marketing Organisations

The key to developing successful supply chains is establishing successful producer marketing organisations

- Forum for producers to learn off each other
- Social networks
- Training from experts
- Shared soil tests
- Bulk buying discounts
- Sharing expensive equipment

Use Multiple Organic Markets

- Local and Farmers markets
- Local shops, restaurants, hotels etc
- Supermarkets
- Farm Gate Sales
- Home delivery and CSA
- Food Coops
- Agents and Merchants at Wholesale Markets
- Exports

Thank You

