Digital Innovation of Sweet Potato Supply Chain

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Leadership Experience

- Apply technology to entire process supply chain
  - include a rating system and optimize packing, processing, and storage process
  - business mode integrate “production and sales”

- Develop the farm enterprise system
  - optimize yields by combining traditional, technological, and scientific techniques
  - contract farming area from 333 hectares to 1,000 hectares

Contribute to the influence of the social state

- Improve the aging problem in agricultural village
  - make breakthrough innovations to help senior farmers regain passion
  - attract youth return and learn to farm
  - the number of contract farmers increased from 200 in 2011 to more than 1,000 in 2021

We have the largest sweet potato production.
Sweet Potato Supply Chain
### Chronology of Events

- **1983**: Founding of Yi Tai Agricultural Products Shop
- **1991**: Founding of marketing and processing departments of Europe sweet potato
- **1992**: Founding of K.K. ORCHARD
- **2001**: Successfully developed patented product "Frozen Baked Sweet Potato", and exported it to Japan.
- **2016**: 3rd generation of K.K. ORCHARD corporate identity
- **2020**: Founding of K.K. ORCHARD Headquarter

### Delivery to Your Table

- **01**: Frozen Baked Sweet Potato
- **02**: Sweet Potato Fries
- **03**: Sweet Potato Waffle Fries
- **04**: Golden/Purple Sweet Potato Ball
- **05**: Korean Sweet Potato
- **06**: Happy Sweet Potato
- **07**: Sweet Potato Pearl
- **08**: Sweet Potato Cake
- **09**: Sweet Potato Cake
- **10**: Sweet Potato Cake

### TAGERT: Partners of customer product development (sweet potatoes)
From Farm to your Table - 16 Levels

1. Grow Healthy Sprouts
2. Stem Cultivation
3. Species Preservation
4. Plug Tray Plantation
5. Cultivation at High Elevation
6. Greenhouse Cultivation
7. Farm Acclimation
8. Seedling Cultivation
9. Soil & Land Preparation
10. Transplant the Seedlings
11. Flip Vines and Weed the Farm
12. Trim Vines
13. Harvest
14. Sort and Classify
15. Sort and Wash
16. Packing and Delivery
Challenges

(Agricultural product supply chain)

● Climate change
Unstable weather causes large changes in profit.

● Aging population
The culture attached much attention to industry and business instead of agriculture. In Taiwan, the agricultural labor force is aging, their average age is 64.

● Decrease of cultivated land
Rapid industrialization leads to the serious agricultural lands fragmentation. The cultivated land has been drastically reduced that each farmer only has 0.4 hectare cultivated land in Taiwan.
Challenges
(Digitization of the agricultural supply chain)

- Behavioral change
- Environmental conditions
- Huge system construction cost
How We Do It
Digital Supply Chain Blueprint

Before

Traditional labor

automation

Intelligent

After
Digital Supply Chain Blueprint

Transparency. Humanize. Visualization

Supply Chain Management Platform

Collect

Forecast

Analysis

Statistics

Order → Material requirement → Intesification → Harvesting & Grading → Manufacture → Transportation

Planting → Production → Logistics

External information

Internal management

Customer

Dealer

Material supplier

Raw material supplier

Material supplier

Dealer

Customer

External information

Internal management
Digital Supply Chain Effectiveness

In 2019, we’ve

- Worked over 800 hectare with 712 Contract Farmers with K.K.ORCHARD Brand
- Harvested 30,000 ton Fresh Sweet Potato
- Sorted 300 ton/day
- 5,000 ton Fresh Sweet Potato
- 5,000 ton Frozen Baked Sweet Potato
- 2,000 ton Frozen Fries
- 1,000 ton other Processed Food

From Farm to Your Table
After COVID-19
Online shopping drives niche markets

The Long Tail Module
recharted by Jamo
www.jamowoo.com

Product diversification

K.K. ORCHARD ESG - Sweet potato circular economy
Various professionals enter agriculture
Supply chain co-prosperity
Maximize resource utilization
Thank You