

# Topic 1: Quality Agriculture

## Presentation:

# Quality Agriculture Development Program

**Council of Agriculture**

**Executive Yuan**

**2 November 2009**

# Overview

---

- 1. Introduction**
- 2. Analysis of Present Situation**
  - A. Industry Overview**
  - B. Promotion Effort Results**
  - C. Future Challenges**
- 3. Promotion Strategy**
  - A. Development Blueprint & Timeline**
  - B. Innovative Strategies & Action Plan**
  - C. Investment**
- 4. Final Remarks**
  - A. Conclusions**
  - B. Topics for Discussion**

# 1. Introduction (1/3)

Founded on concepts of **health**, **efficiency**, and **sustainability**, the COA proposed the **Quality Agriculture Development Program** to address globalization & trade liberalization, ensure the sustainability of Taiwan's agriculture and make the most of Taiwan's extant advantages in agro-tech & geography. The Program was approved by the Executive Yuan on 7 May 2009 under a major initiative promoting biotech, tourism, green energy, medical care, quality agriculture and cultural innovation. The Program presents an important, forward looking vision for Taiwan's agricultural sector that creates important new economic value and strengthens Taiwan's 'soft power' position.

# 1. Introduction (2/3)


## A Diversified Agriculture

---

 Covering both local farmers' markets and world-class orchid export industry.


 Covering both products for the general public and high-value trendy products.

 Covering both traditional culture and agro-tourism.

 Though low in production value, the new agriculture can have the strong effect of:

\* fighting business cycles.

\* adding value domestically.

 The new agriculture is not just a primary industry, but also a green and service industry.

*Evolving from a production industry  
toward a lifestyle industry*

# 1. Introduction (3/3)

## Themes and Visions of Quality Agriculture

Healthful  
Agriculture

Strengthening quality certification to make Taiwan a toxin-free island

Excellent  
Agriculture

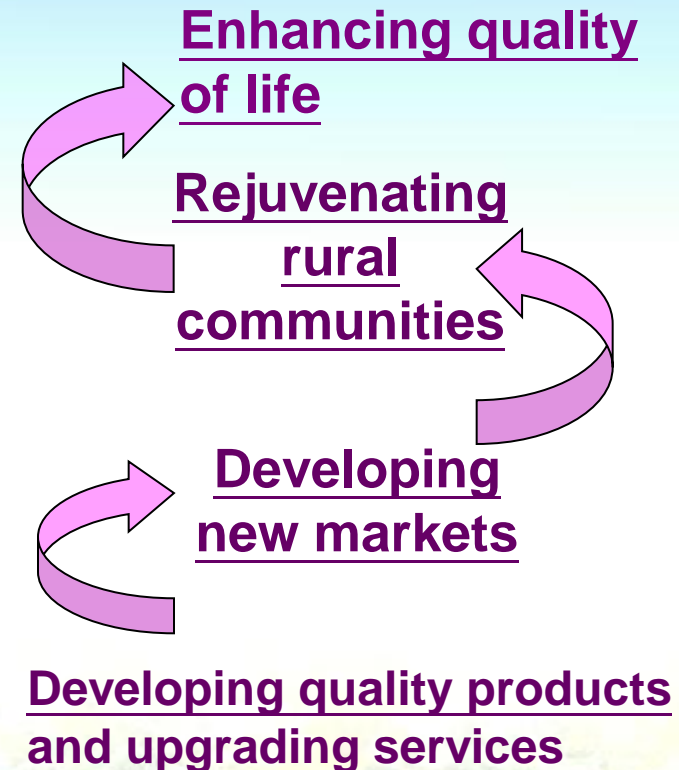
Advancing R&D to make Taiwan an island of excellent agricultural technology

LOHAS  
Agriculture

Rejuvenating rural life to make Taiwan a LOHAS island

3 Themes

3 Visions



Pushing a chain reaction of improvement

## 2. Analysis of Present Situation

### A. Industry Overview

### B. Promotion Effort Results

### C. Future Challenges

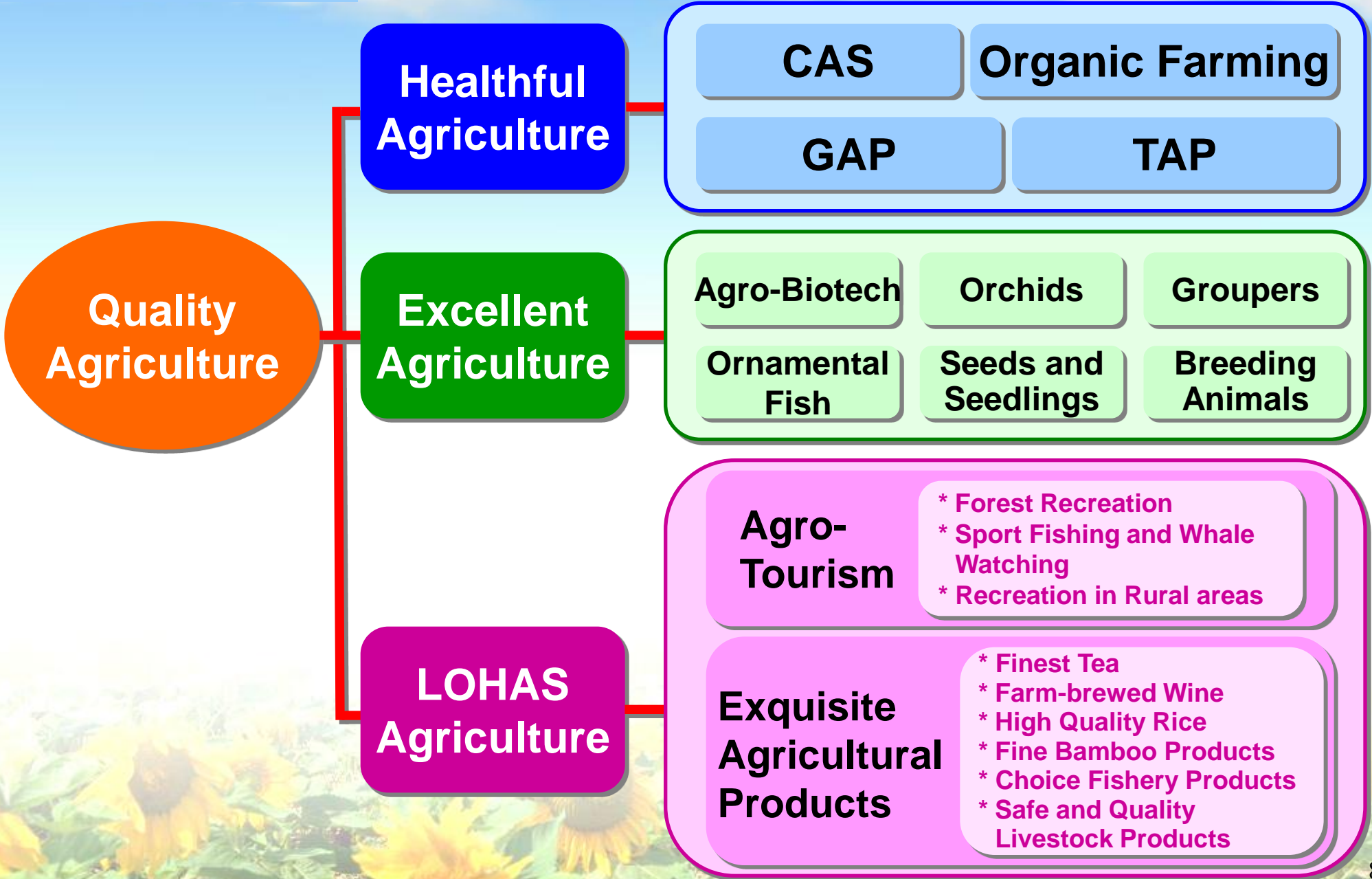
# The Taiwan Agricultural Sector Today

 Value of Taiwan agricultural production in 2008 totaled NT\$417.5 billion (US\$12.729 billion), accounting for 1.69% of national GDP

| Category              | Production Value<br>(in NT\$ billions)  | Percentage of<br>national GDP |
|-----------------------|---|-------------------------------|
| Crop Products         | <b>NT\$179.1</b><br>(US\$5,460 million) | <b>1.20%</b>                  |
| Forestry<br>Products  | <b>NT\$0.5</b><br>(US\$16 million)      | <b>0.01%</b>                  |
| Fisheries<br>Products | <b>NT\$91.8</b><br>(US\$2,799 million)  | <b>0.27%</b>                  |
| Livestock<br>Products | <b>NT\$146.1</b><br>(US\$4,454 million) | <b>0.21%</b>                  |

(Source: Taiwan Agricultural Annual & Directorate-General of Budget, Accounting and Statistics)

**Note:** 1. Production value expressed in billions of NT dollars and millions of US dollars.  
2. NT\$:US\$ exchange rate based on average 2008 annual exchange rate of 32.8:1.  
3. GDP calculated as national productivity less the value of semi-finished goods.



# Quality Agriculture

## Healthful Agriculture

CAS      Organic Farming

GAP      TAP

## Excellent Agriculture

Agro-Biotech      Orchids      Groupers

Ornamental Fish      Seeds and Seedlings      Breeding Animals

## LOHAS Agriculture

**Agro-Tourism**

- \* Forest Recreation
- \* Sport Fishing and Whale Watching
- \* Recreation in Rural areas

**Exquisite Agricultural Products**

- \* Finest Tea
- \* Farm-brewed Wine
- \* High Quality Rice
- \* Fine Bamboo Products
- \* Choice Fishery Products
- \* Safe and Quality Livestock Products

# Theme 1: Healthful Agriculture – Current Situation

Of the 820,000 hectares farmed in Taiwan in 2008, **25,000 (3%)** were certified under **organic, TAP or GAP programs.**



## Theme 2: Excellent Agriculture – Current Situation

Value generated by 6 subsectors, including **agricultural biotech, orchids, groupers, ornamental fish, seeds and seedlings, and breeding animals** totals approximately **NT\$21.06 billion (US\$642 million)**.

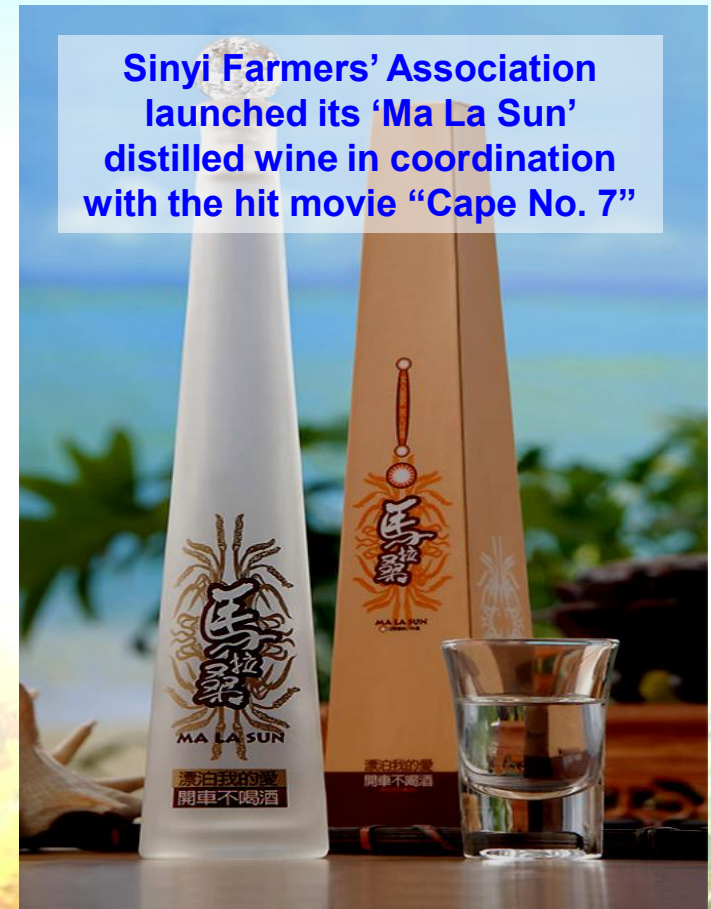
Taiwan cultivates greatest variety of orchids in the world



Taiwan raises 6 of the 7 varieties of grouper able to be artificially propagated.

## Theme 3: LOHAS Agriculture – Current Situation

- ☑ **Develop in-depth agro-tourism** - including recreational agriculture, rural tourism, forest & eco-tourism, and recreational sea fishing - attracts some 17 million visitors annually and generates approx. NT\$12.51 billion (US\$381 million) in revenues.
- ☑ **Taiwan's exquisite agricultural products** including – tea, wine, rice, bamboo products, specialty seafood and high-end livestock products – generate approx. NT\$7.2 billion (US\$220 million) in annual revenues.



## 2. Analysis of Present Situation

A. Industry Overview

**B. Promotion Effort Results**

C. Future Challenges

# Theme 1: Healthful Agriculture – Promotion Results

## Organic Farming

- ✓ Certified Organic Farmers: **1,029**;
- ✓ Certified Organic Farmland: **2,509 ha.**;
- ✓ Annual Production Value: **at least NT\$1.5 billion** (US\$46 million).

## CAS Products

- ✓ **4 domestic organizations** certified to execute CAS certification activities;
- ✓ CAS certified facilities: **296**; CAS certified products: **6,053**; Follow-up inspections: **639**; items targeted by random inspections: **2,311**;
- ✓ Annual Production Value: **NT\$42 billion** (US\$1.28 billion).

## GAP

- ✓ Facilitated **1,275 production units** earning GAP certification;
- ✓ Total area producing GAP products: **170,000+ ha.**;
- ✓ Annual Production: approx. **350,000 tons**

## TAP

- ✓ **155** TAP ag product categories already announced;
- ✓ **14** domestic organizations approved to execute TAP certification;
- ✓ **1,569** domestic ag producers currently hold TAP approval; **126** TAP certified products are currently commercially available.

## Theme 2: Excellent Agriculture – Promotion Results (1/2)

### Agro-Biotech

- ✓ A research institute for agricultural science and technology currently in planning stage. Three formal planning meetings have been held to date.
- ✓ 164 projects related to the “Development Scheme of Industrialization for Agricultural Biotechnology” are in various stages of development. Also, 15 projects to date have been approved under the recently passed law “Regulations for Industrialization Promotion of Agricultural Biotechnology”.

### Orchids

- ✓ 2 progress report and review meetings have been held to discuss progress on creating technical team dedicated research of key cultivated flowers and related integrated research platform.
- ✓ To support industry growth, specially-designated orchid cultivation & export districts in Taichung and Nantou Counties have been expanded by 27.6 and 5.3 hectares, respectively.
- ✓ Enhance Typhoon Morakot recovery assistance, including low-interest disaster loans up to NT\$10,000 per ping of registered land; assist with facility / equipment repair and provision of replacement orchid seedlings; training from tech advisory team on orchid rehabilitation techniques.

## Theme 2: Excellent Agriculture – Promotion Results (2/2)

### Ornamental Fish

- ✓ Planning for 2009 Ornamental Fish Exposition (Nov. 6~9 at TWTC);
- ✓ Held 2009 AquaPets Show (July 17~20) & Aquarium Landscaping Competition;
- ✓ Working to set 38 environmental impact (EI) criteria to be applied to the importation of ornamental fish.

### Groupers

- ✓ Help Pingtung County Government set Typhoon Morakot Recovery Program for the fisheries industry. Enhance cleaning & disinfection efforts, and subsidize purchase of grouper fry.
- ✓ Offer low interest loans to grouper and giant grouper farmers up to a maximum of NT\$5 & NT\$8 million, respectively.

### Seeds & Seedlings

- ✓ 3 national-level preparatory meetings already held for the 2010 Asia & Pacific Seed Association (ASPA) Convention to be held in Taiwan;
- ✓ Promote Typhoon Morakot recovery initiatives, including providing low-interest loans, helping repair / replace equipment and offering technical team disaster recovery assistance.

## Theme 3: LOHAS Agriculture - Promotion Results

### Agro-Tourism

- ✓ Promote 2 meals + 1 night rural leisure tour packages; should attract 120,000 visitors annually;
- ✓ Establish evaluation mechanism for recreational farms. Service quality of 12 farms already test evaluated;
- ✓ Highlight the unique diversity of 14 townships in tour packages focused on 'fashionable green living & LOHAS'.

### Coastal Fisheries Tourism

- ✓ Renovate facilities at 10 fish harbors, including Badouzi, Wushih, and Hualien. Complete bidding and contract signing to begin construction of yacht wharves at Wushih, Badouzi and Wuci.
- ✓ Help 20 district fishing associations to reposition to take advantage of recreational coastal opportunities. Plan tourism route to highlight Taiwan's traditional harbor characteristics.

### Forest & Eco-Tourism

- ✓ Select groups to plan and develop new large scale flatland forest recreational areas in Hualien (Danong & Dafu), Pingdong (Linhou & Sihlin Farm), Jiayi (Dongshih & Aogu Farm) Counties.

### Exquisite Products

- ✓ Conduct formal research into the packaging & fresh freezing technologies needed to successfully launch and market frozen seafood gift products;
- ✓ Join the 2009 'Taiwan Trade Fair in Nanjing', with 8 local agricultural associations expected to attend and promote products.

## 2. Analysis of Present Situation

**A. Industry Overview**

**B. Promotion Effort Results**

**C. Future Challenges**

# Future Challenges (1/2)

## i. Impact on Agricultural Sector of Global Climate Change & Natural Disasters

- Agricultural losses due to Typhoon Morakot were serious, affecting ag production, livelihoods and the rural environment. Seed/Seedling, breeding animals, orchids, grouper and forest & eco-tourism all suffered particularly serious damage. As such, the current situation, objectives, target measures and expected growth targets for each require proper adjustment.

## ii. Increased Competitive Pressures due to Trade Liberalization and other Market Factors

- The domestic agricultural sector faces myriad challenges, including global trade liberalization, increasingly sophisticated technologies, improving international communication / transportation networks, and the comparatively low prices of agricultural products sourced from Mainland China & Southeast Asia.

## Future Challenges (2/2)

### iii. Rapid Changes in Agricultural Product Consumption Habits

- Changes in consumer priorities and expectations with regard to agricultural products (including greater awareness of sanitation & safety, attention to branding, focus on natural / healthy products, attention to quality details, increasing variety/diversity and emphasis on convenience) reflect the general rise in personal income, changes in social structures and increasing quality of life. In response to such, there is a perceived immediate need for a new commercial operations model for the agricultural sector that allocates and integrates responsibility for R&D, production, sales & marketing, and logistics/channel management.

### iv. Small Scale Agriculture Hampers Effective Production Operations

- Taiwan agriculture is largely typified by small landholdings (on average, farmers cultivate 1 hectare of land) and diversity in terms of produce. Effective promotion of GAP, TAP, and organic certifications is frequently hampered by pesticide residues in the surrounding environment and polluted irrigation water. Difficulties encountered in obtaining large scale tracts of land suited to cultivation also make the promotion of specialized agriculture difficult.

# 3. Promotion Strategy

**A. Development Blueprint & Timeline**

**B. Innovative Strategies & Action Plan**

**C. Investment**

# Theme 1: Healthful Agriculture



## Organic Farming

**The objective is for Taiwan to achieve toxin-free status.**

By 2012 organic products acreage will be doubled to 5,000 ha. with a total value of NT\$ 3 billion (US\$ 91 million).

**Growth in next 4 to equal that of past 10 years**



## GAP

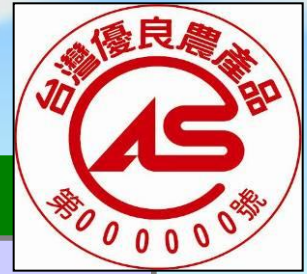
**GAP is the basis of toxic-free agriculture.**

By 2012 the acreage for GAP fruit and vegetables will reach 30,000 ha. with a production value of NT\$12.6 billion (US\$384 million).

## CAS

**This labeling system ensures the safety of processed products.**

By 2012 the CAS-marked products will reach a value of NT\$ 53 billion (US\$ 1.6 billion).



## TAP

**This system is to ensure compliance with international safety standards.**

By 2012 the value of products certified under this system will reach NT\$5.4 billion (US\$165 million).



## Theme 2: Excellent Agriculture

As illustrated in the areas of Agricultural biotechnology, orchids, groupers, ornamental fish, seeds/seedlings, and breeding animals, agricultural technology in Taiwan has already achieved remarkable results.

Total production value (2008): NT\$21.06 billion (US\$642 million)

⇒ (est. 2012): NT\$28.67 billion (US\$874 million)

⇒ 2012 – production value of Agro-biotech & ornamental fish to double;

⇒ 2014 – production value of orchids to double;

⇒ 2015 – production value of groupers to double.

Taiwan continues to develop new orchid varieties with distinctive flower, coloration and competitive characteristics



## Theme 3: LOHAS Agriculture

### Develop in-depth Agro-Tourism

- Forest recreation
- Sport fishing and whale viewing
- Recreation in rural areas

### Goals for 2012:

- ⇒ More than 30 million visitors
- ⇒ Market value will be doubled to about NT\$ 19.9 billion (US\$ 607 million)
- ⇒ 25,000 new job openings created by end of 2012.

### Exquisite agricultural products

- Finest tea
- Farm-brewed wine
- High quality rice
- Fine bamboo products
- Choice fishery products
- Safe and quality livestock products

### Goals for 2012

- ⇒ Production value: NT\$ 12.3 billion
- ⇒ 4,500 new job openings created by end of 2012.

# 3. Promotion Strategy

**A. Development Blueprint & Timeline**

**B. Innovative Strategies & Action Plan**

**C. Investment**

**New Agricultural Management**

**New Markets**

**New Agricultural Technology**

- ✓ Molecular marker breed selection;
- ✓ Use advanced communications technologies to facilitate further operations automation;
- ✓ Develop bio-pesticides and bio-fertilizers;
- ✓ Develop vaccines & disease screening technology

- ✓ Enlarging farming scale through the small landlord-turned large tenant program;
- ✓ Using creative culture and tourism to develop agro-tourism;
- ✓ Promoting agricultural upgrading with the aid of branding;
- ✓ Integrating all R&D resources;
- ✓ Establish dedicated digital sales & marketing TV network to promote agricultural products;
- ✓ Promoting distance marketing and service by using information technology.

- ✓ Healthful products for senior citizens;
- ✓ Products for weddings and high-income people;
- ✓ Products for festivals and as gifts;
- ✓ Products for high-income districts in mainland China and foreign targeted markets.

strategies of implementation

**Quality Agriculture**

Rural Renewal

Coastal Revival

Support Measures

60,000 ha. Afforestation Program

ICT + Supportive Environment

Diversified Ecology and Culture

High Quality of R&D Human Resources

# 3. Promotion Strategy

**A. Development Blueprint & Timeline**

**B. Innovative Strategies & Action Plan**

**C. Investment**

# Theme 1: Healthful Agriculture - Investment

(Unit NT\$ millions)

| Item             | GAP | Organic Farming | CAS   | TAP | TOTAL        |
|------------------|-----|-----------------|-------|-----|--------------|
| 2009~2012 Budget | 444 | 1,221           | 1,120 | 656 | <b>3,441</b> |



# Theme 2: Excellent Agriculture - Investment

(Unit NT\$ millions)

| Item             | Agro-Biotech | Orchids | Ornamental Fish | Groupers | Seeds / Seedlings | Breeding Animals | TOTAL |
|------------------|--------------|---------|-----------------|----------|-------------------|------------------|-------|
| 2009~2012 Budget | 910          | 1,190   | 1,820           | 1,953    | 219               | 168              | 6,260 |

Management Services Center,  
COA Pingtung Agricultural  
Biotechnology Park



# Theme 3: LOHAS Agriculture - Investment

(Unit NT\$ millions)

| Item             | Develop in-depth Agro-Tourism | Exquisite Agricultural Products | TOTAL  |
|------------------|-------------------------------|---------------------------------|--------|
| 2009~2012 Budget | 13,682                        | 864                             | 14,546 |



# Investment Totals

(Unit NT\$ millions)

| Item                | Healthful | Excellent | LOHAS  | TOTAL         |
|---------------------|-----------|-----------|--------|---------------|
| 2009~2012<br>Budget | 3,441     | 6,260     | 14,546 | <b>24,247</b> |

\*Budget for healthful agriculture used primarily in system creation and production & sales management activities.



# 4. Final Remarks

## A. Conclusions

## B. Topics for Discussion


## Quality Agriculture – Production Value

⇒ 2008: NT\$93.4 billion (US\$2.848 billion)

⇒ 2012: NT\$134.9 billion (US\$4.113 billion)

Market segments slated to double their present value include:

- ✓ Organic Farming, TAP, Agricultural Biotechnology, GAP, Ornamental Fish, Agro-tourism, Exquisite Agricultural Products;
- ✓ Growth delays caused by Typhoon Morakot are expected to delay doubled growth targets for the Orchids and Groupers to 2014 & 2015, respectively.

 Accumulated number of job openings created between 2008 and 2012: 53,000



## **The quality agriculture program will make Taiwan agriculture:**

- A healthful industry in the interests of all the people.**
- An excellent industry with cutting-edge science and technology.**
- A LOHAS agriculture that provides a comfortable and happy life.**



# 4. Final Remarks

## A. Conclusions

## B. Topics for Discussion

# Points for Discussion

- i. How may we best employ current technologies to achieve healthful agriculture for all?;**
- ii. How may we best develop technologically-advanced excellent agriculture?; and**
- iii. How may be best use current technologies to a create comfortable and fashion-conscience LOHAS agriculture?**

# The End

## We Welcome Your Comments

