The Framework of Agricultural Policy and Recent Major Agricultural Policies in Taiwan

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Taiwan
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Introduction

- Taiwan is located in subtropics
- Average temperature 21~23 °C
- Island: 35,961 Km²; 151km wide, 368km long
- Mountainous: Central mountain range (64%); Plains (36%) mainly on western coast
- Small arable land: 808,294 ha or 22% is used for agriculture and food production
Agricultural development in Taiwan has taken a unique path. In the early years,

– Carried out land reform “land to the tiller”
– Policy adjustments as agriculture progressed
  • to spur greater productivity
  • to develop exports of raw and processed agricultural goods

These developments in turn ushered in an era of rapid economic growth
Agriculture in Taiwan

- Agricultural GDP
- Agricultural population
- Farm household and size
- Agricultural production and composition
- Agricultural products
- Farm household income
Agricultural GDP and its share

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>National GDP (A)</td>
<td>1,811</td>
<td>4,958</td>
<td>9,930</td>
<td>13,745</td>
</tr>
<tr>
<td>Agricultural GDP (B)</td>
<td>133</td>
<td>182</td>
<td>189</td>
<td>241</td>
</tr>
<tr>
<td>% (B/A)</td>
<td>7.33</td>
<td>3.68</td>
<td>1.90</td>
<td>1.75</td>
</tr>
</tbody>
</table>

Unit: Billion NT$  

Source: Directorate-General of Budget, Accounting and Statistics (DGBAS), Executive Yuan, ROC (Republic of China)
## Agricultural population

<table>
<thead>
<tr>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total population (A)</td>
<td>18,136</td>
<td>20,557</td>
<td>22,340</td>
<td>23,055</td>
</tr>
<tr>
<td>Agricultural population (B)</td>
<td>5,101</td>
<td>4,206</td>
<td>3,783</td>
<td>2,962</td>
</tr>
<tr>
<td>% (B/A)</td>
<td>28.13</td>
<td>20.46</td>
<td>16.93</td>
<td>12.85</td>
</tr>
</tbody>
</table>

*Source: Ministry of Interior; DGBAS; Agriculture and Food Agency, COA, Executive Yuan, ROC*
### Agricultural employment number by age group

Unit: 1000 persons, %

<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>1,093</td>
<td>918</td>
<td>708</td>
<td>555</td>
<td>542</td>
</tr>
<tr>
<td>Age Group (old years)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15 ~ 34</td>
<td>22.3</td>
<td>17.7</td>
<td>13.9</td>
<td>9.7</td>
<td>10.2</td>
</tr>
<tr>
<td>35 ~ 64</td>
<td>72.8</td>
<td>74.8</td>
<td>75.3</td>
<td>74.0</td>
<td>72.7</td>
</tr>
<tr>
<td>Over 65</td>
<td>4.9</td>
<td>7.5</td>
<td>10.8</td>
<td>16.3</td>
<td>17.1</td>
</tr>
</tbody>
</table>

Source: DGBAS, Executive Yuan, ROC
## Farm household and size

<table>
<thead>
<tr>
<th>Categories</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cultivated fields (1000ha) (A)</td>
<td>826</td>
<td>823</td>
<td>815</td>
<td>813</td>
</tr>
<tr>
<td>No. of households (*1000) (B)</td>
<td>751</td>
<td>748</td>
<td>744</td>
<td>777</td>
</tr>
<tr>
<td>Full-time (%)</td>
<td>21.5</td>
<td>21.7</td>
<td>21.9</td>
<td>24.2</td>
</tr>
<tr>
<td>Part-time (%)</td>
<td>78.5</td>
<td>78.3</td>
<td>78.1</td>
<td>75.8</td>
</tr>
<tr>
<td>Average farm size (ha) (A/B)</td>
<td>1.099</td>
<td>1.10</td>
<td>1.096</td>
<td>1.047</td>
</tr>
<tr>
<td>Farm size over 3.0 ha (%)</td>
<td>2.90</td>
<td>3.47</td>
<td>3.66</td>
<td>2.35</td>
</tr>
</tbody>
</table>

Source: DGBAS; Agriculture and Food Agency, COA. Executive Yuan
## Agricultural production and composition

### Agricultural production values and compositions

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Values</th>
<th>Compositions (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Crops</td>
</tr>
<tr>
<td>1981</td>
<td>238,467</td>
<td>46.23</td>
</tr>
<tr>
<td>1991</td>
<td>323,336</td>
<td>45.69</td>
</tr>
<tr>
<td>2001</td>
<td>352,690</td>
<td>45.58</td>
</tr>
<tr>
<td>2011</td>
<td>475,476</td>
<td>44.17</td>
</tr>
</tbody>
</table>

Unit: million NT$

Source: COA, Executive Yuan, ROC
# Agricultural products

## Values of crops production and their compositions

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Values/a</th>
<th>Composition (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Rice</td>
<td>Coarse Grain</td>
</tr>
<tr>
<td>1981</td>
<td>110,235</td>
<td>42.1</td>
</tr>
<tr>
<td>1991</td>
<td>147,735</td>
<td>26.2</td>
</tr>
<tr>
<td>2001</td>
<td>160,759</td>
<td>20.4</td>
</tr>
<tr>
<td>2011</td>
<td>210,012</td>
<td>18.2</td>
</tr>
</tbody>
</table>

/a values based upon current price

Source: COA, Executive Yuan, ROC
## Farm household income

### Income of farm and non-farm household

<table>
<thead>
<tr>
<th>Year/categories</th>
<th>1981</th>
<th>1991</th>
<th>2001</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Per Household income&lt;sup&gt;a&lt;/sup&gt;</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Farmers (A)</td>
<td>244,424</td>
<td>572,269</td>
<td>881,298</td>
<td>884,547</td>
</tr>
<tr>
<td>Non-farmers (B)</td>
<td>318,808</td>
<td>736,750</td>
<td>1,136,274</td>
<td>1,142,343</td>
</tr>
<tr>
<td>% (A/B)</td>
<td>76.7</td>
<td>77.7</td>
<td>77.6</td>
<td>77.4</td>
</tr>
<tr>
<td>Sources of income</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agricultural income (D)</td>
<td>64,457</td>
<td>122,360</td>
<td>163,158</td>
<td>193,133</td>
</tr>
<tr>
<td>% (D/A)</td>
<td>26.4</td>
<td>21.4</td>
<td>18.5</td>
<td>21.8</td>
</tr>
<tr>
<td>Per capita income</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Farmers (E)</td>
<td>43,882</td>
<td>124,136</td>
<td>224,249</td>
<td>248,468</td>
</tr>
<tr>
<td>Non-farmers (F)</td>
<td>69,761</td>
<td>180,576</td>
<td>320,981</td>
<td>353,667</td>
</tr>
<tr>
<td>% (E/F)</td>
<td>62.9</td>
<td>68.7</td>
<td>659.9</td>
<td>70.3</td>
</tr>
</tbody>
</table>

<sup>a</sup> income values based upon current prices

Source: DGBAS, Executive Yuan
Agricultural development are influenced greatly by

- **Internal factors**
  - Changes in consumer demand and tastes
    - Increased focus on food quality and safety
  - Declined agricultural human resource due to urbanization

- **External factors**
  - Highly liberalized economy with rapid regional economic integration
  - Climate change
    - Frequent weather related disasters which threatens agricultural productivity
  - Fast advancement of key agricultural and related technologies
    - Leveraging high tech for agriculture has become a trend
Facing the new challenges, we will

- leverage industry value chain to expand the breadth and depth of agriculture
- replace the traditional thoughts of production-oriented agriculture to value-added system
- develop a holistic plan and connect the plan with human, earth, water, and industry
The Framework of Agricultural Policy

- Vision
- Mission
- Strategy
- Strategic Programs
Agricultural Policy of Taiwan

Vision

- To transform agriculture into a young, dynamic and highly competitive industry
- To ensure a healthy, efficient and sustainable agriculture for all citizens
Mission

- Farmers – efficiency, profits and welfare
- Consumers – freshness, quality, safety and healthy
- Environment – landscape, energy-saving and sustainability
- Citizen of the world – clean environment, harmony and green energy
Strategy

- Establishing plans to support "Superior Delicate Agriculture – Healthy and Excellent Program"
- Addressing agricultural adjustments for climate change
- Promulgated and Promoting “Rural Regeneration Act”
- Carrying on “Golden Decade-LOHAS Agriculture” program
LOHAS Agriculture: Strategic Programs

- Raising the industry’s competitiveness and leading the internationalization of Taiwan’s agriculture
- Adjusting the structure of agriculture, and integrating the value-adding development of resources
- Ensuring food security, and strengthening agricultural product safety
- Vitalizing the use of agricultural resources, and ensuring sustainable development
Key points for future agricultural policies

- Competitiveness at International Level
- Adjustments of Agricultural Structure, Talent Development, Develop Value Add Resource Consolidation
- Ensure Food Security and Enhance Agricultural Products Safety
- Reactivate Agricultural Resource, Maintain Ecological Sustainability
- Strengthen Farmers’ Organization, Care for Farmers’ Well-beings
Competitiveness at International Level

- Establish agricultural specific cloud based, integrated service system
- Strengthen on early warming and adjustment to ensure stabilization of agricultural production and marketing
- Cross industry collaboration and expedite the establishment of agricultural industry value chain operation
- Promote the development and industrialization of innovative agriculture technologies to enable agricultural upgrade
Integrate with green technologies to drive the high efficiency and energy-saving innovative agricultural technology

Strengthen international agricultural business

Promote internationalization for leisure agriculture

Participate international trade negotiation, realize agriculture structural adjustments
● Adjustments of Agricultural Structure, Talent Development, Develop Value Add Resource Consolidation

➢ Improve Agricultural Talent and Operational Efficiency
  ✓ Establish retirement system for aging farmers
  ✓ Promote ‘Small Landlord, Big Tennant’
  ✓ Drive Agricultural Academy
  ✓ Establish young farmer consultation center
Combine industry development with rural rejuvenation, improve living quality of agricultural community and production environment

- Drive agricultural rejuvenation
- Establish agriculture production zone
- Create collaborative business opportunities
Ensure Food Security and Enhance Agricultural Products Safety

- Improve Domestic Food Self-Sufficient Rate, Establish Diversified Food Security Mechanisms
  - Develop diversified food production and supply system
  - Develop management system of classification of food security

- Promote Exquisite Agriculture with Traditional Cultural Elements
  - Combine origin characteristic of agricultural product with traditional and local culture
  - Assist the development of diversified utilization and innovative packaging
  - Develop tea industry as Exquisite Agriculture
  - Promote efficient high-value livestock production systems
Promote ‘Consume at the Production Location’ and Diversified Marketing Channels

- Develop new demand of local produced products
- Promote the concept of ‘Consume at the Production Location’
- Promote dietary education
- Drive Rational Fertilization and a Friendly Business Model, Create Low Carbon Green Energy Environment
- Assist farmers in rationalizing fertilization use
- Reduce energy consumption and carbon reduction in livestock industry, prevent pollution and reuse
Drive Certification System for Agricultural Products

- Promote multiple recognized certification system
- Drive and establish localized specialties and value-added livestock marketing system

Improve Animal and Plant Health Inspection and quarantine

- Sound adjustment of FMD prevention measure
- Strengthen animal disease detection, warning
Pesticides and Animal Drug Safety Inspection with International Standard

- Define drug testing guidelines
- Establish testing stations
- Strengthening agricultural pesticide residue detection technology development and the integration of surveillance systems
- Leverage advanced technology to test and monitor pesticide usage (field, work areas, market)
✓ Develop test plan based on production zone, production date and product traits
✓ Outline process to handle drug test failed products to prevent flow into the marketplace
✓ Determine penalty for violators (training, legal actions)
✓ Conduct drug test and heavy metal testing for unlisted fishery products to ensure sea food safety
● Reactivate Agricultural Resource, Maintain Ecological Sustainability

➢ Adjust Farming Systems, Promote Diversified Food Production
  ✓ Strengthen the promotion of the continuous fallow reactivation
  ✓ Encourage the fallow farmland diversified use
➢ Preserve Premium Agricultural Land and Focus on ‘Agricultural Land for Agricultural Usage’
  ✓ Plan out agricultural land resource, classify agricultural land
  ✓ Develop long term agricultural land resource survey system
  ✓ Maintain premium agricultural land and resource
  ✓ Enhance communication between departments to support local management of premium land

➢ Promote Rational Planning of Quantity and Quality of Agricultural Water
  ✓ Promote drought resistant crops for dry land
  ✓ Plan rational usage of agricultural water
  ✓ Establish monitoring and warning systems to handle water quality and emergency management
- Improve and upgrade Irrigation Facilities
  - Leverage eco-friendly system when upgrading irrigation systems
  - Improving and updating irrigation and water conservancy facilities
  - Expand drought resistant crops with modern management
  - Rezone with rejuvenation of agricultural community
  - Improve irrigation and drainage channels of prior rezoned land
  - Monitor irrigation water quality and management survey facilities
Strengthen the Conservation of Fishery Resources, Lead Fishery Industry for Sustainability

- Enhance aquaculture in harmony with the environment
- Expedite recovery of fishing resource and sustainable utilization
- Participate and cooperate in conservation of international fishery resources
➤ Strengthen Afforestation
   ✓ Strengthen reforestation and restoration of degraded coastal woodland forest
   ✓ Maintain natural habitat
   ✓ Promote afforestation
   ✓ Cash reward for hillside and plains afforestation
   ✓ Strengthen management of afforestation and sustainability

➤ Establish Forest and Sustainable Development of Natural Resources
   – Strengthen woodland and sustainable forest management
   – Maintain natural ecosystems
Strengthen Animal Protection and, Implement Pet Management

- Enhance law enforcement intensity and monitoring
- Enhance pet registration and sterilization
- Reduce stray cats from the beginning
- Strengthen public animal shelters and quality
- Promote economic and humane treatment for laboratory animals
Promote Holistic Watershed Conservation and Disaster Prevention

- Strengthen watershed sediment disaster management
- Combine hardware and software on disaster prevention
- Strengthen local voluntary disaster prevention capabilities
- Integrate advanced technologies to enhance landslide warning system
- Promote "preventive management" and localize the "self-management" policies
- Provide technical consultation on conservation of water and soil
- Accelerate the overall state-owned forests, watershed conservation
● Strengthen Farmers’ Organization, Care for Farmers’ Well-beings

➢ Taking Care of Farmers

✓ Provide relief due to agricultural natural disaster and impact by imported products

✓ Subsidize fishing boats oil

✓ Guarantee purchase price

✓ Subsidize idled season for fishermen

✓ Release cash benefits for aging farmers

✓ Subsidize allowances to farmers and fishermen children schooling expenses
➢ Plan Income Support System for Farmers and Agricultural Insurance
  ✓ Design policy adjustments to support agricultural income support system
  ✓ Plan agricultural and vessels insurance

➢ Strengthen Operational Efficiency and Service Functions of Farmers’ Organizations

➢ Improve Agricultural Financial System
  ✓ Promote jointly use of agriculture and fishery information system
  ✓ Develop sound credit department of farmers and fishery organizations
Conclusion

• To promote the industry, along with the restructuring of agriculture resources in order to increase its competitiveness

• To integrate with related primary, secondary and the third industries to drive innovation and extend the scope of agriculture

• To advance agriculture, leveraging business intelligent information and green technologies to increase food production

• To transform agriculture toward green focused operation and promote service-oriented development