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 Km^2 ; 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

Agricultural GDP and its share Unit: Billion NT$				
Categories	1981	1991	2001	2011
National GDP (A)	1,811	4,958	9,930	13,745
Agricultural GDP (B)	133	182	189	241
% (B/A)	7.33	3.68	1.90	1.75
Source: Directorate-General of Budget, Accounting and Statistics (DGBAS), Executive Yuan, ROC(Republic of China)				

Agricultural population

Agricultural population and its share				Unit:1000 persons
Categories	1981	1991	2001	2011
Total population (A)	18,136	20,557	22,340	23,055
Agricultural population (B)	5,101	4,206	3,783	2,962
% (B/A)	28.13	20.46	16.93	12.85

Source : Ministry of Interior; DGBAS; Agriculture and Food Agency, COA, Executive Yuan, ROC

Agricultural employment number by age group

Unit: 1000 persons, %

Categories	1991	1996	2001	2006	2011
Total	1,093	918	708	555	542
Age Group (old years)；					
15 ~ 34	22.3	17.7	13.9	9.7	10.2
35 ~ 64	72.8	74.8	75.3	74.0	72.7
Over 65	4.9	7.5	10.8	16.3	17.1

Source: DGBAS, Executive Yuan, ROC

Farm household and size

Cultivated fields, number of farm household and farm size				
Categories	2007	2008	2009	2010
Cultivated fields (1000ha) (A)	826	823	815	813
No. of households (*1000) (B)	751	748	744	777
Full-time (%)	21.5	21.7	21.9	24.2
Part-time (%)	78.5	78.3	78.1	75.8
Average farm size (ha) (A/B)	1.099	1.10	1.096	1.047
Farm size over 3.0 ha (%)	2.90	3.47	3.66	2.35
Source: DGBAS； Agriculture and Food Agency, COA. Executive Yuan				

Agricultural production and composition

Agricultural production values and compositions Unit: million NT$					
Year	Total Values	Compositions (%)			
		Crops	Forestry	Fishery	Livestock
1981	238,467	46.23	1.95	21.11	30.71
1991	323,336	45.69	0.40	25.83	28.07
2001	352,690	45.58	0.17	25.55	28.70
2011	475,476	44.17	0.08	22.27	33.48
Source: COA, Executive Yuan, ROC					

Agricultural products

Values of crops production and their compositions

Unit: Million NT$; %

Year	Total Values[/a]	Composition (%)					
		Rice	Coarse Grain	Special Crop	Fruits	Vegetable	Other
1981	110,235	42.1	7.8	12.3	15.9	21.3	0.8
1991	147,735	26.2	8.8	9.6	30.5	22.2	2,7
2001	160,759	20.4	4.6	6.7	36.2	24.8	7.3
2011	210,012	18.2	4.3	5.8	35.4	28.8	7.5

[/a] values based upon current price

Source: COA, Executive Yuan, ROC

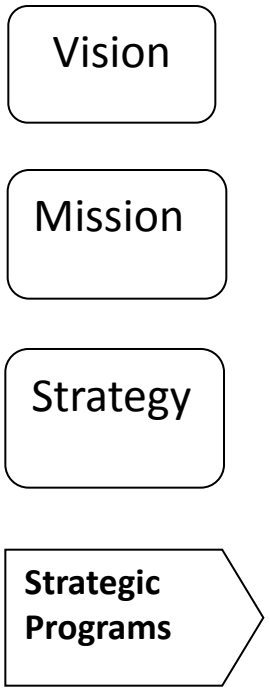
Farm household income

Income of farm and non-farm household				
				Unit: NT$
Year/categories	1981	1991	2001	2010
Per Household income [a]				
Farmers (A)	244,424	572,269	881,298	884,547
Non-farmers (B)	318,808	736,750	1,136,274	1,142,343
% (A/B)	76.7	77.7	77.6	77.4
Sources of income				
Agricultural income (D)	64,457	122,360	163,158	193,133
% (D/A)	26.4	21.4	18.5	21.8
Per capita income				
Farmers (E)	43,882	124,136	224,249	248,468
Non-farmers (F)	69,761	180,576	320,981	353,667
% (E/F)	62.9	68.7	659.9	70.3
/a 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



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 citizen

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