

The Survey of Agricultural Product Costs in China

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Summary

China is both a major producer and consumer of agricultural products in the world. In 2003, the National Bureau of Statistics (NBS) in China has surveyed main agricultural products to fulfill several objectives. These objectives include estimating the level and changes of agricultural product costs, satisfying the needs of agricultural economic accounting and analysis, reflecting the benefits of improved agricultural production efficiencies, providing objective basis for adjusting agricultural structure, increasing agricultural economic benefit and enhancing international competitiveness of Chinese agricultural products. The survey was carried out by NBS' provincial survey office in accordance with unified statistical scope, statistical caliber and calculate method.

This paper introduces the task, survey scope, survey method, survey content, data summary and estimation of main agricultural product costs in China. It also discusses the problems need be addressed in future.

I. Purpose and Task

The purpose is to estimate the cost level and changes of agriculture, forestry, pasturage and fishery, in order to meet the needs for agricultural value accounting.

Our mission is to systematically investigate, collect and collate information on the cost of major agricultural products, and to calculate the consumption quota or technical ratio of the main agricultural units. We further used the above metrics to estimate the level and changes of the cost of agriculture, forestry and pasturage products.

II. Scope and Subject

The scope covers all agricultural production and business units.

Survey subjects include all regional offices within the network of the cost of agricultural products survey system. Agricultural production units and ordinary farmers are selected separately. Each agricultural production unit identified according to the country agricultural product survey categories; general farmers are grouped according to crop, pasturage and rural household survey outlets in the village.

III. Survey Method

Survey of agricultural product cost is completed in a combined sampling survey, typical investigation and key investigation. Most samples are derived from the survey of Producer Price of Agricultural Products. Main producing varieties have been registered in the national cost survey network of uniform sampling. During on-site investigation, each county survey office is asked to send staff(s) following the investigation cycle of the selected agricultural production and management units (farmers, agricultural enterprises, etc.). Key indicators are critically reviewed, reasonably calculated; costs are proportioned to costing items according to the identified survey varieties, such as material and production services, which are actually used in production process. Then, the basic report is completed.

IV. Surveyed Items

Categories and products: At present, the survey includes wheat, rice, corn, soybeans, cotton, pig, poultry, egg and so on. Products may be adjusted to include more local main products and marketable agricultural items, according to the

national unified requirements of agricultural product survey categories and varieties, and in accordance with regional conditions and the needs of the products.. See annex 3 for details.

Survey items: including seed, feed, fertilizer, fuel, pesticides, agricultural machinery, material consumption, transportation, epidemic prevention, technical service fee and other production services expenditure. The cost of other production expenditure is estimated using the actual costs of agricultural and non-agricultural items or services.. See annex 1 for details.

V. Main Indicators

◆ Agricultural product cost includes material consumption and production service expenses.

The material consumption includes seeds, fodder, forage, fertilizers, fuel, pesticides, agricultural film, small farm tools, aquaculture drugs, water, electricity, scaffolding material fees, office costs, etc. Cost of material consumption is calculated on the actual price paid for the agricultural means of production or for other material products.

Production service expense includes repair fee, external transportation fee, productive post and postal fee, external employment and irrigation and drainage fee, outside employment machinery operation fee, breeding fee, epidemic prevention fee, technical service fee, handing over management fee, insurance, employee education expenses, travel expenses, conference fee and so on. The production service expenditure is calculated according to the actual external payment made in the production process of agriculture, forestry and pasturage.

◆ Seeds

The seeds include the quantity and expenditure on retaining seeds and purchasing seeds, samplings during the production process. Self-produced and freely supplied seeds are estimated by the fair market prices; purchased seeds are estimated according to the actual price plus other incidental expenses.

Piglet (poultry) is calculated at the actual price of the purchase. Piglets generally do not exceed 25 kg; cattle and sheep piglets are younger than one year. Seedling costs for fish including crab and shrimp are calculated according to the actual purchase price plus various freight, miscellaneous expenses.

◆ Fertilizers

Cost of fertilizer is calculated on the basis of the actual purchase price plus incidental expenses during purchase. Quantity of fertilizer is estimated based on the effective content of composition.

◆ Manure

Cost of purchased manure is calculated on the basis of the actual purchase price plus the related incidental expenses. Cost of farmer self-accumulated manure is estimated according to the market price. If there is no established market price for manure, the county survey office will use a conversion defined in a typical survey method.

◆ Agricultural film、 Pesticides、 Forage

Costs are calculated according to the actual prices. If self-made, cost is estimated based on the actual expenses.

◆ Cost of scaffolding material includes wooden poles, steel frames, wires, straws, sunshades, rain awning, etc. . For the same materials to be used more than one year, their costs are apportioned.

◆ Small farm tools are those purchased in the same year of survey and under 1000 yuan.

◆ Office supplies include paper, ink and other low value consumables, excluding a variety of equipment, appliances, houses and other assets as part of the equipment.

◆ Repair fee

◆ Employed transportation costs

◆ The productive postal and telecommunications expenses

◆ Irrigation and drainage service fee

◆ Rental of agricultural machinery work costs

◆ Technical service fee includes technical training, consultation and counseling, and the cost of supporting technical information.

◆ Management fee include books, newspapers, magazines and other expenses related to the production and internet information fees.

- ◆ Drug refers to animal husbandry and fishery production units purchased in the outside.
- ◆ Breeding fee refers to the animal breeding expenses incurred during the livestock production.
- ◆ Cost of immunization
- ◆ Fixed assets refers to the unit value of more than 1000 yuan, and their uses should be long than 1 year of production. They include housing, machinery, machinery, production facilities and other production-related equipment, utensils, tools and etc.
- ◆ Employment
- ◆ Wages of a hired employee
- ◆ Land contract fee is the lease or contract (subcontract) fee paid by the production unit or farmer to the other person for the right to farm on the land and its attachments.
- ◆ Various subsidized incomes include direct food, seed subsidies, comprehensive agricultural subsidies and agricultural machinery purchase subsidies.

VI. Summary and Projection

(1) Summary methods are methods used to generate national and provincial summaries according to varieties and projects.

(2) Calculation method is weighted averaging based

(3) The annual base cost of grain is calculated based on its seasonal cost and is adjusted by its output proportionally; the cost of poultry products is estimated by averaging the costs in the first and the second half of the year.

VII. Investigation Cycle

In principle, the investigation goes on with agricultural production survey.

① Grain, rapeseed and cotton: There are three surveys of grain on July 15, August 20 and November 30; rapeseed on July 15; cotton on November 30.

② Animal husbandry is surveyed twice a year, on July 15 and the following January 20.

③ Other agricultural products are surveyed once a year which is on the following January 20.

VIII. Data Escalation

The regional investigation offices report original data to both Department of Rural Survey at the National Bureau of Statistics and the Provincial Survey Office online. Each provincial survey office reports comprehensive data to the department of rural survey at the National Bureau of Statistics.

IX. Several Problems

Although the survey has been conducted for many years and quality of data has been improved continuously, we still face several problems:

- It is difficult to accurately estimate cost of milk and egg.
- How to design a sampling survey of imported vegetable and fruit ?
- Are there more efficient approaches to collect data?
- What specific items (indicators) should be included in the survey for particular commodities?
- How to estimate the cost of shared items such as fertilizer, water and fuel among commodities?
- How to make the best use of the data of Cost of Production surveys?

Annex:

1. Survey forms of primary agricultural products cost
2. Integrated form of cost of main agricultural products
3. Varieties of cost survey of main agricultural products of provinces

Annex1

Survey forms of primary agricultural products cost

Name of the unit or head of household: _____

Farmer code: province code □□county code□□□□township code□□□□village code□□□□household code □□□

Nor-farmer code: province code □□county code □□□□unit code □□□□

Survey varieties: _____ code: _____ 20 ____ year ____ season

Item	Unit	Code	quantity	Amount (yuan)	unit price (yuan)
Total Cost		6			
I. Material consumption		61			
1. Use of seed		6101			
Retained seed	KG	61011			
...		61012			
2. Forage	KG	6102			
...		61021			
3. Fertilizer	KG	6103			
...					
4. Fuel	KG	6104			
...		61041			
5. Agricultural film	KG	6105			
6. Pesticide	KG	6106			
7. pharmaceuticals for livestock and aquaculture	KG	6107			
8. water consumption	Ton	6108			
9. electricity	degree	6109			
10. Scaffolding Material Fee	Yuan	6110			
11. Acquisition of small Farm tools	Yuan	6111			
12. Office Supplies Purchase	Yuan	6112			
13. Other	Yuan	6199			
II. Expenditure on production services		62			
Services expenditure					
1. Repair fee	Yuan	6201			
2. External transportation	Yuan	6202			
3. Productive post and telecommunications fee	Yuan	6203			
4. External employment Irrigation and drainage	Yuan	6204			
5. External employment Machinery operating costs	Yuan	6205			
6. Breeding fee	Yuan	6206			
7. Immunization costs	Yuan	6207			
8. Technical Service Charge	Yuan	6208			
9. Handing over management fee	Yuan	6209			
10. Insurance	Yuan	6210			
11. Advertising Fee	Yuan	6211			
12. Staff Education fee	Yuan	6212			
13. Travel expenses	Yuan	6213			
14. Conference Fees	Yuan	6214			
15. Other Service charges	Yuan	6299			

续表

Item	Unit	Code	quantity	Amount (yuan)	unit price (yuan)
Additional Information:		63			
Number of piglet (poultry)	Head	610181			
Employment	day	6301			
# the Hired	day	63011			
Household Labor input	day	63012			
Average planting days	day	6303			
Land contract fee	Yuan	6305			
Income from subsidies	Yuan	6306			
# grain direct supplement	Yuan	6307			
Seed subsidy	Yuan	6308			
Comprehensive subsidy for	Yuan	6309			
agricultural materials					
Agricultural machinery	Yuan	6310			
Purchase Subsidy					
Other subsidies	Yuan	6311			
Depreciation of fixed Assets	Yuan	6312			

Annex 3

Varieties of cost survey of main agricultural products of provinces

	Wheat	Rice	Corn	Soybean	cotton	pig	cattle	sheep	chicken	egg
Beijing						※			※	
Tianjin						※			※	
Hebei	※		※	※	※	※	※	※	※	※
Shanxi	※		※		※	※		※	※	※
Neimeng			※	※		※	※	※		※
Liaoning		※	※	※		※	※	※	※	※
Jilin		※	※	※		※	※	※	※	※
Heilongjiang		※	※	※		※	※	※	※	※
Shanghai						※				
Jiangsu	※	※	※	※	※	※		※	※	※
Zhejiang		※				※			※	※
Anhui	※	※	※	※	※	※	※	※	※	※
Fujian		※				※			※	※
Jiangxi		※			※	※	※		※	※
Shandong	※		※	※	※	※	※	※	※	※
Henan	※	※	※	※	※	※	※	※	※	※
Hubei	※	※	※	※	※	※	※	※	※	※
Hunan		※		※	※	※	※	※	※	※
Guangdong		※				※	※		※	※
Guangxi		※	※			※	※		※	
Hainan		※				※			※	
Chongqing		※	※	※		※	※		※	※
Sichuan	※	※	※	※		※	※	※	※	※
Guizhou		※	※			※	※			
Yunnan		※	※	※		※	※	※	※	
Xizang										
Shaanxi	※		※	※	※	※	※	※		※
Gansu			※	※	※		※	※		
Qinghai							※	※		
Ningxia						※	※	※		
Xijiang	※		※		※		※	※		