



Food and Agriculture  
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# International Seminar on Approaches and Methodologies for Private Food Grain Stock Measurement

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## Rapporteurs' Report

By Ashok Vishandass  
CTA, AMIS-India Project, FAO  
email: [ashok.Vishandass@fao.org](mailto:ashok.Vishandass@fao.org)

## Sign Post of the Seminar

- ❖ The seminar began with an Opening Session & conducted in 5 Technical Sessions. These are:
  - ❖ **Opening Session**
  - ❖ Technical Session-1 : **Policy and Environment for Measurement of Private Food Grain Stocks**, Chair : Prof. Vijay Paul Sharma, Chairman (CACP) (2 Presentations)
  - ❖ Technical Session-2 : **Role of Private Sector in Grain Storage and Regulatory Structure for Warehousing**, Chair : Dr. T. Haque (3 Presentations)
  - ❖ Technical Session-3 : **Experiences in Measuring Private Food Grain Stocks**, Chair : Prof. Brian D. Wright (for 3 Presentations) and Ms. Sudha P. Rao (for 4 Presentations)
  - ❖ Technical Session-4 : **Recent Regional Experiences in Measuring Private Food Grains Stock**, Chair : Mr. Mukesh K. Srivastava, FAO (for 4 Presentations) and Mr RB Burman (for 3 Presentations)
  - ❖ Technical Session-5 : **Innovative Approaches for Indirect Measurement of Private Stocks**, Chair : Prof. Ramesh Chand (3 Presentations)
- ❖ In all, 22 presentations were made.
- ❖ 10 different countries participated, besides joint hosts India and FAO

# Opening Session

- ❖ Delivering inaugural address, Mr. S K Pattanayak, Secretary (A, C & FW), MoAFW, emphasised the importance of reliable and accurate information on domestic foodgrain stock availability, particularly with private institutions.
- ❖ Such information is vital for effective designing policy intervention to avert food crisis and ensure food security.
- ❖ Seminar provided a platform for experts from different countries to share their knowledge and experience to find lasting solutions to the technical challenge in measuring private food grain stock.
- ❖ Mr. Shyam Khadka, the FAO Representative in India, said that access dimension of food security requires stability of food prices for those who depend upon the market for meeting their food requirements.
- ❖ He referred the food crisis of 2007-08 spurred by surge in food grains prices, led to the setting up of AMIS by the agriculture ministers of G20 countries, which focuses on filling the gaps and shortcomings of existing agricultural market information systems at the country level.
- ❖ Prof. Abhijit Sen highlighted the growing importance of measuring foodgrain stock. He added that during initial days of AMIS, there was a reluctance to release stock data by different countries on account of non commercial consideration and economic benefits of holding information.

## Opening Session (Contd..)

- ❖ Prof. Sen shared his ideas on methodologies and estimation of stocks and said that transparency in markets brings efficiency in policy formation. According to him, building on the existing data system mainly by focusing on cost of cultivation and annual survey of industries will help in getting transparent, accurate, regular information on stock on food grains. Only after analysing the existing data, we should consider filling gaps with additional data using other appropriate approaches including modelling
- ❖ FAO Senior Statistician, Mr. Mukesh Srivastava, said that estimation of private stock is a challenging subject for statisticians, as no single survey can focus on a diverse set of economic agents involved in stocking. The foodgrain stocks are kept by farmers, households, traders, processors etc.
- ❖ He opined that such information is vital for keeping a watch on food security status of the country as well as for management of supply chain to ensure stability of foodgrain prices as well as taking timely import-export decisions.

## TS-1: Policy and Environment for Measurement of Private Food Grain Stocks

- ❖ Rationale to hold foodgrain stocks lies in stabilizing foodgrain prices, assuring “remunerative” prices to farmers and ensuring access to food staples by the poor
- ❖ Stocks allow fluctuations in production to be smoothed out as they can be drawn down to supplement supply, meaning that prices can remain more stable
- ❖ Private and public stocks play a complimentary role in determining the market price
- ❖ National Governments may hold smaller stocks of foodgrains if complete information on stocks is available
- ❖ A need to deepen the understanding on:
  - ❖ Size and share of stocks held by private agents
  - ❖ What are the incentives they face?
  - ❖ Do these incentives push them in directions that might negate the efforts of the government

## TS-1: Policy and Environment for Measurement of Private Food Grain Stocks (Contd..)

- ❖ Questions on what, when, and how to measure foodgrain stocks were posed?
- ❖ Issue whether stock is a function of prices or price is a function of stock was flagged
- ❖ There are five different set of data (CCS, ASI, SAS, Consumer Expenditure Surveys, unincorporated non-agri enterprises) in India which could be used to measure private foodgrain stocks

## TS-2: Role of Private Sector in Grain Storage and Regulatory Structure for Warehousing

- ❖ **Warehousing activity**
  - ❖ Activity in the food grain supply chain integrated with activity of stocking.
  - ❖ Food grain stocks need to be warehoused
  - ❖ Convergence of information on warehousing and food stocking
- ❖ **Three presentations gave diverse perspective of warehousing**
  - ❖ Importance of stocking for quality assurance, supply distribution and commercialization
  - ❖ Unorganized subsistence agriculture linked unorganised warehousing activity: e.g. Indian Context
  - ❖ Organised warehousing information system linked with commercial agriculture: Brazil context
    - ❖ Information on availability, utilisation and regional distribution of warehousing capacity
    - ❖ Costing and economics of food grain stocking

## TS-2: Role of Private Sector in Grain Storage and Regulatory Structure for Warehousing (Contd..)

- ❖ **Institutionalization of Warehouse Receipts by WDRA**
  - ❖ Facilitating marketing with WR as negotiable instrument
  - ❖ Administrative data through registration of Warehouses
    - ❖ Out of 64000 warehouses only 1300 registered
    - ❖ New initiative, expected to mature for supporting data system for food stock
      - ❖ Suggestion of survey of warehouses, results of past surveys
    - ❖ Ethical issues: Multiple receipts, speculation, market distortion, data trust: Example pulses shortage

## TS-3: Policy and Environment for Measuring Private Food Grain Stocks

- ❖ Drawing upon the ongoing work experience from the countries like Brazil, Philippines, Senegal, UK and USA, Mr Yakob presented the 'Guidelines for designing and implementing grain stock surveys'. These guidelines are documented in a manual. In this manual, emphasis was given to the approach, timing, targeting and selection of crops for the survey.
- ❖ Ms Lian from China explained about the ongoing household survey program which captures the food stock data directly for the crops such as wheat, rice, corn by urban and rural strata.
- ❖ She also explained about getting the stock data indirectly by using production, purchase and utilization data of food commodities through weighted average methods.
- ❖ Mr Luis from SIAP Mexico highlighted how the stock data is collected from bonded warehouses
- ❖ Mr Dissanayake presented the crop and food security situation in Sri Lanka and briefed about the proposed food grain stock survey which shall be combined with household agriculture production survey.
- ❖ The survey will measure the stock at four food chain namely luxury supermarkets, large paddy mills, grain mills and small to medium private sales outlets.

## TS-3: Policy and Environment for Measuring Private Food Grain Stocks (Contd..)

- ❖ Ms Olga **Martyniuk** from Ukraine briefed on the estimation of stock is estimated by statistical observation and through sample survey every month
- ❖ She also explained about the grain supply and demand balance system which includes 120 indicators received from 13 different surveys which generates 15 indicators related to wheat, barley, corn rye and total grains.
- ❖ The household stocks are measured at farm and non-farm levels for rice and corn in **Philippines** which help towards national food security, production policies and import decisions
- ❖ Ms Juditha C Perido presented the data collection system of commercial stock survey. These data are collected from National Food Authority from commercial enterprises like retailers, wholesalers and warehousemen
- ❖ Mr **Bidhan** Baral, **Bangladesh** briefed about the existing data systems including production, import, export and stocking in Bangladesh through different surveys and other secondary sources.
- ❖ Bangladesh, Dr Dipankar Roy, presented the key features of ongoing HIES with more than 46000 households and explained that stock can be measured from this survey indirectly but reliable estimates will be available only through dedicated stock measurement survey
- ❖ The issues of budget and HR needs to be taken into consideration while designing the stock surveys.
- ❖ Issue of inclusion of other crops like pulses and oilseeds in the existing four AMIS crops was also suggested by the Ministry of Agriculture, India.

## TS-4: Recent Regional Experiences in Measuring Private Food Grains Stock

- ❖ The imperative of measuring private food grain stocks needs to sink in the Consciousness of National Governments
- ❖ Broad consensus that stock assessment surveys needs to be organized for its on farm and off farm domains
- ❖ In general: convergence in use of statistical survey designs and estimations
- ❖ More frequent reporting and processing
- ❖ Divergent focus and target group consideration
  - ❖ Domestic food security; export / import orientation; measures for stability of prices
  - ❖ Food security management in situation of deficit in domestic food supply; Off farm rice stock assessment in Indonesia
  - ❖ Regular assessment of household food security and vulnerability with specific country requirements e.g. Nepal, Vietnam
  - ❖ Stock assessment at traders and millers level for assured food security in predominance of rice: Bangladesh
  - ❖ Monthly administrative reporting of rice stock in variety break-up by traders in Thailand
  - ❖ Trade and processors' need of data for business decision making; their lack of utility and trust on official estimates; generation of trade estimates by stakeholders : SOPA just as an example

## TS-4: Recent Regional Experiences in Measuring Private Food Grains Stock (Contd..)

- ❖ **Dovetailing with existing statistical operations and survey resources**
  - ❖ Modules added in household surveys e g Nepal, Vietnam
  - ❖ Frames for different domains from census and business registers : Indonesia
  - ❖ Administrative reporting systems : Thailand, as an example
  - ❖ Explorations in India to strengthen existing data on stocks (RT 610) under Sample Surveys on Cost of Cultivation
- ❖ **Designing statistical operations for food stock assessment**
  - ❖ Diversity and size of domains and sub domains
    - ❖ Farm and non farm households
    - ❖ Small and large trading and processing enterprises
    - ❖ Availability of appropriate frames
    - ❖ Generally, it is more convenient to organise surveys at farm level ,
  - ❖ Periodicity and reference period
  - ❖ Sample size and ambitions of coverage and contents of survey
  - ❖ Resources and budget
- ❖ **Data issues**
  - ❖ Issues of reliability and credibility of crop statistics on production
  - ❖ Inconsistency in Stock and utilization statistics from different sources

## TS-5: Innovative Approaches for Indirect Measurement of Private Stocks

- ❖ For individual grain crops, production variation does not explain price volatility
- ❖ The question as to why prices are much more sensitive to annual shocks when stocks are minimal was probed into
- ❖ Price is sufficient condition to indicate market conditions provided perfect market exists. But perfect markets are not very common.
- ❖ Skewed Spread of Warehouses due to the grain/wheat focus : 60% of Warehouses in one geo zone, North.
- ❖ Information asymmetry
- ❖ Specialisations within: Take into consideration the requirements of specific crops (Cold chains etc)
- ❖ Private traders are unlikely to share data on their stocks as it may intersect their commercial interests

## Take Away

- ❖ Empirics do suggest high correlation between stocks and prices, though more research is required to be undertaken to test the hypothesis if stock is a function of prices or prices a function of stocks?
- ❖ Some countries such as Philippines and Ukraine have adopted certain approaches to measure private food grain stocks. There is general willingness of all participating countries to measure private food grain stocks.
- ❖ Can a broad Approach and Methodology be Standardized to facilitate cross countries comparisons?
- ❖ Does the private interests of some stakeholders intersect with the ‘public good’ of measuring private stocks? Getting private players on board to share the information on their stocks could be challenging but possible.

## Take Away (Contd..)

- ❖ Issues of financial and HR should also be taken into consideration while designing the stock surveys. National Governments to be convinced that expected outcome justify the costs
- ❖ Feasibility of expanding the domain of existing four AMIS crops to include pulses needs to be explored, given its sensitivity in countries like India
- ❖ Can countries reduce opportunity cost of holding large stocks if stocks could be measured with an acceptable degree of precision?
- ❖ If yes, can standards for EWS be developed to enable National Governments to take timely action to avert near crisis witnessed in 2007-2008?
- ❖ Price levels do not necessarily indicate market conditions because of imperfect markets.

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