

# Asian Wheat Outlook: Food Security Challenges and Opportunities

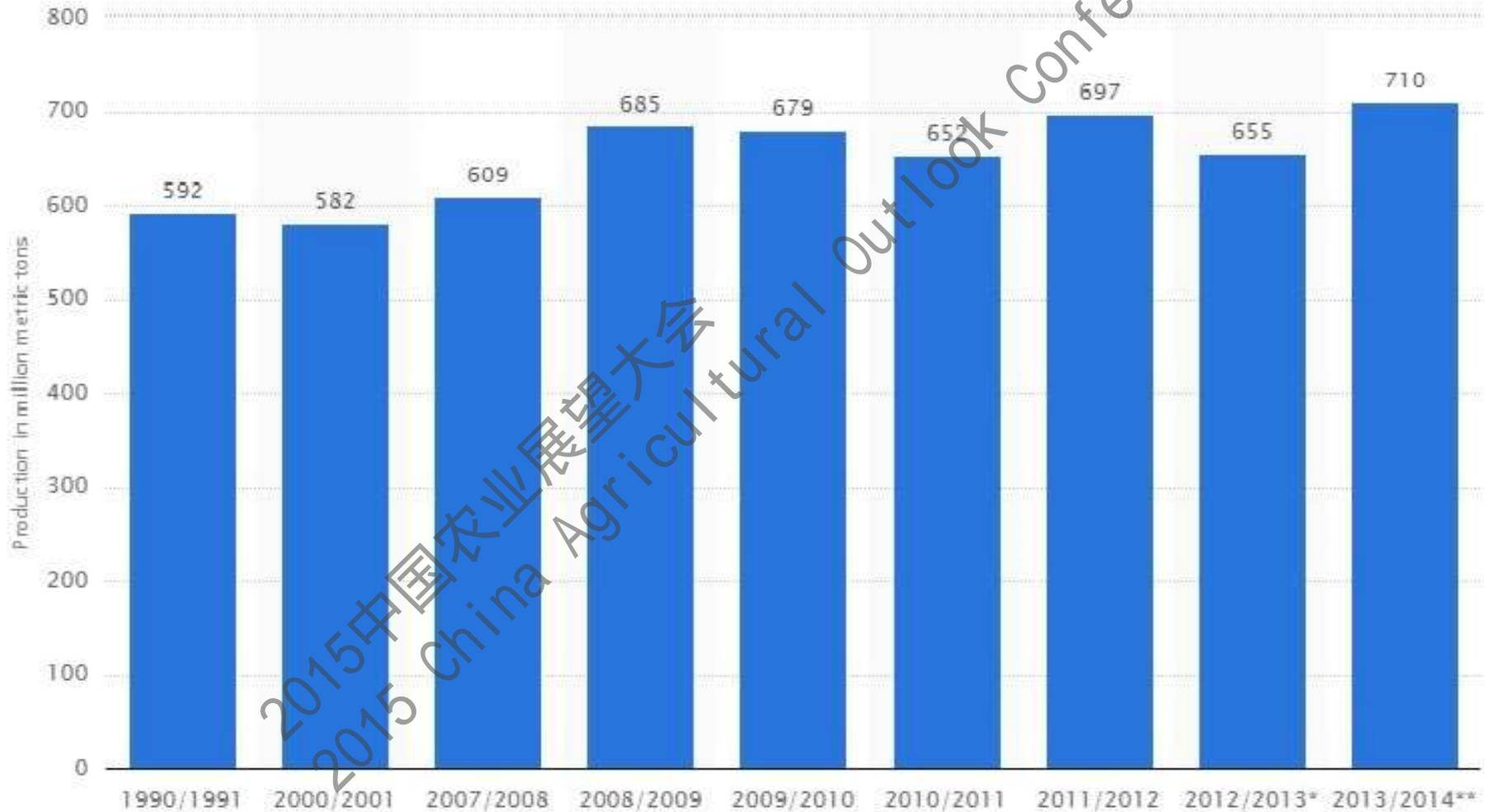
**Prof. Dr. Muhammad Afzal**  
Dean Faculty of Agriculture,  
University of Sargodha, Pakistan  
E-Mail: [chafzal64@yahoo.com](mailto:chafzal64@yahoo.com)

# Wheat: Significance and Importance

- The cultivation of wheat (*Triticum* spp.) reaches far back into history.
- It stands among the first domesticated food crops.
- Basic staple food of the major civilizations of Europe West Asia and North Africa for 8000 years .
- Consumption, defined as food, feed, seed and processed uses, as well as waste, has remained near 550 million tonnes annually since 1990.
- Consumption worldwide has increased rapidly since the early 1960s.

# Wheat in the World

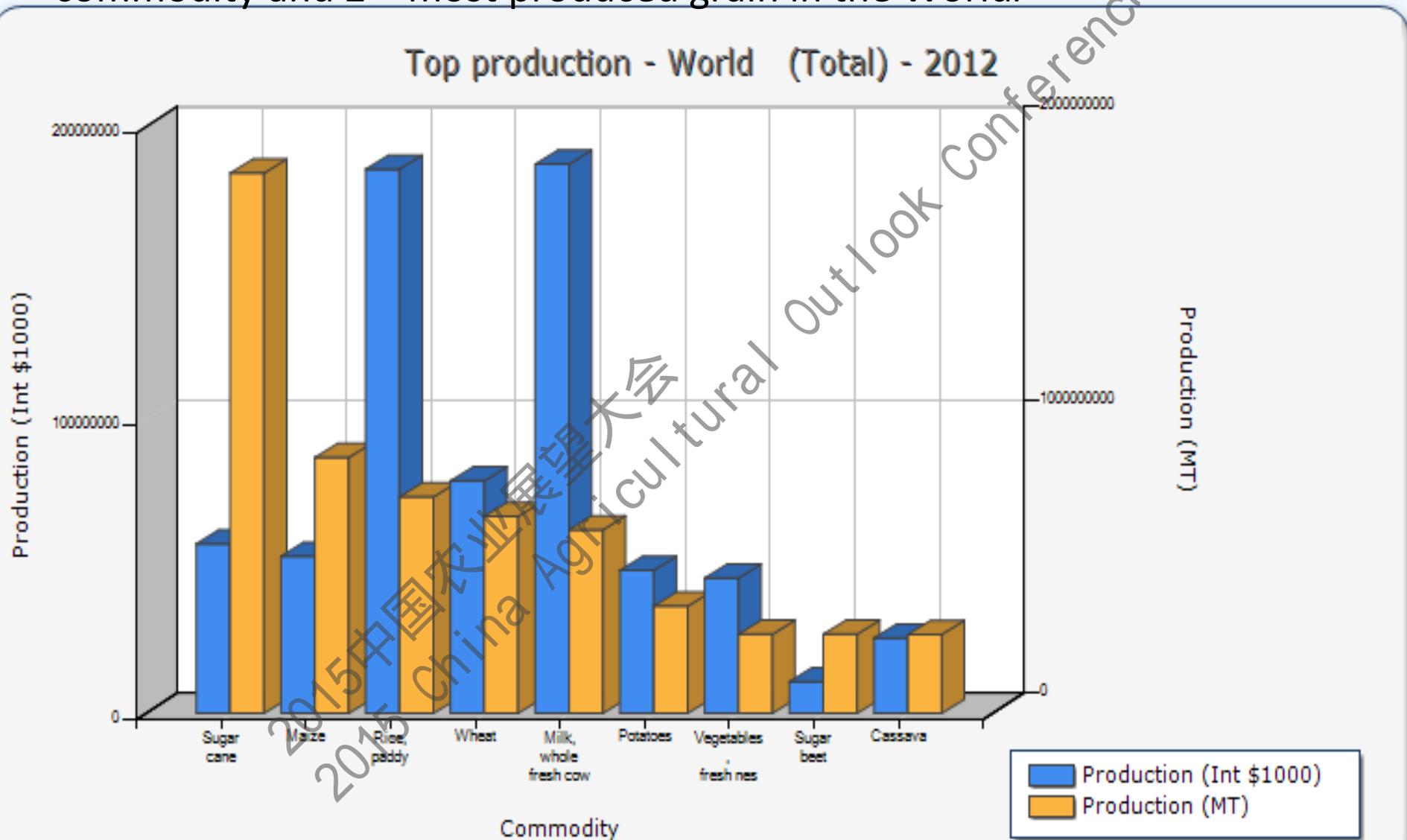
The statistics reflect the world wide production volume of wheat from 1990/1991 to 2013/2014, the global production volume of wheat amounted to approximately 710 million metric tons:



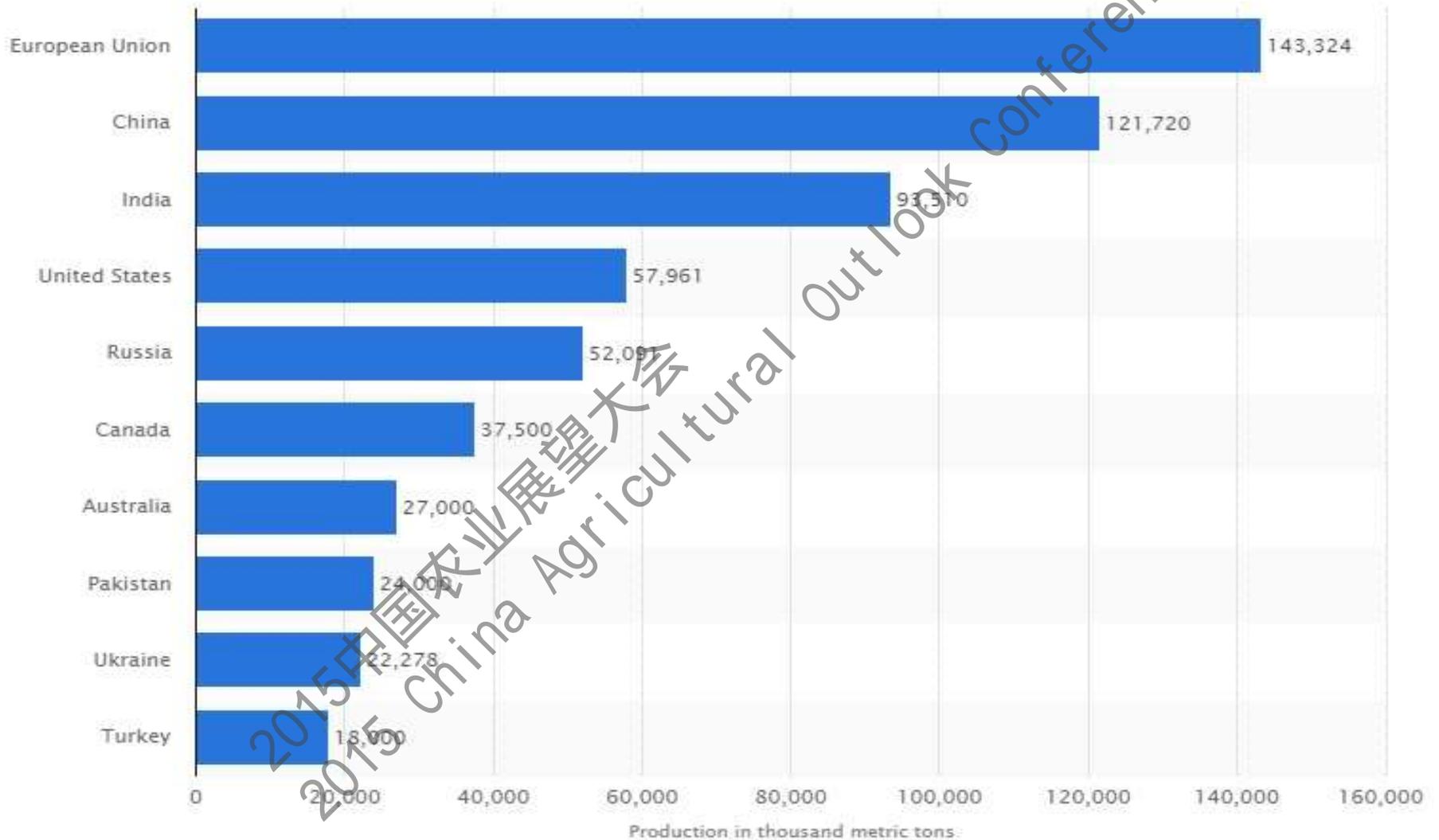
Source: Statista

# Top Produced Agricultural commodities in the world(2012)

In year 2012, wheat ranked as the 4<sup>th</sup> top produced Agricultural commodity and 2<sup>nd</sup> most produced grain in the World.



# Leading 10 wheat producers worldwide in 2013/2014 (in 1,000 metric tons)\*



# Wheat in Asia

- Wheat is the second important source of food calories (21%) after rice and the largest source of protein (20%) to major population of the developing countries.
- The estimates indicate that world will need around 1090 million tons of wheat by 2050 from its current production level of 670-680 million tons per annum.
- In the developing World, by 2050;the demand for wheat will be 60 percent higher over current level.
- Asia is the world's largest producer of wheat with 280 million tons and an average yield of 2.9 tons per hectare (excluding Russia).
- Southern and Eastern Asia produce 114 million tons each,
- Western Asia 29 million tons and Central Asia 23 million tons

# Wheat productivity in Asia

- The global wheat harvest during 2010- 11 was about 682 million tons from 227 million hectare land with an average productivity of 3.0 tons per hectare.
- The productivity in Asian countries which occupied 45 per cent of acreage remained much below (2.23 t/ha) the global average and contributed only 33 per cent in global wheat production.
- Asian countries imported nearly 40 million tons of wheat, mostly non-traditional wheat growing countries or countries with limited wheat production: Japan (5.2 mt), Korea (3.1 mt), Indonesia (2.6 mt), Malaysia (2.4 mt) and the Philippines (2.4 mt)

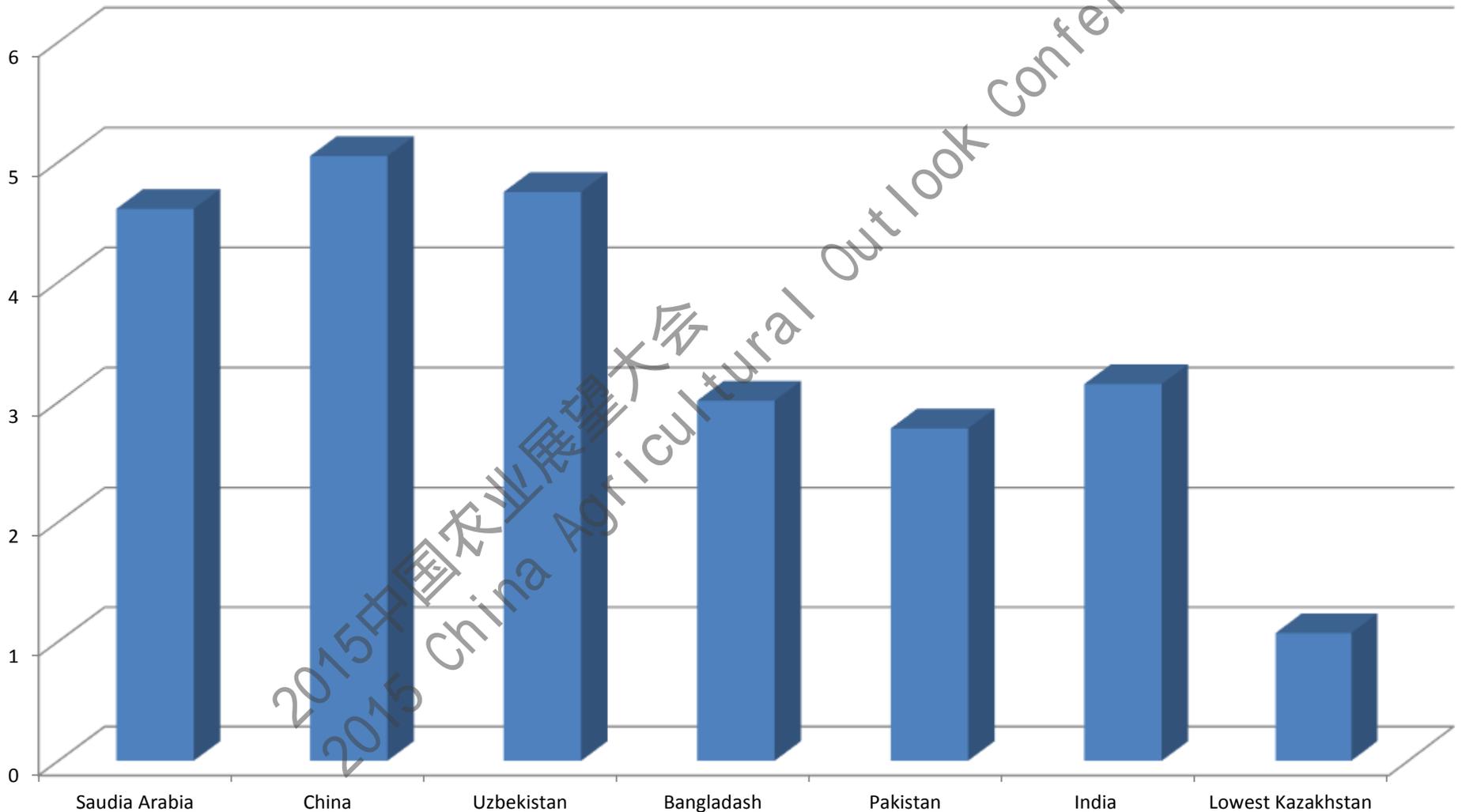
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# Wheat consumption in Regions

- The demand for agricultural products is expected to remain firm, even if the rate of growth is slower compared to the past decade.
- Rapidly growing Asian economies are expected to account for the greatest share of additional consumption due to:
  - Consumption patterns
  - Access to food substitutes
  - Preferences
- Regions like North America and Europe might result in much slower consumption growth rate due to:
  - Declining population growth
  - Saturated level of consumption.
- Substantial population growth in Africa will drive significant increases in total consumption, however per capita consumption growth in the region remains marginal.

# Varied yield in different countries within the region

Productivity in Tonnes per Hectare



# Reasons for increased consumption

Increasing consumption levels might also result due to

- Growing incomes
- Urbanization
- Shifts in lifestyle habits
- Dietary structure
- Transition from a traditional cereal based diet to a more protein-rich, diversified diet
- Processed and prepared foods,

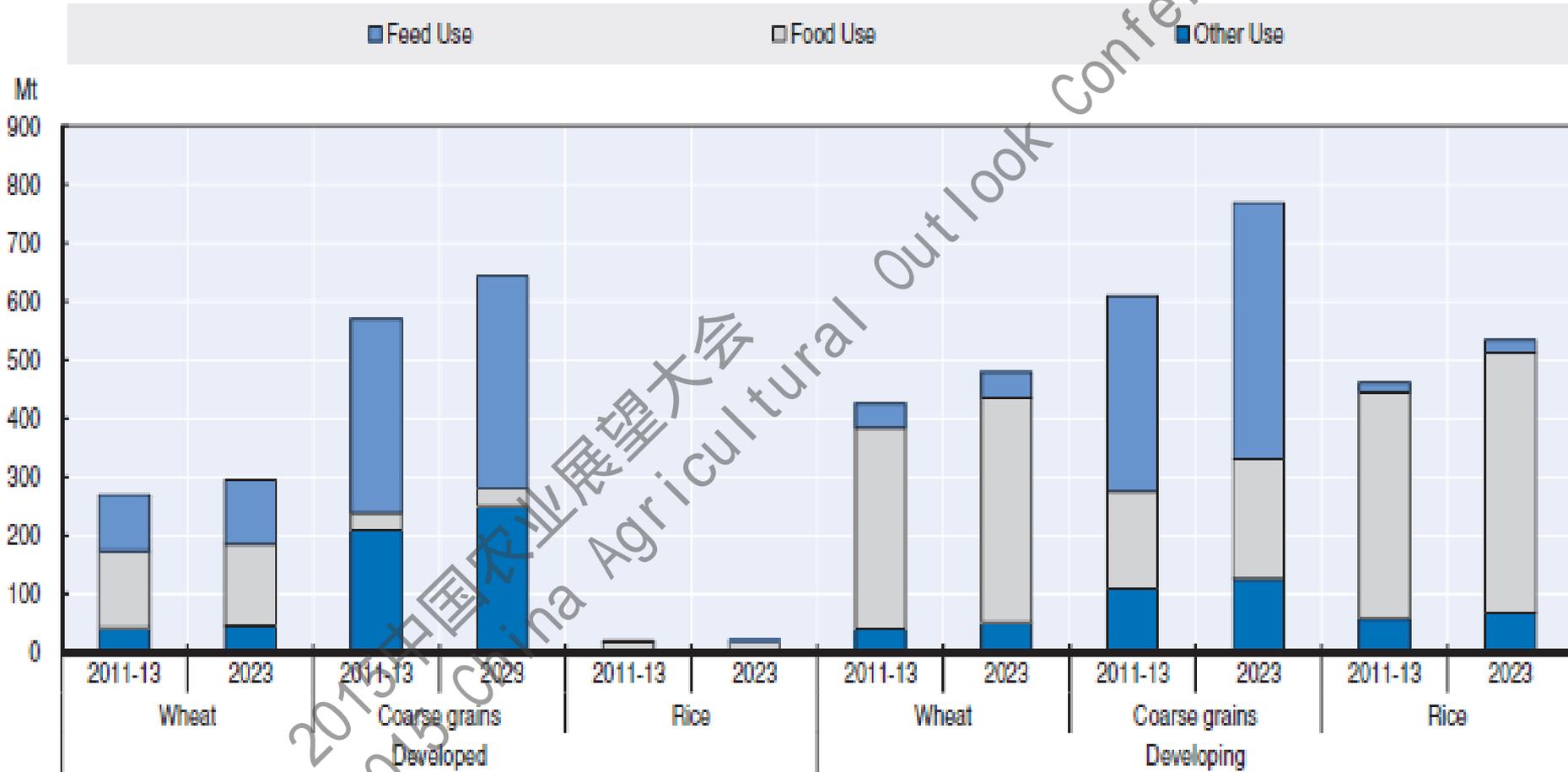
Whereas expansion of the livestock sector alters the demand for crops, resulting in a

- Declining share of pure food crops,
- In favour of crops like coarse grains and oilseeds

The emergence of biofuel and other industrial uses adds a further important dimension to demand, which will remain significant in the future.

# Growing diversity of crop use

## Cereal consumption in developed and developing countries



Source: OECD and FAO Secretariats.

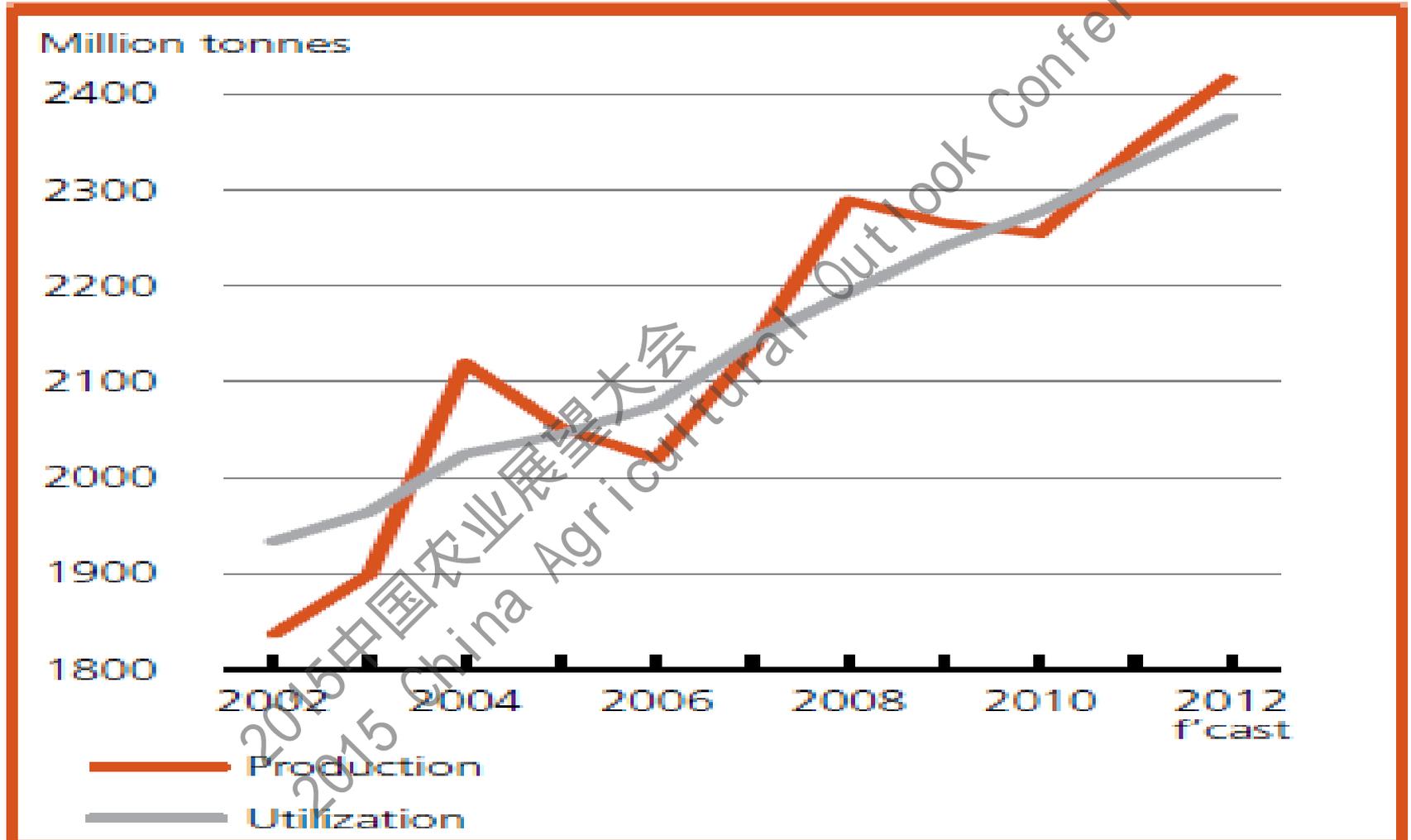
# Global cereal utilization

Global cereal utilization is forecasted to expand by at least 2 percent in 2012/13, to 2376 million tonnes from 2328 million tonnes,

- Feed utilization growing by 3.8 percent, while
- Food consumption is expected to increase by just over 1 percent largely keeping pace with the world population growth.

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# World cereal production and utilization



# Basic facts of world cereal production and utilization (000 tonnes)

	2010/11	2011/12 estimate	2012/13 forecast	Change: 2012/13 over 2011/12 (%)
<b>PRODUCTION <sup>1</sup></b>				
<b>World</b>	<b>2 254.5</b>	<b>2 344.3</b>	<b>2 419.1</b>	<b>3.2</b>
Developing countries	1 315.8	1 344.1	1 371.4	2.0
Developed countries	938.7	1 000.2	1 047.7	4.7
<b>TRADE <sup>2</sup></b>				
<b>World</b>	<b>281.5</b>	<b>295.5</b>	<b>296.6</b>	<b>0.4</b>
Developing countries	90.9	88.5	90.1	1.7
Developed countries	190.6	207.0	206.6	-0.2
<b>UTILIZATION</b>				
<b>World</b>	<b>2 277.4</b>	<b>2 326.9</b>	<b>2 376.3</b>	<b>2.1</b>
Developing countries	1 429.8	1 468.4	1 492.3	1.6
Developed countries	847.5	858.4	884.0	3.0
Per caput cereal food use (kg per year)	153.5	153.6	154.2	0.4
<b>STOCKS <sup>3</sup></b>				
<b>World</b>	<b>499.9</b>	<b>511.8</b>	<b>547.6</b>	<b>7.0</b>
Developing countries	349.6	366.6	385.0	5.0
Developed countries	150.3	145.2	162.6	12.0
<b>WORLD STOCK-TO-USE RATIO%</b>	<b>21.5</b>	<b>21.5</b>	<b>22.7</b>	<b>5.4</b>

# Wheat situation in Asian Sub-regions

In Asia, estimates of the 2012 wheat crops for East sub-region Point to a new record output of 239 million tonnes,

- 2.5 percent up from the previous high last year.

In China and India, record wheat harvests have been achieved reflecting the incentive of

- High prices for producers,
- Adequate supply of irrigations water,
- Combined with favorable conditions and
- Fertilizers and other inputs.

# Wheat situation in Asian Sub-regions

- By contrast in Pakistan, a slight reduction after last year was observed because of less satisfactory growing conditions.
- In the Asian sub-region,
  - Wheat production in Kazakhstan (the major producer in the subregion) fell sharply by about one-third from last year (2011) to 14.7 million tonnes, reflecting:
    - A reduction in plantings
    - Dry weather
    - High temperatures,
    - Having an adverse effect on yield potential.
- In the Near East, the aggregate wheat harvest of the sub-region was 44 million tonnes, some 5 percent below last year's good level but about the average of the past five years.

# Wheat situation in Asian Sub-regions

- In general, the sub-region benefitted from well-distributed rainfall during the growing period from November 2011 to April 2012.
- Record wheat harvests were officially estimated for China and India at 120.3 and 90.2 million tonnes respectively, reflecting good availability of
  - Irrigation water
  - Fertilizers
  - Other inputs and
  - High domestic and international prices

# Wheat situation in Asian Sub-regions

- Similarly, in Bangladesh and Nepal, favorable weather conditions boosted wheat production to a record level.
- A slightly smaller wheat crop prospected in Pakistan,
  - Following a period of cool weather during March 2012,
  - Protracted period of below-average rains,
  - Floods in the Sindh province, and
  - Reduced availability of fertilizers and irrigation water.
- Estimate puts 2012 wheat production at about 24 million tonnes, 1 percent below the record harvest of 2011, but still some 3.7 percent above the previous five-year average.

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# Food security

“Food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life”.  
(World Food Summit, 1996)

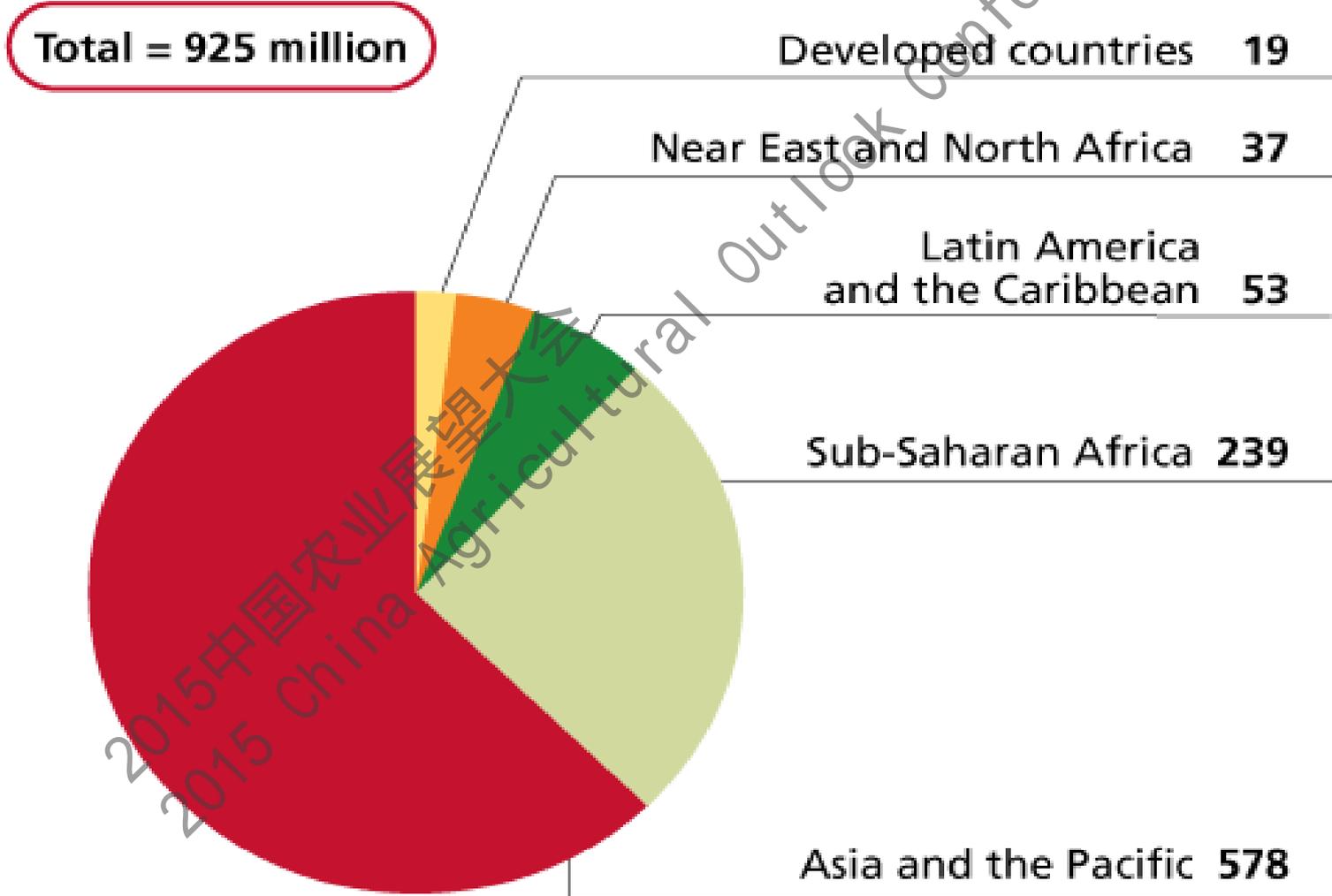
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# Food Security Dimensions

- **Availability**
  - Much improved, but progress is uneven across regions and over time
- **Accessibility**
  - Significantly improved, in line with poverty reduction
- **Utilization**
  - Marked improvements are evident in both determinants and outcomes
- **Stability**
  - Exposure to short-term risks may endanger long-term progress

## Number of hungry people in the world

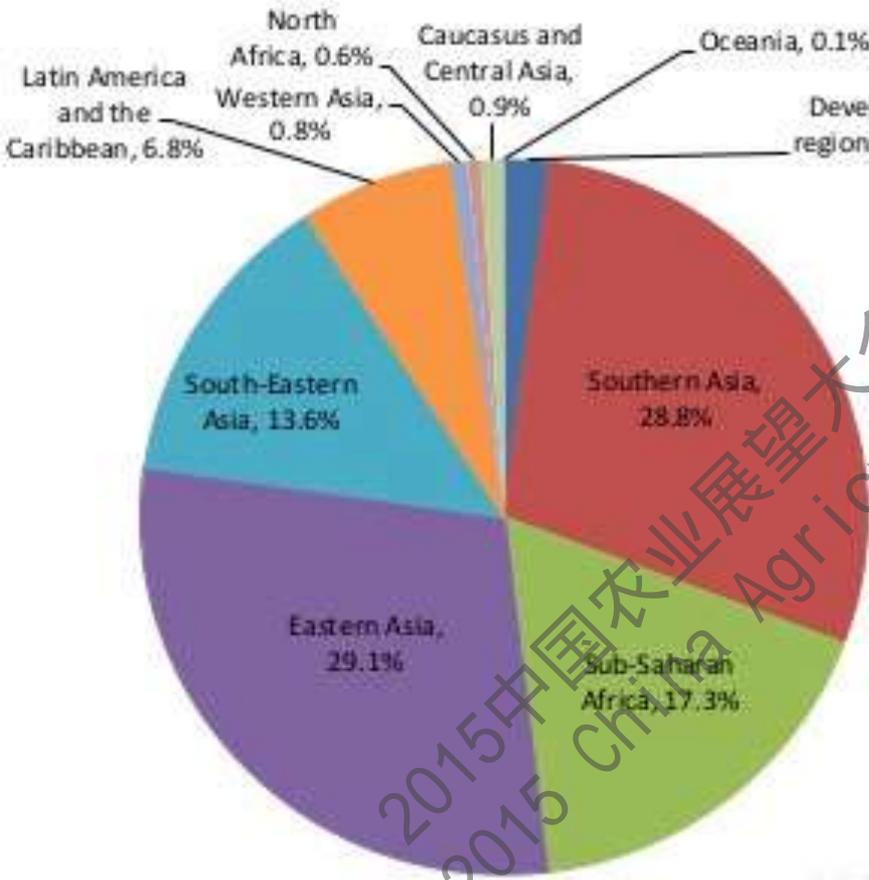
925 million hungry people in 2010



# Changing distribution of world hunger, 1990–2014

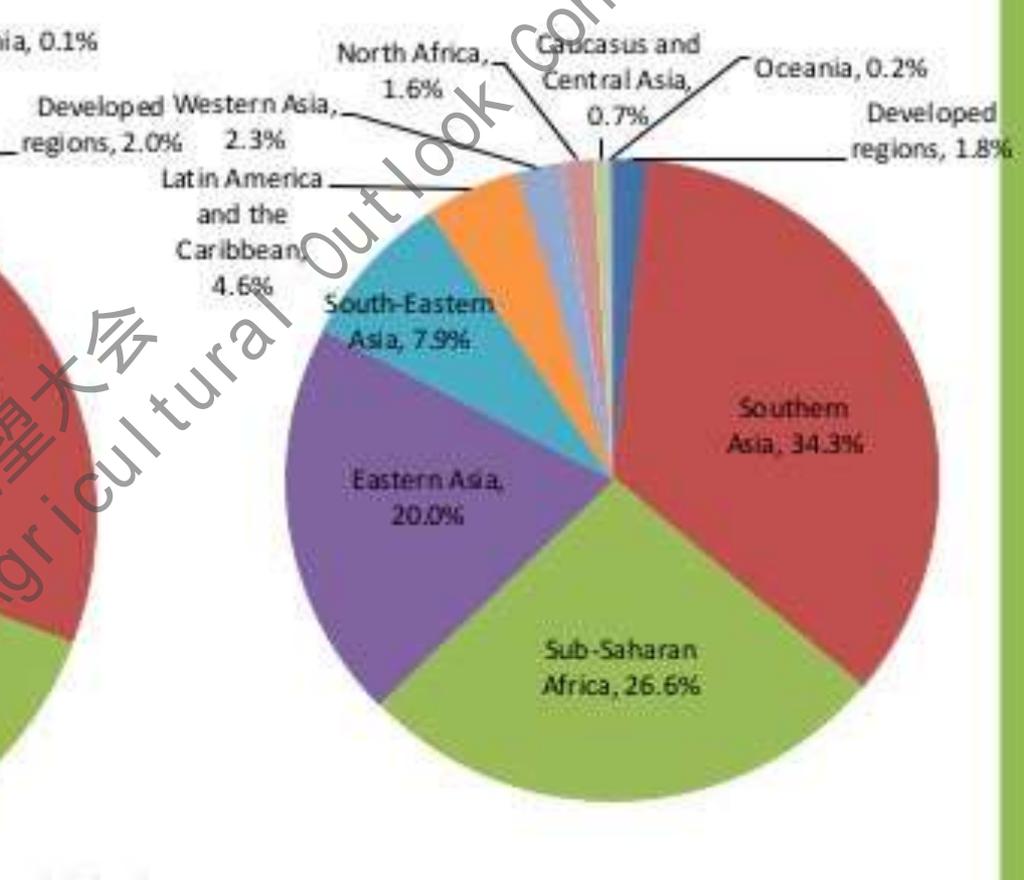


**1990–92**



Total = 1015 million

**2012–14**

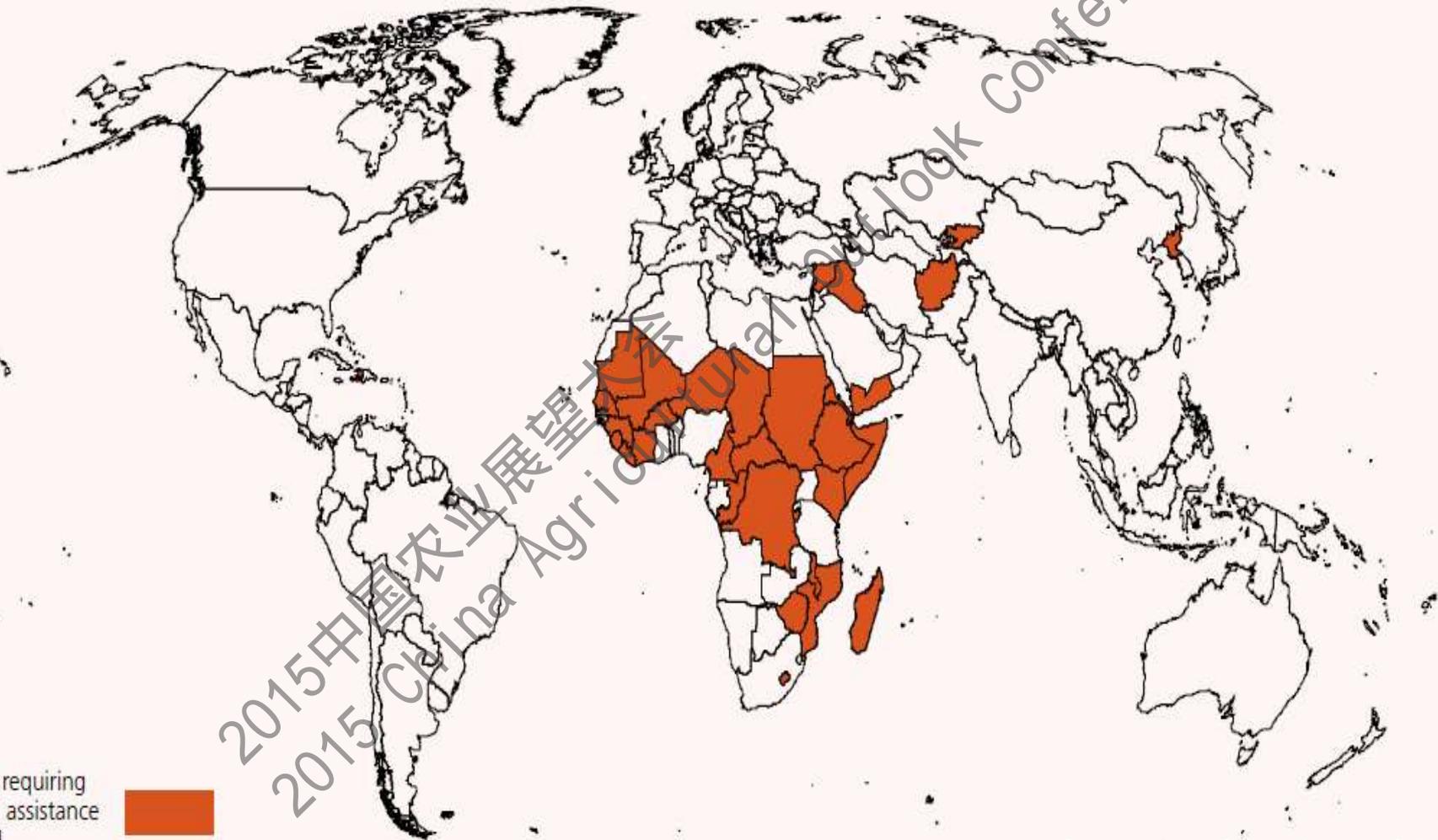


Total = 805 million

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# Countries requiring external assistance for food

World: 35 countries



Source: <http://www.fao.org/giews/>

# Countries requiring external assistance for food

- Africa: 28
- Asia : 6
  - Iraq
  - Afghanistan
  - Korea
  - Yemen
  - Kyrgyzstan
  - Syrian Arab Republic
- **LATIN AMERICA AND THE CARIBBEAN: 1**

# Current scenario for food security situation

- We face a double imperative: we must end hunger and malnutrition, and we must do so sustainably.
- Progress in improving global food security is fragile and in many ways environmentally unsustainable.
- Meeting both imperatives is doable, but it will demand more
  - Strategic use of resources,
  - Accountability
  - Stronger responsibility and,
  - More creativity from all of us.

# Oil prices impact on food security

- Oil-producing countries in Africa and elsewhere have already felt the pinch of declining oil prices. If these governments respond to budget pressures by reducing or eliminating food subsidies, poor people in these countries will likely face greater hardship.
- If oil prices are volatile in 2015, they are likely to lead to more volatile food prices and thereby harm poor developing country producers and consumers, who have limited capacity to adjust to rapid price changes.

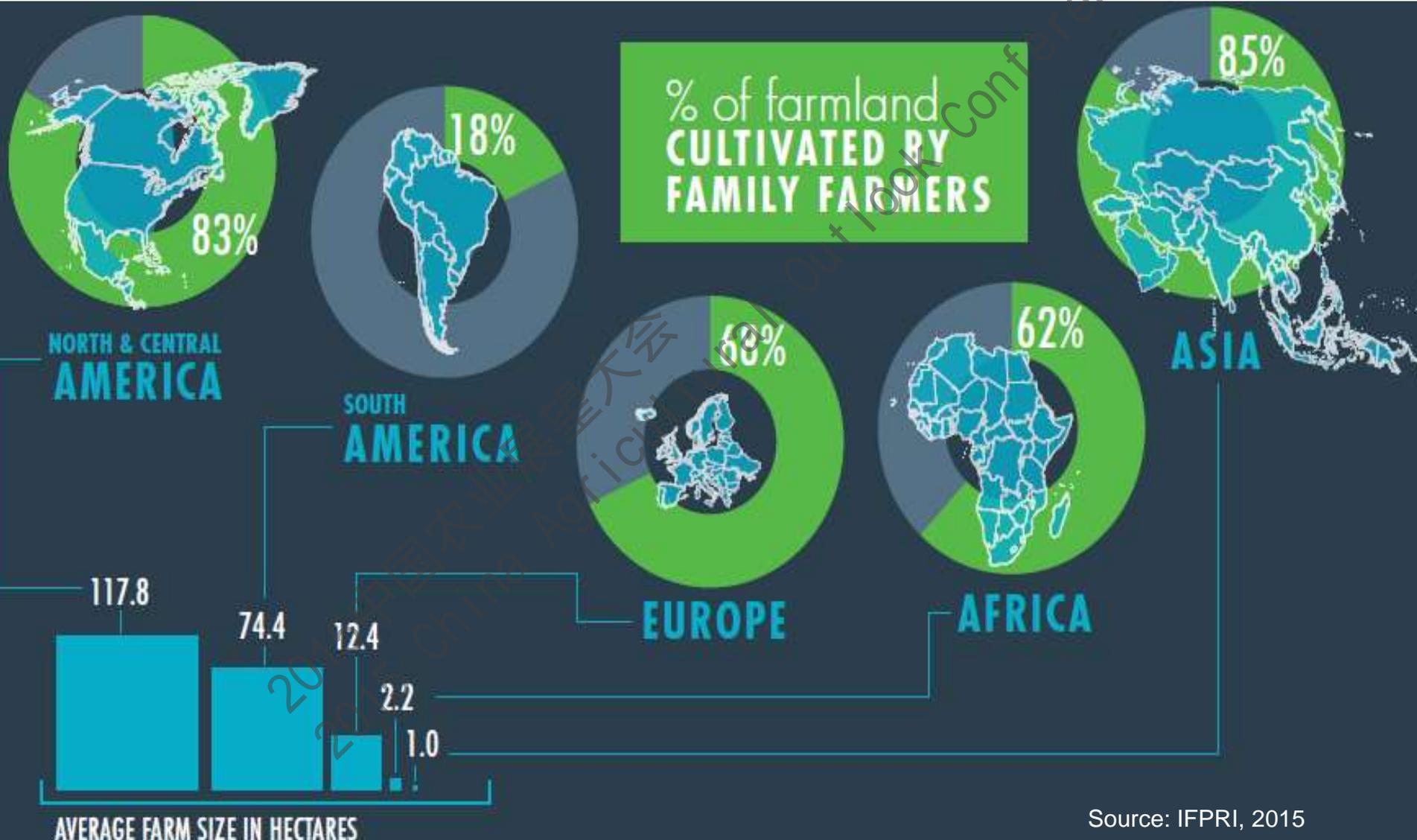
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# Farm size and food security Issues

- Among the people most vulnerable to shocks are those responsible for producing much of the world's food: small farmers, or the people who work at farm for the production processes.
- The changing variabilities between the marketable surplus is the area of concerns as most of the small farmers deploy the farm business just to fulfill domestic needs.

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# Distribution of land held by family farms and average farm size by region



# Policies in vogue

- In 2014 Pakistan introduced a new credit guarantee scheme of financial inclusion for small and marginal farmers,
  - It encourages banks to lend to those who previously have not had access to banking facilities.
  - 50 percent in credit will be given by the financial institution to farmers who own up to five and ten acres, respectively, of irrigated and un irrigated land.
- Another program introduced that year is a crop-loan insurance scheme to cover the risk posed by
  - Natural calamities,
  - Climate change, and
  - Plant disease.

# Expected out comes

- These programs are expected to
  - Increase private investment in agriculture
  - Enhance the risk-taking ability of farmers and
  - To adopt improved technologies.

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# An example from India

In terms of agricultural insurance,

- India is now considering expanding its weather-based and index-based insurance products to “agricultural income insurance.”
  - Such a move would protect farmers’ income in the event of a fall in prices of food commodities and
  - also guard against climate risks in production.
- South Asian countries have had also mixed outcomes in the past, the effectiveness and long-term financial viability of these programs will need to be carefully monitored.

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# Key factors that characterize food security and nutrition in developing countries

- Rising inequality
- Rapid urbanization
- Changing consumer preferences
- Persistent lack of focus on nutrition and
- Poor targeting in safety nets

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# Strategies and approaches to ensure food security

- Innovations in technology, institutions, and policies
- Reshaping the food system
- Reduce inequalities with a focus on gender
- Improve rural infrastructure
- Expansion of effective social safety nets
- Community development initiatives
- Facilitative knowledge sharing and learning
- Strategic food reserves, to help buffer the impacts of food shocks
- To be clear that the factors that influence people's nutrition go well beyond food and agriculture to include drinking water and sanitation.

# 谢谢你们

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