

**Workshop on Knowledge Intensive Agriculture**

# **Gansu Internet-plus Socialized Agricultural Service System Development Project**



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# GANSU INTERNET PLUS AGRICULTURE PROJECT

- \$240 million project cost, – \$150 ADB loan to Farmer Supply and Marketing Cooperative Association
- Develop inclusive agricultural service systems through implementation with farmer cooperatives



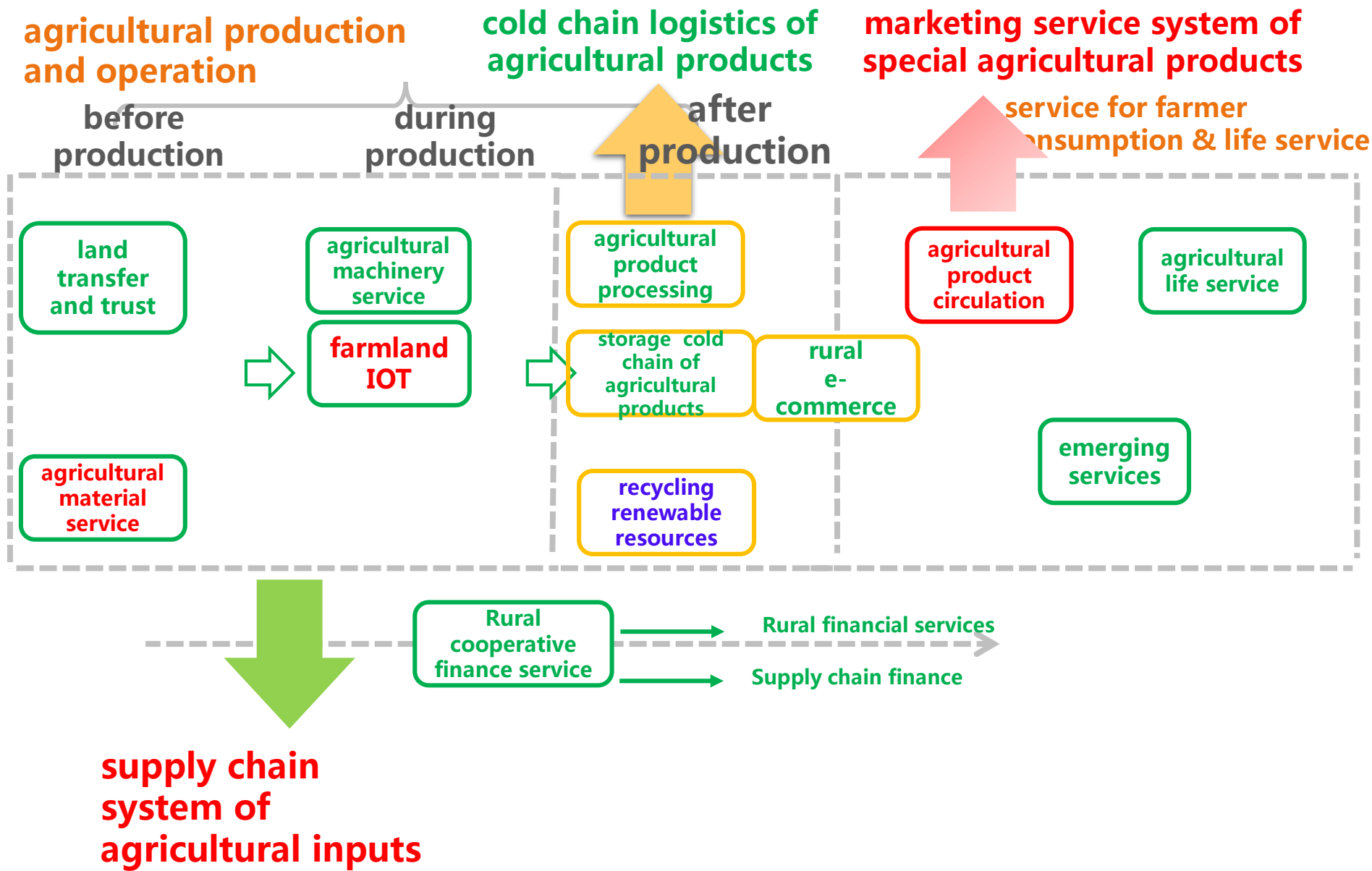
# GANSU INTERNET PLUS AGRICULTURE PROJECT

- Application of network connected sensors and tracing technology along the value chain from production to marketing
  - Precise application of inputs (water, fertilizers, pesticides)
  - Product tracing
- Enhance market access through a two-way information exchange system between producers and consumers;
  - Provide consumers with product origin and process information
  - Provide producers with market information and production support services





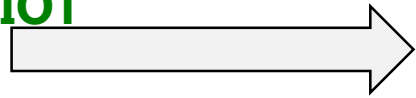
# AGRICULTURAL SERVICE INDUSTRY CHAIN



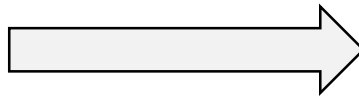
# OUTPUT 1: COMPREHENSIVE INFORMATION SERVICE AND MANAGEMENT PLATFORM

- Develop data and training centers with information platforms to process data generated at production and processing for e-commerce marketing purpose

collect and process the project-related big data, cloud calculation and IOT



Be able to conduct long-distance visual monitoring



# PROJECT AREA IN GANSU PROVINCE – DATA AND TRAINING CENTERS



## OUTPUT 2: AGRICULTURAL PROCESSING, STORAGE, AND MARKETING MODERNIZED

- Build logistic and distribution system for agricultural inputs and outputs (warehouses, (cold) storage, market facilities)
- Design integrated information exchange network for enhanced market access and coordination, quality assurance and reduced transaction costs at different stages of value chain



# PROJECT AREA IN GANSU PROVINCE - INTELLIGENT COLD CHAIN AND WAREHOUSE INVESTMENTS



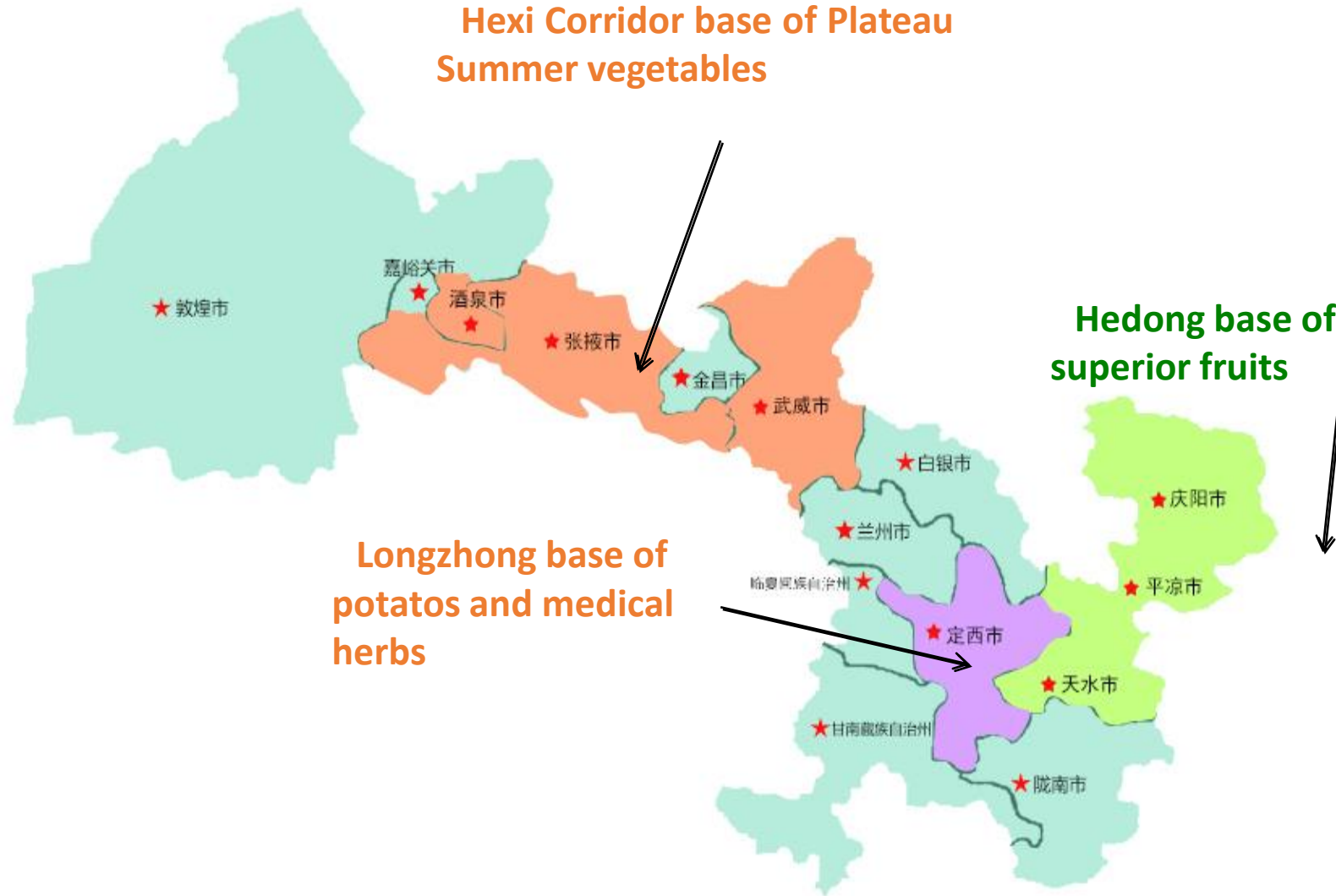


## OUTPUT 3: AGRICULTURAL PRODUCTION MODERNIZED

- Establish agricultural production bases for summer vegetables, potatoes, fruits, etc.
- High value production systems will be equipped with internet of things applications for increased production efficiency and coordination.



# PROJECT AREA IN GANSU PROVINCE – PRODUCTION BASES



# HIGH-LEVEL TECHNOLOGY - AGRICULTURAL SERVICES

Transforming and upgrading the traditional agriculture includes the following technologies:

## Production

- ◆ Network connected sensors (Internet of Things) to control & monitor soil moisture, fertilizer & pesticide application & yield quantity and quality
  - ◆ Extension support -> Exchange collected data between farmers

## Processing and Logistics

- ◆ Sensors to track quantity and quality of harvested products in agricultural storage and subsequent processing stages

## Marketing

- ◆ Internet-based marketing of agricultural products
- ◆ Building e-commerce platforms and brands
- ◆ Network-based customer interface
  - > traceability

# IMPLEMENTATION – FARMERS’ SUPPLY AND MARKETING COOPERATIVE ASSOCIATION OF GANSU PROVINCE

## organization advantage

Complete organization system with 1,168 enterprises, 151 leading enterprises, 14 city-level cooperatives, 83 county-level cooperatives, 683 village-level cooperatives, 2,228 farmer cooperatives and 5,629 rural comprehensive service cooperatives

## service advantage

The total asset is 13.57 billion RMB Yuan with owner equity being 4.1 billion Yuan. It owns 1,123 ha. and 2.837 million m2 of operation facilities and warehouse.

## scale advantage

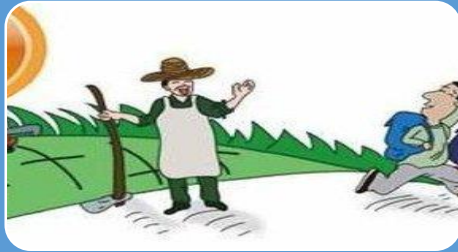
In 2015, the total sale value was 46.07 billion Yuan with the profit reaching 185 million Yuan, the annual profit increase rate being over 18%.

## brand advantage

Deeply rooted in rural areas for a long time, has a strong foundation for agricultural service, enjoys a good reputation and wins trust from farmers.



# IMPLEMENTATION - CHINA COOPERATIVE SYSTEM



## Land Trusteeship

- China Cooperative System has managed 43.877 million acres' land in trust, built 4,294 agricultural service centers covering 28 provinces (cities or autonomous regions).
- Service content has updated from a single link to serial services including agricultural materials supply, formula fertilization, agricultural machinery and purchase and storage processing. Service models have evolved to the integrated development of the first, second and third industries from trust-based cultivation, planting and management.



## Construction of Agricultural Internet of Things

- Complete the construction of 5 systems, including the quality tracking platform of agricultural materials, operating management system for agricultural enterprises, remote monitoring system for stores, the intelligent control system over the delivery of agricultural means of production and the diagnosis system of diseases and pests.
- Complete the industrial part and data center of Internet of Agricultural Means of Production.
- We realized that the agricultural products can be recognized, the status can be recorded, information can be checked and status can be tracked



## E-commerce of Agricultural Products

- The total sales amount of the e-commerce of Supply and Marketing Cooperatives reach 486.73 billion RMB, a year-on-year growth of 60.4%, accounting for over 15% made by the whole system.
- The China Cooperative system has updated the 70,000 basic operating service networks to village e-commerce service stations, which facilitates the effective connection between the off-line resources and the on-line internet.

# AGRICULTURAL E-COMMERCE MARKET POTENTIAL

**Sales of Agricultural Products on Ali Platforms during 2010-2015(Unit: RMB100 million yuan)**

