Challenges in Chinese Agricultural Supply and Potato Staple Food Strategy

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Outline

1. Challenges in Chinese Agricultural Supply
2. Potato Staple Food Strategy
3. Further Outlook for Potato Staple Food Strategy
1. Challenges in Chinese Agricultural Supply

The biggest challenge in food supply in the past was to meet the increasing food demand.
China food trade: export and import (million US$) in 1984-2013

On average China was a net food exporter until the late 2000s.

Source: FAO
Except soybean, China achieved high level of food self-sufficiency in 2013

Source: FAO
Changes in dietary patterns pose new challenges to China’s agricultural sector.
One of the New Challenges in China’s Agricultural Products Supply

Supply-side structural reform and support for innovation were identified as a way to boost agriculture modernization.
China’s ‘Supply-Side’ Structural Reform in Agriculture

• This strategy expects to benefit farmers by improving their production efficiency and increasing the added-value of agriculture products.
2. Potato Staple Food Strategy

• In January 2015, China's Ministry of Agriculture (MOA) announced that China was boosting its potato production and consumption to transform the crop into the country's fourth major grain: after rice, wheat and corn.
Potato Staple Strategy in China

- The key point of this strategy is to improve its industrialization, without using the land and water resources currently utilized for rice, wheat and maize production.
Significances

This strategy is to match China’s supply-side reform in agriculture

1. Guarantee national food security
2. Reduce the pressures of environmental resources
3. Improve the dietary structure
Goal

- The MOA is planning to expand ...by 2020

  Production
  - 100 million mu, 1300 kilograms per mu, 130 million tons.

  Processing
  - 30% of potato seeds are expected to be planted as staple food processing

  Seed
  - 45% of virus free seed potatoes used

  Consumption
  - 30% of potatoes are expected to be consumed as staple foods
Main progresses

- Developing the first generation of potato staple product.
- Screening out suitable potato seeds from 17 regions
- Testing the nutrition of 22 potato seeds
- Preparation for "National potato staple products and industrial development planning"
- ................
3. Future outlook for Potato Staple Food Strategy

- Production
- Processing
- Consumption
1) potato production

• Overview

Production area

Growing 50% of China’s potato
Seed potatoes production
Fall: Apr/May-Sep/Oct.

Growing 8%
Spring: Dec/Jan-Apr/May
Summer: Feb/Mar-Jun/Jul

Growing 37%
Diverse geography and climate
Fall: Mar/Apr-Aug/Sep
Summer: Jan-May/Jun

Growing 5%
Oct/Nov/Dec-Jan/Feb/Mar/Apr
1) potato production

•Overview

Most regions in Northern single cropping zone and Southwestern mixed cropping zone.

Top 10 regions by area harvested

- Sichuan: 14%
- Gansu: 12%
- Guizhou: 12%
- Nei Mongolia: 11%
- Yunnan: 9%
- Shaanxi: 6%
- Heilongjiang: 5%
- Hubei: 5%
- Chongqing: 4%
- Ningxia: 4%
1) potato production

• Further Outlook for Production in 10-15 years

• First Stage

<table>
<thead>
<tr>
<th>Area harvested (10 thousand mu)</th>
<th>Yield (Kilograms per mu)</th>
<th>Production Quantity (10 thousand tons)</th>
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<tbody>
<tr>
<td>10000</td>
<td>1300</td>
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• Second Stage

<table>
<thead>
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<th>Area harvested (10 thousand mu)</th>
<th>Yield (Kilograms per mu)</th>
<th>Production Quantity (10 thousand tons)</th>
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<tbody>
<tr>
<td>15000</td>
<td>1500</td>
<td>22500</td>
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</table>
2) Overview: processing potato

- Processing potatoes account for 10-15 percent of total production.
- Among 5000 enterprises, there are only 150 large scale ones (10,000 products per year).
- Processing potatoes mainly include such products as starch, frozen french fries, chips, and dehydrated potatoes.
## 3) potato consumption

### Potato consumption in some countries

<table>
<thead>
<tr>
<th>Ranking</th>
<th>Country</th>
<th>Per Capita Consumption (kilograms)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Belarus</td>
<td>185.2</td>
</tr>
<tr>
<td>2</td>
<td>Ukraine</td>
<td>139.8</td>
</tr>
<tr>
<td>3</td>
<td>Poland</td>
<td>114.7</td>
</tr>
<tr>
<td>5</td>
<td>Russia</td>
<td>111.5</td>
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<td>14</td>
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<td>42</td>
<td>United States</td>
<td>55.6</td>
</tr>
<tr>
<td>65</td>
<td>China</td>
<td>41.2</td>
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<tr>
<td>96</td>
<td>Japan</td>
<td>20.8</td>
</tr>
</tbody>
</table>
China’s potato consumption structure in 2014-2016 MT
Consumption characteristics

1. Low Level of Per Capital Consumption

2. Majority of Fresh potatoes are used for direct consumption which accounts for 65%

3. Incomplete understanding of potato nutrition
Further Outlook for Processing and Consumption

- Fresh potato
- Staple Food
  - Fresh potato
  - Characteristics of staple food products
  - Snack

Traditional staple products:
- Potato steamed bread, potato noodles, potato rice etc..
- Potato pancake, potato mooncake, etc..
- Chips, mashed potato, potato bread, etc..

Flowchart:
- Fresh potato to Staple Food
- Staple Food to Traditional staple products
- Traditional staple products to Snack
- Snack to Potato steamed bread, potato noodles, potato rice etc.
- Snack to Potato pancake, potato mooncake, etc.
- Snack to Chips, mashed potato, potato bread, etc..

- Staple Food
  - Traditional staple products
    - Potato steamed bread, potato noodles, potato rice etc.
    - Potato pancake, potato mooncake, etc.
    - Chips, mashed potato, potato bread, etc.
THANKS FOR YOUR ATTENTION