HOG FARMING IN CHINA – STRUCTURAL CHANGE AND ITS IMPACT ON COMMERCIAL FEED DEMAND

Jurgen Hijink
Hijdeporc consultancy

Presentation for the WebConference 2021
EAST MEATS WEST

A drone image shows newly built multi-storey pig farm in Neixiang county. (Muyuan Foods Co via Reuters photo)
1. Total consumption goes up by app. 1 million t p.a.
2. Per capital increase is a main driver
3. For comparison: Current Dutch figure is app. 33 kg/head
Enormous growth of Chinese pig production since 1950
CHINA AIMS FOR SELF-SUFFICIENCY IN PORK PRODUCTION

Chinese Pig meat Imports (million t)

1. ASF boosted imports (almost 4-fold)
2. Most likely, back to normal in 2026
PIG PRODUCTION RECOVERS (QUICK)

ASF Impact on Chinese Pig Herd – and Recovery...

Source: yangzhu360
ASF: MASSIVE DIP CHINESE PIG PRODUCTION – BUT A QUICK RECOVERY AHEAD?

Pig Meat Production in China (% vs. 2018)

- 2018: 54 million t pig meat
- Source: European Commission
- Taken from the EU medium-term outlook for Agriculture 2019 - 2030
EXAMPLE: HOW CHINA RAMPS UP PORK PRODUCTION

- Establishment took 7 (!!) month (in 2017)
- 3 times 1000 sow unit’s,
- 1 time 500 sow unit.
- 90,000 piglets annually.
- Investment of 25 million Euro.

Many more such projects
CAN THE INDUSTRY SURVIVE?

Massive investments when pork prices were extremely high – afterwards massive price drop (- 60%)

Question: Are these mega farm profitable at these price levels?
1. Until 1995 backyard producers dominated Chinese pig production
2. By 2025 the bulk of output will come from highly specialized, industrial producers
IMPACT FROM MODERNISING FARMS

Key Performance Indicators Chinese Pig Production (2012)

<table>
<thead>
<tr>
<th>Farm size (head/year)</th>
<th>Mean</th>
<th>1-9</th>
<th>10-49</th>
<th>50-499</th>
<th>&gt;=500</th>
</tr>
</thead>
<tbody>
<tr>
<td>FCR</td>
<td>2.99</td>
<td>3.99</td>
<td>3.03</td>
<td>2.90</td>
<td>2.73</td>
</tr>
<tr>
<td>Length of feeding period (days)</td>
<td>197.0</td>
<td>162.0</td>
<td>159.1</td>
<td>153.6</td>
<td>184.6</td>
</tr>
<tr>
<td>Total feed (kg)</td>
<td>527.6</td>
<td>383.0</td>
<td>372.3</td>
<td>331.5</td>
<td>476.5</td>
</tr>
<tr>
<td>Starting weight (kg)</td>
<td>7.6</td>
<td>7.0</td>
<td>7.1</td>
<td>7.0</td>
<td>7.4</td>
</tr>
<tr>
<td>Selling weight (kg)</td>
<td>118.9</td>
<td>113.9</td>
<td>118.8</td>
<td>116.9</td>
<td>117.6</td>
</tr>
</tbody>
</table>

Source: Wang-Feeding China Pigs-938

The smaller the farms, the lower the KPI’s.

In 2021:
Chinese sows produce 16 slaughter pigs per year (690 million pigs).

In Western Europe 1 sow produces 28 slaughter pigs per year.
Will China be able to catching up?
## IMPACT PRODUCTION SYSTEMS ON CORN/WHEAT CONSUMPTION

<table>
<thead>
<tr>
<th>Number of pigs per farm</th>
<th>&lt;50</th>
<th>5-1000</th>
<th>&gt;1000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feed conversation rate</td>
<td>3,5</td>
<td>2,9</td>
<td>2,7</td>
</tr>
<tr>
<td>total feed intake (kg)</td>
<td>450</td>
<td>372</td>
<td>330</td>
</tr>
<tr>
<td>days feeding</td>
<td>180</td>
<td>159</td>
<td>150</td>
</tr>
<tr>
<td>% wheat/corn in feed</td>
<td>20%</td>
<td>50%</td>
<td>65%</td>
</tr>
<tr>
<td>kg wheat/corn per pig</td>
<td>90</td>
<td>186</td>
<td>215</td>
</tr>
</tbody>
</table>

Shift to more industrial production implies to more than double the wheat/corn consumption per pig

Source: Author’s calculation
STRUCTURAL CHANCE WILL BOOST FEED DEMAND (IN MILLION TON)

Assumption: by 2025 backyard production will contribute 5%, medium systems 30% and industrial systems 65%

Source: Author’s calculation
1. Chinese government is promoting heavily the structural change in pig production at a very high speed.

2. This shift implies a shift in feed usage – substitution of traditional feedstock (e.g. food waste) by corn and wheat.

3. This shift implies a massive increase in corn and wheat demand, most likely the current spike in corn imports is already driven by this trend.
THANK YOU FOR YOUR ATTENTION