The potato sector in The Netherlands, cooperation with China

GMV

Dutch Manufacturers of Machinery for
Food Processing and Packaging

Jan Hak, president

Chinese Potato Congress 2011 , Ningxia
20 July 2011

荷兰马铃薯产业发展与中国的合作

GMV

荷兰食品加工和包装机械协会

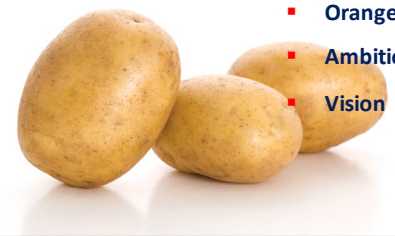
杨·哈克 协会主席

2011年中国马铃薯大会
宁夏
2011年7月20日

The potato sector in The Netherlands, cooperation with China

Contents:

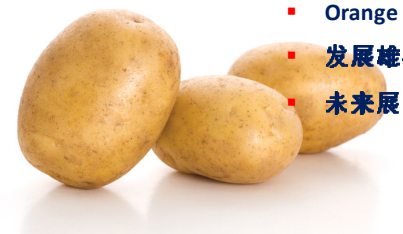
- The Netherlands
- GMV Association
- Potato Industry in The Netherlands
- Key Trends
- GMV in China
- Orange Potato
- Ambition
- Vision



荷兰马铃薯产业发展与中国的合作

主要内容:

- 荷兰现状
- GMV食品加工包装机械协会
- 荷兰的马铃薯产业现状
- 关键趋势
- GMV在中国
- Orange Potato “橙色马铃薯”协会
- 发展雄心
- 未来展望



The Netherlands

Total surface: 3,7 million ha

Total surface

Cities, villages, roads, etc. (48%)

Farmland (52%)

Farmland

Arable, horticulture (58%)

Permanent grassland (40%)

Permanent crops (2%)

The Netherlands

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Total surface

Cities, villages, roads, etc. (48%)

Farmland (52%)

Farmland

Arable, horticulture (58%)

Permanent grassland (40%)

Permanent crops (2%)

荷兰现状

面积: 共370万公顷

总面积

- 城市，农村，公路用地等（占48%）
- 农田用地（52%）

农田用地

- 耕地，园艺用地(58%)
- 长期用草地(40%)
- 长期用作物(2%)

The Netherlands

Total arable land: 1,1 million ha

Arable land

- Potatoes - 25%
- Sugar beets - 25%
- Cereals - 25%
- Various - 25%

Potatoes

- Ware potatoes (48,5%)
- Seed potatoes (28,5%)
- Starch (23%)

荷兰现状

总面积：110万公顷

耕地

- Potatoes - 25%
- Sugar beets - 25%
- Cereals - 25%
- Various - 25%

马铃薯

- Ware potatoes (48,5%)
- Seed potatoes (28,5%)
- Starch (23%)

The Netherlands as 'Food Valley'

Home country of World Leading Food companies

- EUR 68 billion turnover (2010) in agri-food products
- World leading country in food (potato) production and processing machinery 4.150 companies - 137.000 staff (2008)
- One of every six employees works in the food-industry
- 80% Turnover comes from large companies
- An average business consists of 26 labour years and a turnover of EUR 13 million

The Netherlands as 'Food Valley'

Home country of World Leading Food companies

荷兰被认为是'食品峡谷'

世界知名领先食品公司的所在地

- 2010年，农业食品产品的销售额已达到680亿欧元
- 据2008年统计，世界知名领先食品公司（包括马铃薯种植和加工行业）约有4150家，共计13.7万名员工
- 每6个工作的人里面就有一个是从事食品行业工作的
- 80%的销售额是来自大型企业
- 平均计算，相当于每个公司至少有26名全职员工，全年工作，各平均拥有1300万年销售额

荷兰被认为是‘食品峡谷’

世界知名领先食品公司的所在地

GMTV

Central platform for the food processing industry

Members cover a high percentage of total machinery production in all sectors of the agri-food industry: potatoes, fruit, meat, fish, vegetables, dairy, bio-based products, feed, etc.

GMV

食品加工行业中心及行业园地

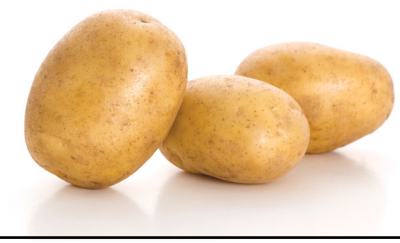
协会成员们大部分集中在食品加工包装机械设备行业
详细来说包括大多数的食品领域:
肉类，鱼类，蔬菜类，马铃薯类，水果类，乳制品类等

The Netherlands as 'Food Technology Valley'

Home country of World Leading Food Technology companies

EUR 3,3 billion turnover (2010) in processing equipment and research

- 80% poultry processing systems
- 70% cheese processing systems
- > 50% potato processing systems
- Etc.



The Netherlands as 'Food Technology Valley'

Home country of World Leading Food Technology companies

荷兰被认为是'食品技术峡谷'

世界知名领先食品技术公司的所在地

据2010年数据，食品加工及研发机械设备的销售额在33亿欧元。在世界范围内：

- 80%的家禽肉制品加工系统设备是荷兰生产的
- 70%的奶酪加工系统设备是荷兰生产的
- > 50%的马铃薯加工系统设备来自荷兰厂商
- 其他...

荷兰被认为是‘食品技术峡谷’

世界知名领先食品技术公司的所在地

The Potato in The Netherlands

Potatoes are grown on 175.000 ha

Ware Potatoes 85.000 ha (48,5%)	
Seed Potatoes 40.000 ha (28,5%)	
Starch Potatoes 50.000 ha (23,0%)	

荷兰马铃薯产业现状

目前有17.5万公顷全部用于马铃薯种植

马铃薯 85.000 公顷 (48,5%)	
种薯 40.000 公顷 (28,5%)	
马铃薯淀粉 50.000 公顷 (23,0%)	

The Potato in The Netherlands

Potato production every year: 8.000.000 t

Fresh potatoes 1.000.000 (ware)	
Products for industry 2.500.000	
Processed consumer products 4.500.000	

荷兰马铃薯产业现状

每年平均生产马铃薯8百万吨

鲜食马铃薯
1.000.000 吨

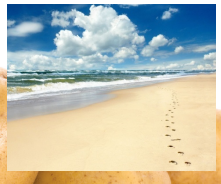
加工用马铃薯
2.500.000 吨

其他马铃薯深加工消费食品
4.500.000 吨

The Potato in The Netherlands

Excellent Dutch quality – due to:

- Location near the sea:
  - Prevalence of diseases
  - Fertile soils - Absence of rocks, flatness of land
- Climate
- Long tradition of growing



荷兰马铃薯产业现状

荷兰马铃薯品质优异，主要因为：

- **据海比较近的地理位置：**
  - 降低流行病的发生几率
  - 土壤平坦肥沃
- **气候条件优越**
- **长期的传统种植方式**

The Potato in The Netherlands

Excellent Dutch quality – due to:

- **High skill level growers**
- **Advanced technological level**
- **High degree of mechanization**

荷兰马铃薯产业现状

荷兰马铃薯品质优异，主要因为：

- 种植户技术水平较高，受教育水平也较高
- 拥有先进而稳定的技术
- 机械化程度高

The Potato in The Netherlands

Excellent Dutch quality – due to:

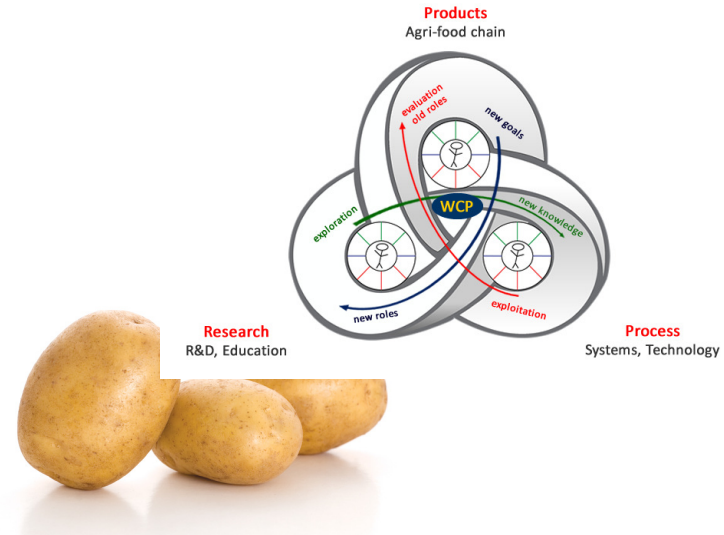
- Strict quality inspections
- Presence of first-rate knowledge and various research institutions and hundreds of 'growers' study clubs
- Innovation!

荷兰马铃薯产业现状

荷兰马铃薯品质优异，主要因为：

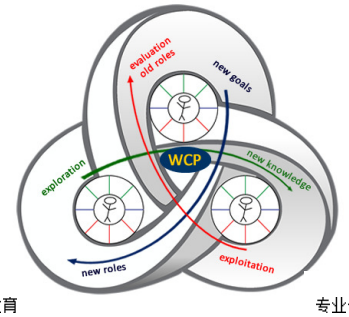
- **严格的质量监督**
- **拥有最先进的知识及各种专业化的研究机构以及数百个种植户的交流俱乐部**
- **创新研发**

Dutch World-Class Performance (WCP)



世界范围内的产业现状

产品
农业食品业供应链



研发
研发部门，教育

加工
专业化系统，技术

The Potato in The Netherlands

Innovations in the Potato Chain

Seed Potatoes, genomics
Clean room technology, gen manipulation

Cultivating
Drip irrigation, crop rotation in (semi) arid areas

Harvesting
Low damage lifting and handling

荷兰马铃薯产业现状

马铃薯产业链及其创新发展状况

种薯，基因研究

无病环境准备技术，基础设施改良

种植技术

病害，作物轮作，干旱和半干旱地区技术

收获

降低收割及装载时的损伤

The Potato in The Netherlands

Innovations in the Potato Chain

Storage

Optimal storage, conditioning

Processing, packaging

Starch, flakes, french fries, etc.

荷兰马铃薯产业现状

马铃薯产业链及其创新发展状况

Tolsma Kiremko Food Processing Equipment mooij TUNNERS METHODIC GOUDA NIVOBA

仓储

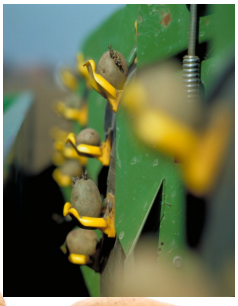
改良仓储设备，仓储温控设施

加工，包装

淀粉，薯片，薯条等产品的加工

Knowledge, Education and Practices

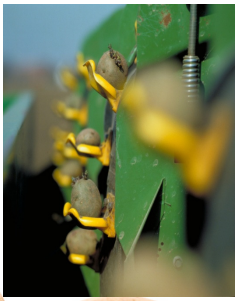
in the Potato Chain



- Climate change
- Genetic modification
- Information technology
- Sustainability indicators
- Good agricultural practices
- Training and education

知识，教育及实践

马铃薯供应链



- 气候变化
- 基因改良
- 信息技术
- 可持续发展的标志
- 农业行业操作规范
- 培训及教育

Knowledge, Education and Practices

in the Potato Chain

As well as
Dissemination of knowledge throughout the chain:

- Economically and efficiently produce of sufficient (security), safe (safety) and nutritious food (quality)
- Sustain and enhance natural resources
- Maintain viable farming enterprises and contribute to sustainable live hoods/communities
- Meet cultural and social demands of society

知识，教育及实践

马铃薯供应链

包括

整条供应链上的信息资源分享，知识的普及：

- 经济，高效地生产优质，安全，营养的高品质食品产品
- 可持续发展的同时加强对自然环境和资源的保护
- 在保证农场及公司正常运营的条件下，需要培养环境保护意识及可持续发展的思想
- 满足社会文化的发展要求

The Netherlands as 'Innovation Center Valley'

World leader in Research & Development
for the Potato – Chain

WAGENINGEN UR
For quality of life

NIZO
YOUR FOOD RESEARCHERS

TNO

Nutrition and health

Sensory and structure

Bio ingredients and functionality

荷兰被认为是‘先进技术创新中心’

世界知名领先马铃薯食品研发技术的所在地

营养学与健康饮食

感官及结构

有机食品成分及其作用

The Netherlands as ‘Innovation Center Valley’

World leader in Training Centers for the Potato – Chain

UV crop protection reduces pesticides

Potato genomics

Advanced processing and logistics

荷兰被认为是‘先进技术创新中心’

世界著名的马铃薯供应链培训教育中心

CAH DRONTEN CHRISTELIJKE AGRARISCHE HOGESCHOOL　hogeschool hardenbosch　AcadeMie - IO

紫外线对作物的保护
减少杀虫剂侵害

马铃薯基因改良

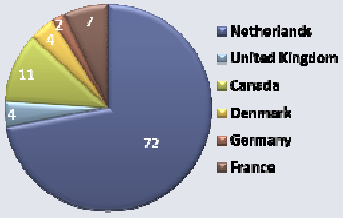
先进的加工，仓储，物流

The Netherlands as “Source Valley”

Seed Potatoes

(1,3 million total production, > 70% for export)

The Netherlands controls 72% of world’s seed potatoes export



The Netherlands exports to countries world-wide

The Netherlands as "Source Valley"

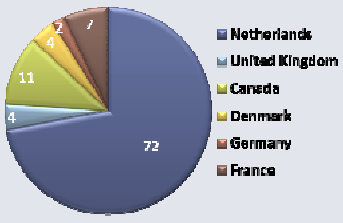
Home country of World Leading Companies for seed potato export

荷兰被认为是"源料之谷"

马铃薯种薯

(130万总量中，超过70%是用作出口)

荷兰掌握着世界上72个国家以上的马铃薯种薯出口



荷兰的马铃薯种薯遍及世界各地

荷兰被认为是“源料之谷”

大多数世界最重要的种薯出口公司的所在地

Seed Potatoes

Key Trends

- (Cross) Breeding new varieties for e.g. reducing illnesses, diseases, pesticides
- Certification (NAK)
- All-year-round storage solutions

马铃薯种薯

关键趋势

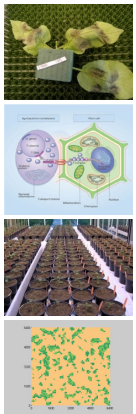
- 杂交培育新品种，例如无病无菌无杀虫剂乘风的。
- 荷兰NAK质量合格证书
- 全年均可提供马铃薯仓储解决办法

Seed Potatoes

Sustainability indicators

- Goal: Durable late blight Phytophtora resistance
- Approach (work packages)

1. Cloning
2. Transformation
3. Selection
4. Resistance management
5. Communication

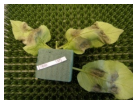
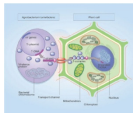


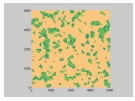
马铃薯种薯

可持续发展的标志

- **目标：** blight Phytophtora晚疫病预防和控制
- **方法** (work packages)

1. 克隆繁殖
2. 移栽
3. 挑选，筛选
4. 抗病性管理
5. 交流沟通



The Netherlands as "Food Valley"

Home country of World Leading Companies for ware potato export

70% of 1 million tons are for export

AGRICO
Meijer FOR SURE
StetHolland
LAND JUWEEL AARDAPPELEN
DEN HARTOGH
AGRO PLANT
HZPC Growing with our potatoes
JAC VAN DEN OORD

荷兰被认为是‘食品峡谷’

世界领先加工用马铃薯出口公司的所在地

100万吨里有70%用于马铃薯出口

The Netherlands as “Food Valley”

Home country of World Leading Companies for potato processing and export

Starch

Processed

荷兰被认为是‘食品峡谷’

世界领先马铃薯加工产品出口的领先公司的所在地

淀粉产品

AVEBE

TATE & LYLE

meel unie

加工产品

Aviko

McCain

AGRISTO

Meijer

FARM FRITES

Frito Lay

Good fun!

The Netherlands as “Food Valley”

Overall Key Trends

- Product diversification
- Health and Nutrition
- Energy and Environment
- Globalization

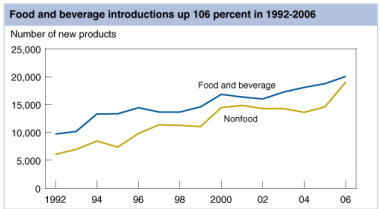
荷兰被认为是‘食品峡谷’

重要发展趋势

- 产品多样化
- 健康和营养
- 能源与环境
- 国际化

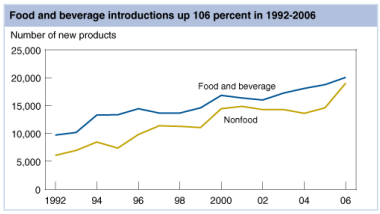
Product Diversification

- Create more added value
  - healthier, convenience
- Distinguish yourself
  - more variations (functional, organic, exceptional)
  - competition (new packaging ideas, developments on shop floor)
- Reach new customers
  - consumer groups



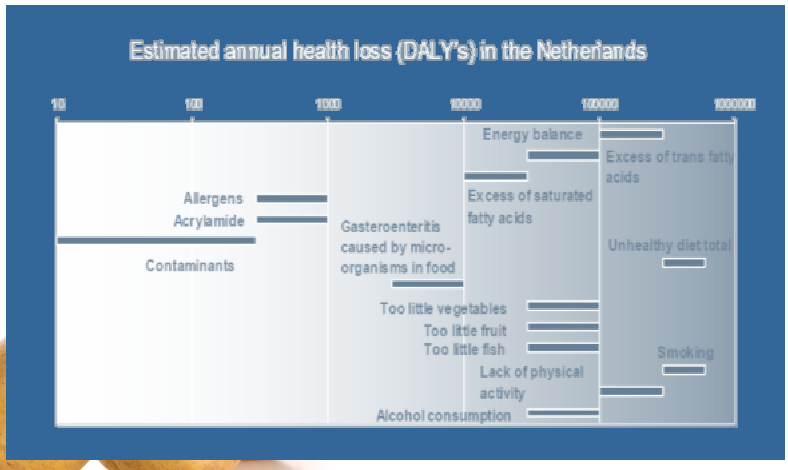
产品多样化

- 创造更多附加价值
  - 更健康，更便捷
- 根据自己需要判断
  - 多样化 (多功能的, 有机的, 特异的)
  - 竞争状况 (新的包装设计, 基层商场促销活动)
- 发展新的客户群
  - 各种类别的客户群



Health and Nutrition

Comparison of Health Issues

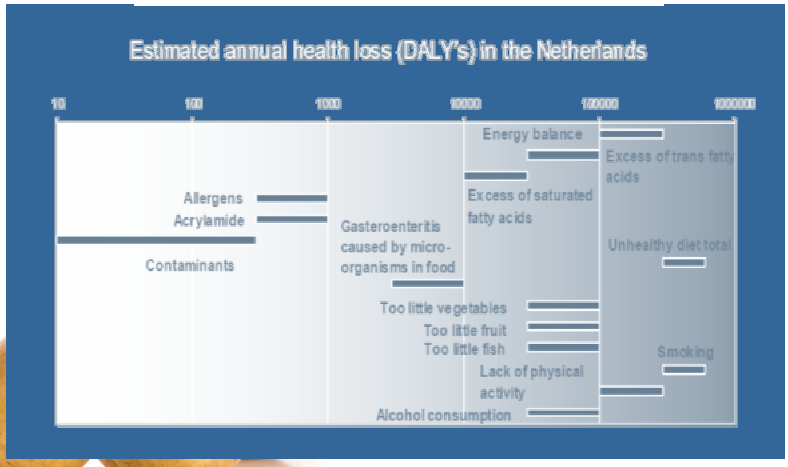


Source: Paul van Eijck

健康和营养

健康成分对比

荷兰每年健康降低估计值

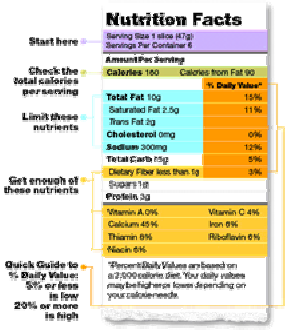


Source: Paul van Eijck

Health and Nutrition

Trans fats

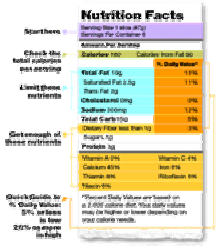
- **French fries:**
  - **Major fast food chains switched to trans fat free frying oils**
- **Potato chips**
  - **Trans fats are an exception**



健康与营养

反式脂肪

- 薯条产品：
  - 快餐食品链上的主角．目前以改为不含反式脂肪的食用油
- 薯片产品：
  - 反式脂肪是一个例外



KFC McDonald's BURGER KING Wendy's HAMBURGERS

Health and Nutrition

Less fat and calories

- French fries:
  - *Smaller portions, focus on preparation other than frying, new frying technologies*
- Potato chips:
  - *Smaller packages, baked, reduced in fat, light*

Vacuum fryer

Blue print multiflow fryer

低卡低脂肪

- 薯条产品
  - 仅占一小部分，目前有新的煎炸技术。
- 薯片产品:
  - 小包装，烘烤代替油炸
    已上市低脂低卡产品

Vacuum fryer

```
ERROR: stackunderflow
OFFENDING COMMAND: ~

STACK:
```