

## Dutch Potato Technology and Cooperation with China

**GMV**

Dutch Manufacturers of Machinery for  
Food Processing and Packaging

Jan Hak, president



2011 Advanced Forum for Potato Industry, Dingxi  
17 September, 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制造和生产

杨·哈克 协会主席

荷兰食品加工和包装机械协会GMV

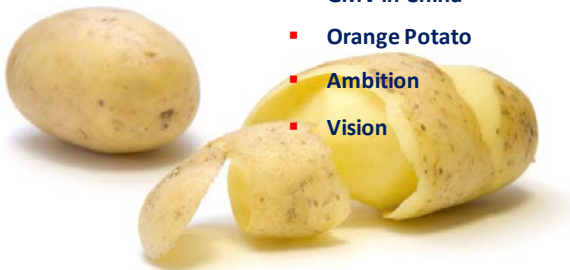


2011 中国·定西马铃薯大会  
2011年9月17日

## Potato Industry 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

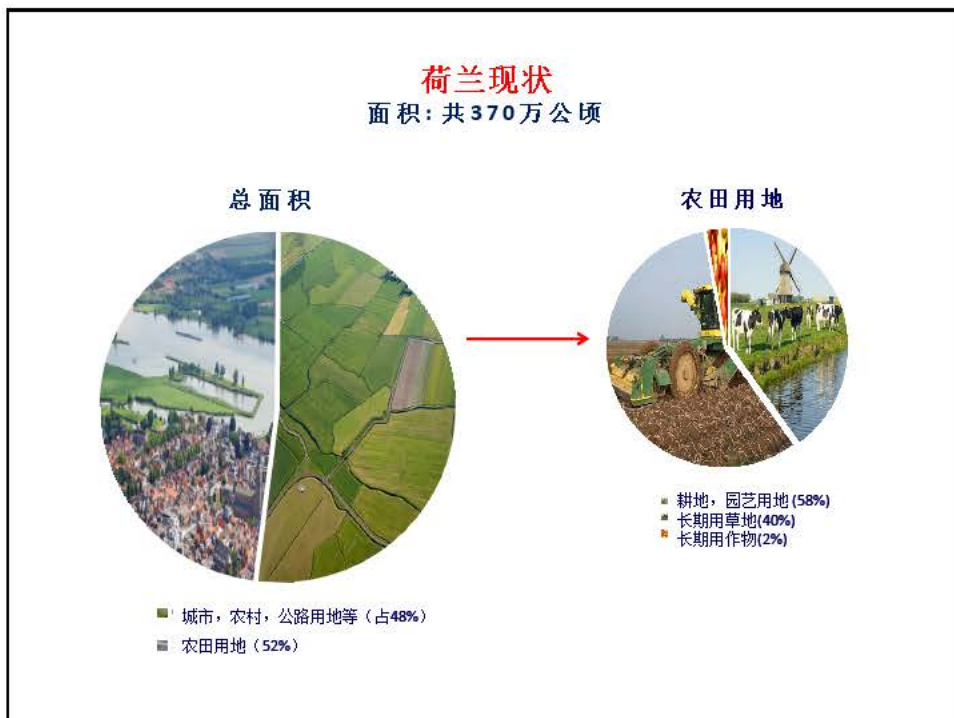
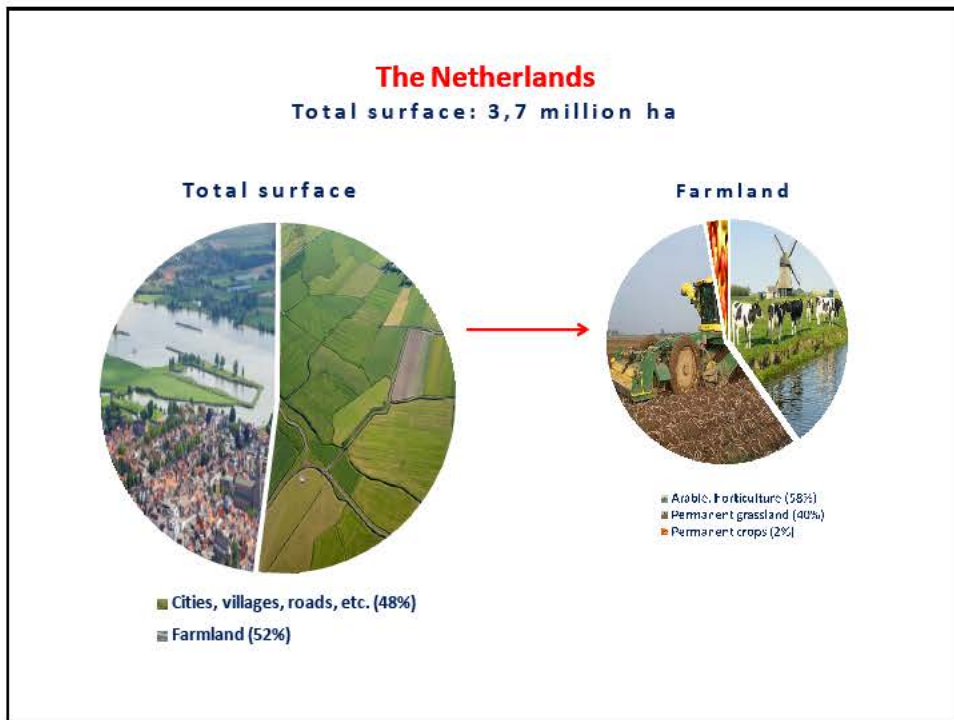


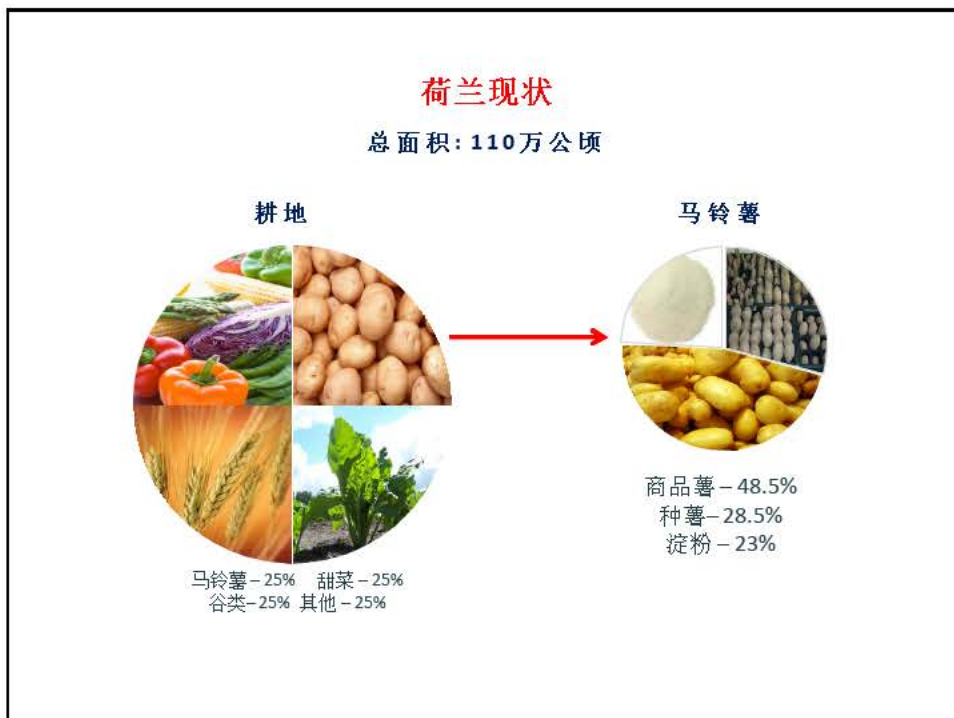
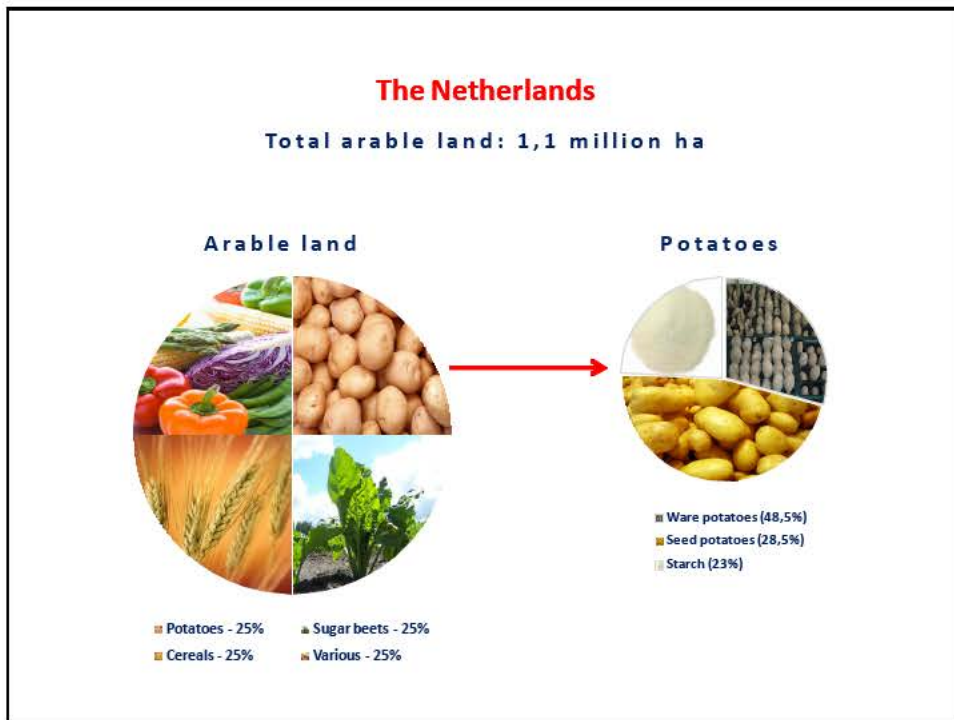
## 荷兰马铃薯产业发展 与中国的合作

### 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协会在中国
- Orange Potato “橙色马铃薯”协会
- 发展雄心
- 未来展望







### 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 production
- 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












### 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1300万的年销售额













**GMV**  
Association

**Central platform for agri-food processing machinery**

*Potatoes, fruit, vegetables, feed, meat, fish, dairy, bio-based products, etc.*



**GMV**

荷兰食品加工及包装机械协会

**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 turn-over (2010) in processing equipment and research


- 80% Poultry systems
- 70% Cheese systems
- > 50% Potato systems
- Etc.










### 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...



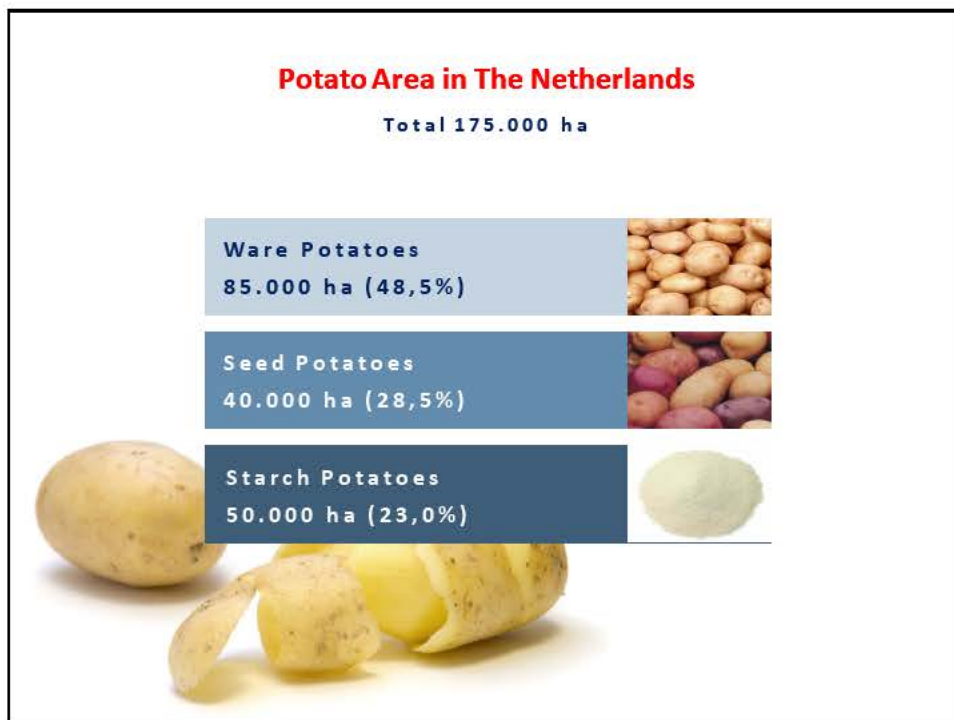














## Potato Quality in The Netherlands

Excellent due to:

- Climate
- Location near the sea:
  - Lower disease pressure
- Fertile soils - Absence of rocks, flatness of land
- 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：

- 适宜的气候条件
- 距海较近的位置:
  - 病害几率较低
  - 肥沃的土壤-石块含量少，土地平坦
- 多年积累的丰富种植经验



### Potato Quality in The Netherlands

Excellent 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



## Potato Quality in The Netherlands

Excellent due to:

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

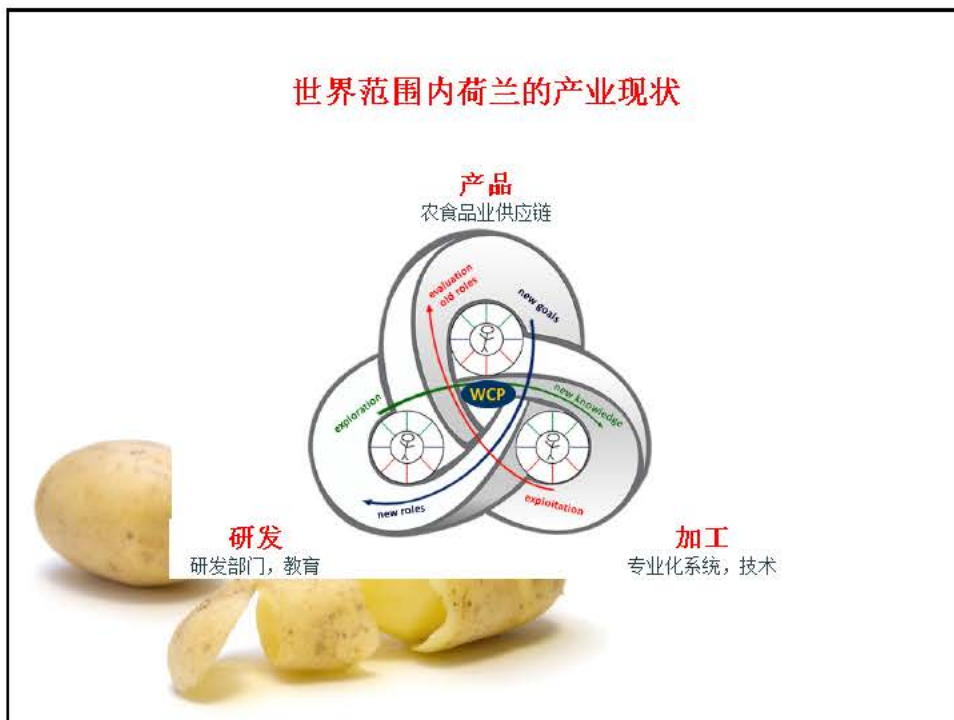


## 荷兰马铃薯产业现状

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
- 保持创新研发的发展理念！！





### “Chain” Innovations in The Netherlands

<p><b>Seed Potatoes, genomics</b> Clean room systems, gen technology</p>	
<p><b>Cultivating</b> Drip irrigation, crop rotation, management</p>	
<p><b>Harvesting</b> Low damage lifting and handling</p>	









### 荷兰马铃薯产业现状

<p><b>种薯, 基因研究</b> 无菌环境准备技术, 基础设施改良</p>	
<p><b>种植技术</b> 滴灌, 作物轮作, 干旱和半干旱地区技术</p>	
<p><b>收获</b> 降低收割及装裁时的损伤</p>	









### “Chain” Innovations in The Netherlands

<b>Storage</b> Storage climate control, conditioning	
<b>Processing</b> Energy, efficiency, by-products, waste	
<b>Packaging, distribution</b> CO <sub>2</sub> footprint, cross docking, MFS	





### 荷兰马铃薯产业现状


<b>仓储技术</b> 仓储温控技术，以及控制系统	
<b>加工技术</b> 充分利用能源，副产品研发，废物利用	
<b>包装及物流配送</b> 低碳概念，交叉配送，MFS网络系统	




**Focus Points as "Innovation Center"**  
World leader in R&D and Training

Nutrition and health 

Sensory and structure 

Bio ingredients and functionality 



WAGENINGEN UR For quality of life  
NIZO YOUR FOOD RESEARCHERS  
TNO

**荷兰被认为是'先进技术创新中心'**  
世界领先的研发及培训系统

营养学与健康饮食 

感官及结构 

有机食品成分及其高效用 



WAGENINGEN UR For quality of life  
NIZO YOUR FOOD RESEARCHERS  
TNO



**Focus Points as "Innovation Center"**  
World leader in R&D and Training

Precision agriculture 

Potato genomics 

Advanced processing and logistics 



  **AcadeM<sup>c</sup> - IO**

**荷兰被认为是'先进技术创新中心'**  
世界领先的研究及培训系统

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，物流配送 



  **AcadeM<sup>c</sup> - IO**

## Focus Points as "Innovation Center"

World leader in R&D and Training

- Economically and efficiently produce of sufficient, safe and nutritious food
- Sustain and enhance natural resources
- Maintain viable farming enterprises and contribute to sustainable communities
- Meet cultural and social demands of society



## 荷兰被认为是'先进技术创新中心'

世界领先的研发及培训系统

- 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 "Seed Source"

#### Seed Potatoes

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

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



### 荷兰被认为是“种源之谷”

#### 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



### The Netherlands as "Seed Source"

Home country of World Leading Companies for seed potato export

The Netherlands exports to countries world-wide



### 荷兰被认为是“种源之谷”

世界马铃薯种薯出口领先公司所在地

荷兰的马铃薯种薯遍布全球各地



## The Netherlands as "Seed Source"

Innovation focus:

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



## 荷兰被认为是“种源之谷” 创新的关键:

- 杂交培育新品种，例如无病无菌无杀虫剂成分的。
- 荷兰权威NAK质量合格证书 
- 对应全年不同条件的马铃薯仓储解决办法



**Key Trends**

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




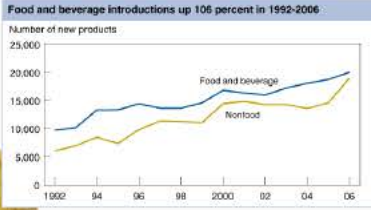
**关键发展趋势**


- 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

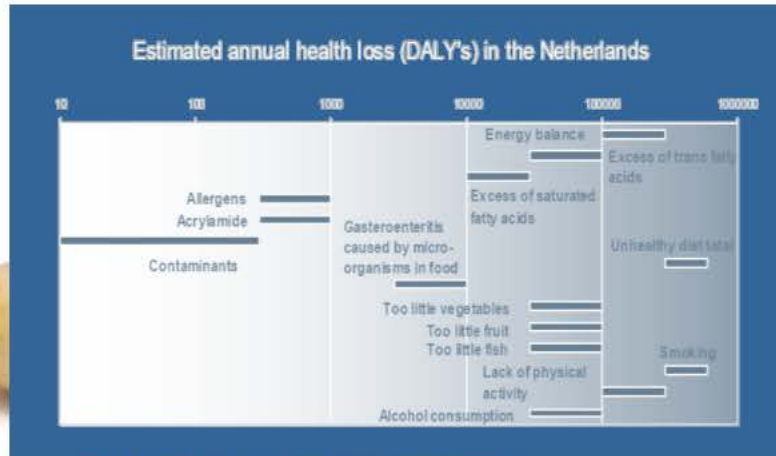
- 创造更多附加价值
  - 更健康, 更便捷
- 根据自己需要判断
  - 多样化(多功能的, 有机的, 特异的)
  - 竞争状况(新的包装设计, 基层商场促销活动)
- 发展新的客户群
  - 各种类别的客户群



## Health and Nutrition

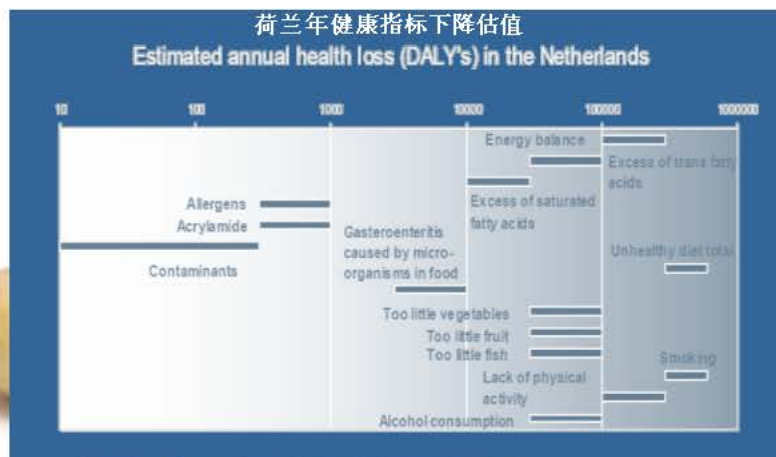
### Comparison of Health Issues



Source: Paul van Eijk

## 健康和营养

### 健康成分对比





Source: Paul van Eijk




### 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

Trans fats

- 薯条产品
  - 快餐食品链上的主角，目前已更换为不含反式脂肪酸的煎炸油
  
- 薯片产品
  - 反式脂肪是一个例外






## Health and Nutrition

Less fat and calories

- French fries:
  - Smaller portions, focus on preparation other than frying, new frying technologies



Blue print multiflow fryer

- Potato chips:
  - Smaller packages, baked, reduced in fat, light



Vacuum fryer

## 健康与营养

低卡低脂肪

- 薯条产品
  - 仅占一小部分，目前有新的煎炸技术



Blue print multiflow fryer

- 薯片产品
  - 小包装，烘烤代替油炸，已上市低脂低卡产品



Vacuum fryer

### Health and Nutrition

#### Sodium & Acrylamide

- Sodium  
(less, offer sachets)



- Acrylamide  
(lighter fries, changes in frying process, less potato ingredients (extruded snacks), enzymes)




### 健康与营养

#### 钠与丙烯酰胺

- 钠  
(含量少, 小袋包装)



- 丙烯酰胺  
(低脂薯条, 在油炸过程中改变, 较少的马铃薯成分, 酶作用)




## Energy and Environment

- Energy saving in processing
- Alternative energy sources, e.g.:
  - Aviko  
(wind energy, bio fuels)
  - Solanyl Bioplastics  
(re-duce, re-use, re-cycle)
  - Various  
(biodiesel, solar and wind power, green building)



## 能源与环境

- 在加工过程中节约能源
- 或者使用可选的替代能源，例如：
  - Aviko爱味客公司所使用的  
风力能源及生物燃料
  - Solanyl Bioplastics公司所使用的  
2次材料，回收材料等
  - 其他一些公司所使用的  
生物燃料，太阳能及风力，绿色建筑



### Energy and Environment

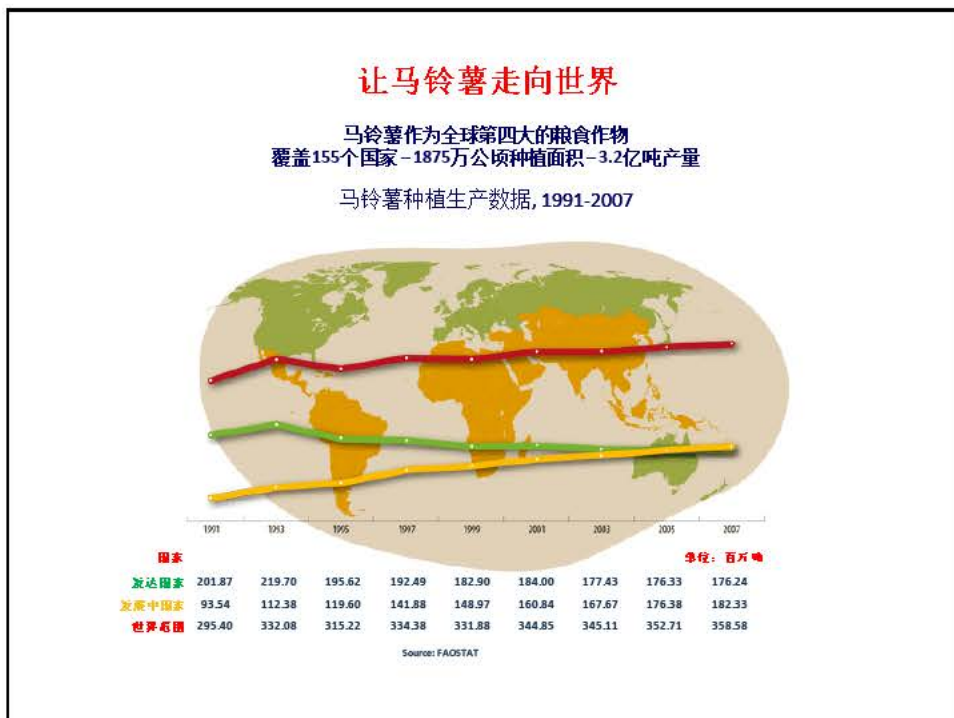
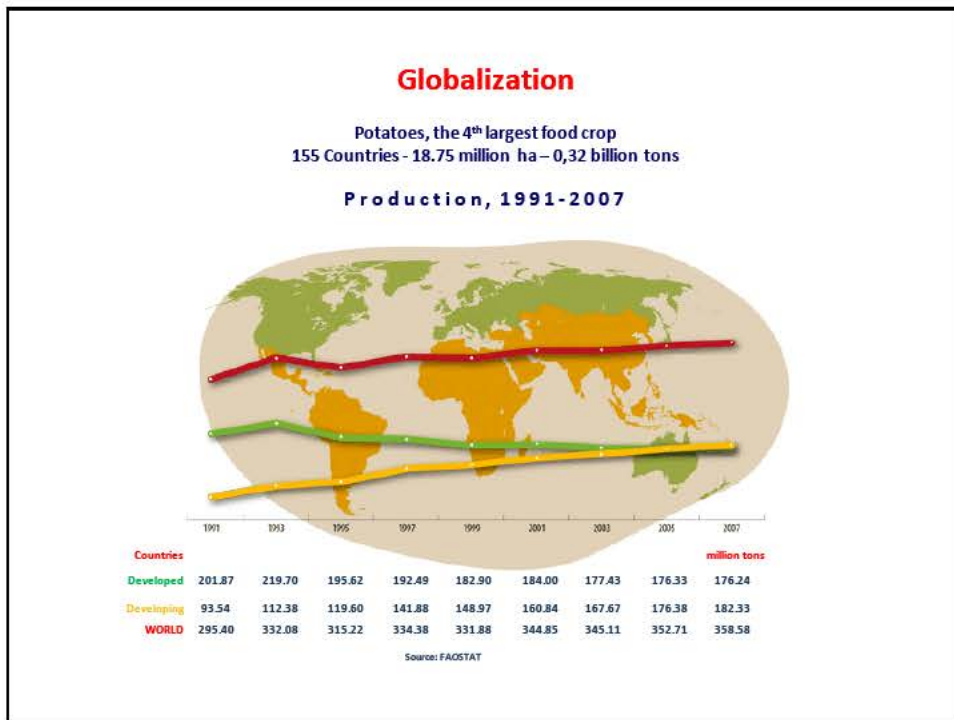
- Supply chain integration
- Low carbon footprint
- Local sourcing of Potatoes
- “Controlled” potato cultivation
- Reduction in use of pesticides
- Organic potato products
- New varieties (resistance)

The diagram illustrates the supply chain stages with the following percentages: 44% (farmer), 30% (potato slices), 15% (potato bag), 9% (truck), and 2% (potato bag).

### 能源与环境

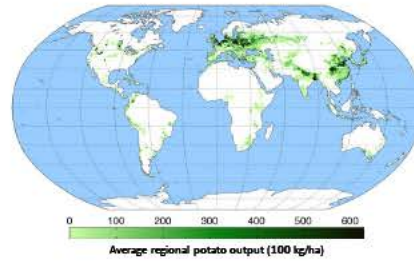
- 综合供应链
- 低碳概念
- 本地马铃薯供应源
- “可控”的马铃薯种植系统
- 减少杀虫剂的使用
- 有机马铃薯产品
- 新品种（抗病品种）

The diagram illustrates the supply chain stages with the following percentages: 44% (farmer), 30% (potato slices), 15% (potato bag), 9% (truck), and 2% (potato bag).



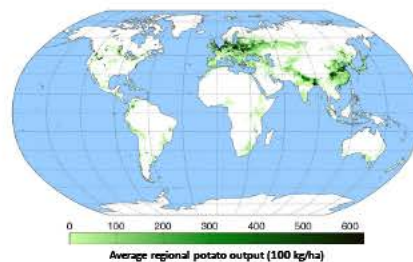
## Globalization

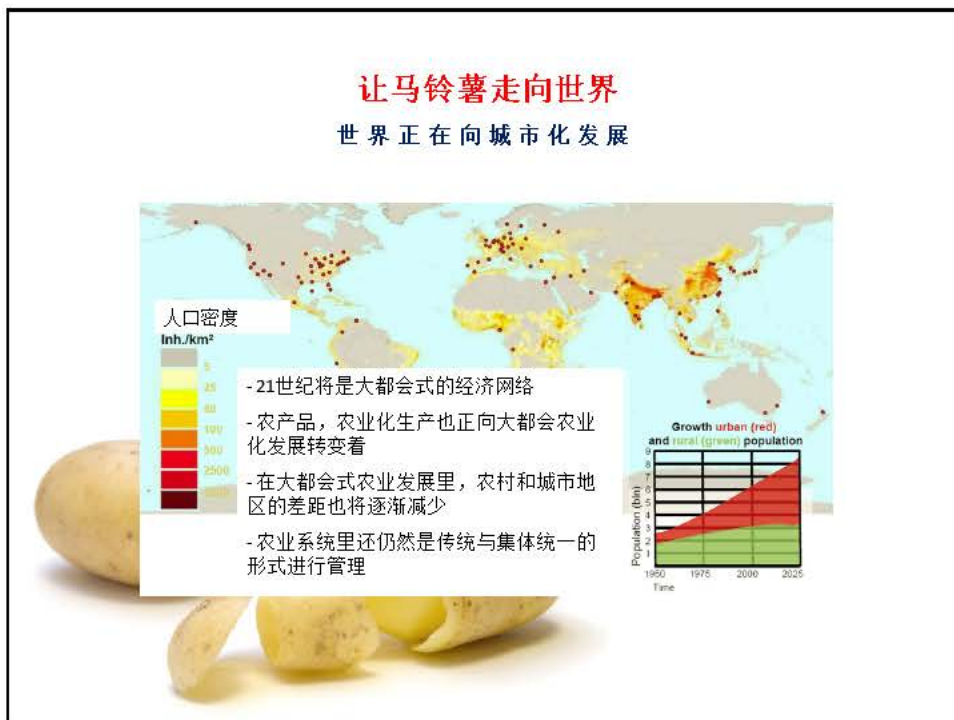
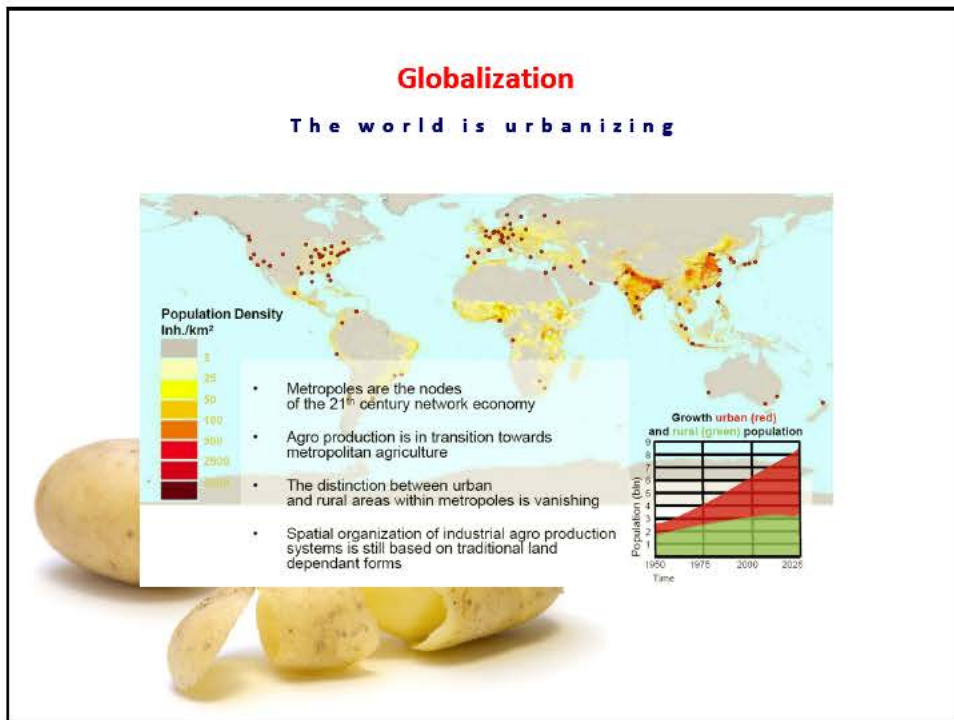
- Growing importance of China and India, South America (demand outside Europe doubled in 10 years)
- Global shift in consumption of potato and potato products
- Impact of new countries on potato supply and demand
- Equipment manufacturers and system integrators, acting global
- Increased competition: buying power major retail and QSR chains
- Outsourcing



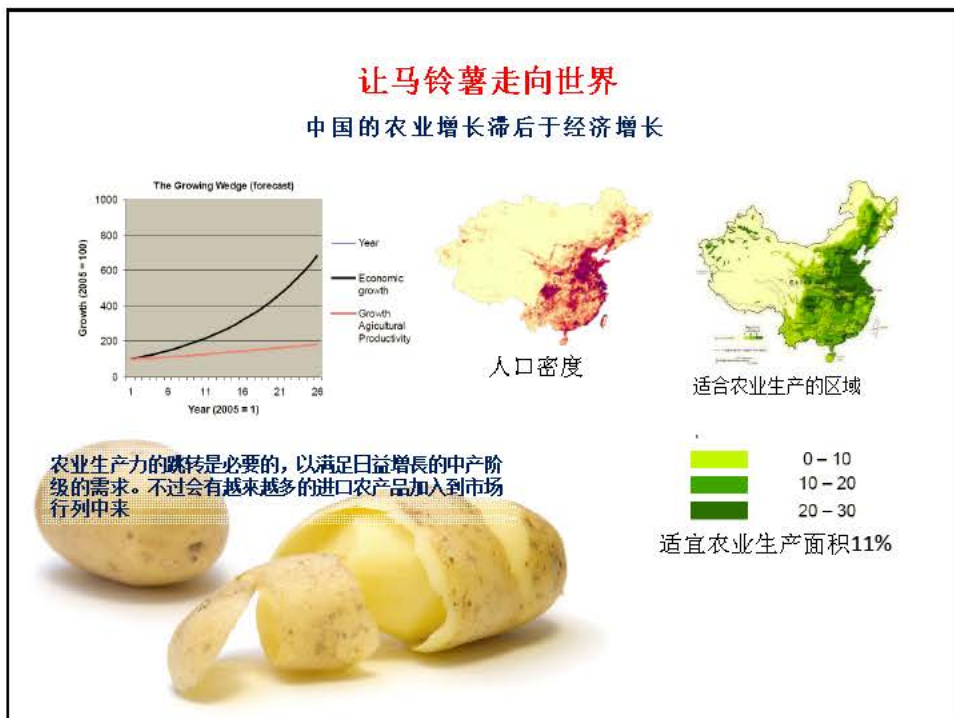
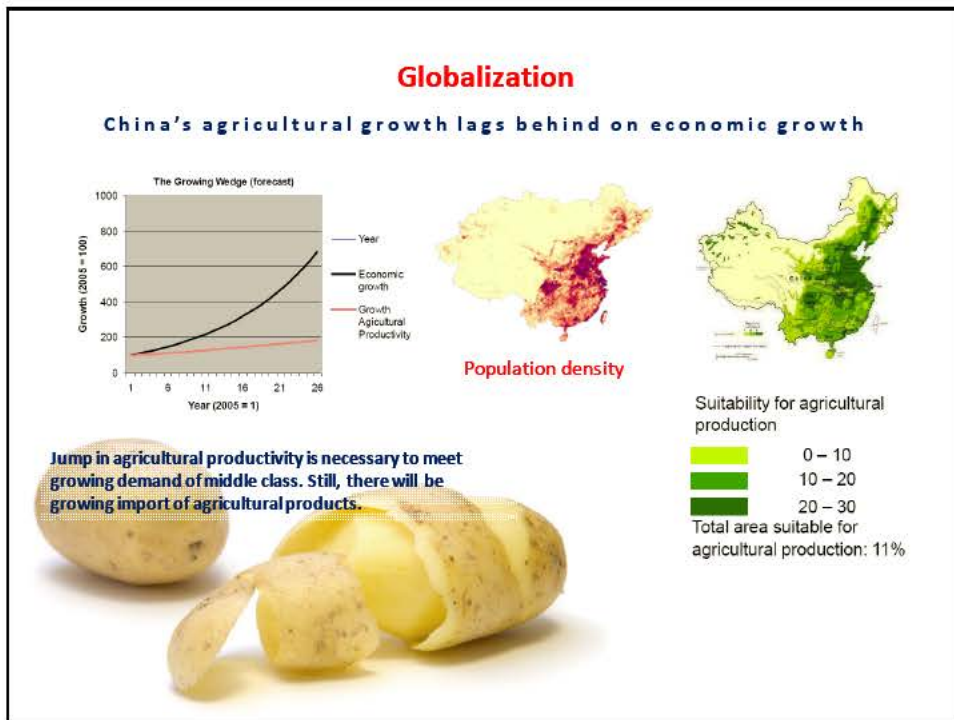
## 让马铃薯走向世界

- 对于中国，印度以及南美来说，国际化发展是非常重要的（在过去10年间，欧洲之外的国家需求增加了2倍）
- 世界马铃薯和马铃薯产品的消费状况发生着转变
- 新的一些国家对马铃薯供应及需求产生了一定影响
- 国际化的设备生产商，以及系统供应商，均以国际化的形式活跃在世界市场上
- 日益剧烈的竞争：主要购买力集中在零售商及QSR（质量体系规范）链
- 向外国采买进口









## GMV - 1<sup>st</sup> Dutch Potato Technology Mission

25 Year joint focus



## GMV协会- 第一届荷兰马铃薯技术代表团访问中国

25年来中荷之间的友好往来与紧密合作



**GMV**  **ORANGEPOTATO**

# 荷兰小土豆大产业



Pioneers in international business

 **ORANGEPOTATO** **GMV**

# 荷兰小土豆大产业

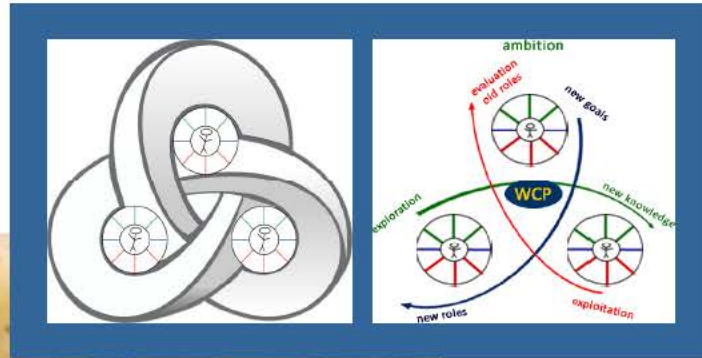


Pioneers in international business



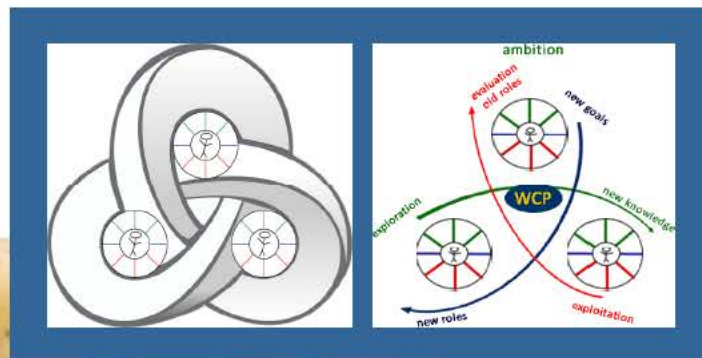
## Human Capital

The most important asset!



## 关键点在人才

最重要的是目前所拥有的人才



**Human Capital**  
The most important asset!

The diagram illustrates the relationship between Innovation and Performance through Human Capital (WCP). It features three overlapping circles, each containing a smaller circle with a person icon. The top circle is labeled 'ambition' and 'new goals'. The left circle is labeled 'exploration' and 'new roles'. The right circle is labeled 'exploitation' and 'new knowledge'. A central blue circle is labeled 'WCP'. Arrows indicate a clockwise flow: from 'ambition' to 'new goals', from 'new goals' to 'exploitation', from 'exploitation' to 'new knowledge', from 'new knowledge' to 'ambition', from 'ambition' to 'exploration', from 'exploration' to 'new roles', and from 'new roles' to 'ambition'. The word 'Innovation' is written in red at the bottom left, and 'Performance' is written in red at the bottom right. The entire diagram is enclosed in a blue border.

**关键点在人才**  
最重要的是目前所拥有的人才

This is a Chinese translation of the diagram above. The text is in red. The top text reads '关键点在人才' (Key point is in talent) and '最重要的是目前所拥有的人才' (The most important is the talent currently owned). The diagram itself is identical to the one in the first slide, but with Chinese labels: '知识目标' (Knowledge goal) at the top, '创新' (Innovation) at the bottom left, and '表现' (Performance) at the bottom right. The central circle is labeled 'WCP'. The diagram is enclosed in a blue border.

### Ambition - Potato Production

Year	Ha (*1.000)	Yield (Tons/ha)	Production (tons*1million)
1970	2.000	10	20
1980	2.300	11	25.3
1990	2.850	12	34.2
2000	4.700	13	61.1
2005	5.000	14.5	72.5
2010	5.500	15	82.5
2015	6.000	17.5	105
2020	6.500	20	130



### 发展的雄心—马铃薯种植生产

年份	公顷 (*1.000)	产量 (吨/公顷)	生产 (吨*1百万)
1970	2.000	10	20
1980	2.300	11	25.3
1990	2.850	12	34.2
2000	4.700	13	61.1
2005	5.000	14.5	72.5
2010	5.500	15	82.5
2015	6.000	17.5	105
2020	6.500	20	130



### Vision

#### “The (sweet) Potato”

- World class showcases in sustainable development (efficiency of land, energy, water and material utilization)
- Driver for economic development through innovative food production
- Maximizing synergies between rural and urban development
- Lead the way for China's long term food security



### 未来展望

#### “美味”马铃薯

- 世界范围内可持续发展（土地效率，能源，水源以及原料的正确利用）
- 经济发展及食品产品创新的推动力
- 乡村和城市发展相结合，最大限度地发挥两者协同增效发展
- 为中国食品安全长期发展指明方向





**8 x P = Success**



- P**eople
- P**lan
- P**erformance
- P**ro-active
- P**rofessionalism
- P**ositive attitude
- P**eace of mind

**8个成功的关键**



- 人员
- 计划
- 表现
- 向前看的心态
- 专业
- 积极的态度
- 稳定的情绪

*Thank you !*

For more information, please visit our website:

**GMV**

[www.gmv-fme.nl](http://www.gmv-fme.nl)



谢谢 !

了解更多信息请登录我们的网站 :

**GMV**

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Potato - Policy - Partners

### Strategic Partner

Other references:  
Europe, USA, Canada, South Africa, Turkey, Lebanon, Egypt

References in China:

**Liaoning**  
HEALTH & HONEY: distribution, Grading, Packing and (ULO) Storage

**Inner Mongolia**  
HEALTH & AGRICULTURE: processing, storage and BagRack logistics, cultivating, freezing, infusion and dehydration of fruit

**Gansu**  
HEALTH & AGRICULTURE: infusion and dehydration of apples, grading, packing, (ULO) storage & fresh pallet logistics, equipment manufacturing

**Hebei**  
SYSTEMS: coordination, development, procurement and manufacturing

**Beijing**  
COORDINATION: marketing, Sales, PR, Engineering , PR - Networking

HAK PARTNERS

马铃薯 - 政策方针 - 战略伙伴

### 战略伙伴

其他战略合作:  
欧洲, 美国, 加拿大, 南非, 土耳其, 黎巴嫩, 埃及

中国战略合作:

**辽宁**  
健康食品, 蜂蜜: 产品配送, 分级, 包装及超低氧仓储(ULO)

**内蒙古**  
健康农业: 加工, 仓储及装袋架(BagRack)物流, 种植, 速冻, 水果果脯制作及脱水

**甘肃**  
健康农业: 苹果果脯制作及脱水苹果, 分级, 包装, 超低氧仓储, 新鲜水果物流, 加工机械设备

**河北**  
系统: 项目协作, 产业发展, 采购及生产系统优化

**北京**  
项目协作: 市场营销, 宣传, 工程建设, 人脉关系网

HAK PARTNERS  
哈克农业合作公司



Potato - Policy - Partners

Strategic (potato) Partner – 25 Years joint focus



马铃薯 - 政策方针 - 战略伙伴

战略伙伴（马铃薯领域）- 25年来的合作聚焦

