

A wide-angle photograph of a golden wheat field stretching to the horizon. The sky is a deep, clear blue, dotted with several fluffy white cumulus clouds. The wheat in the foreground is in sharp focus, showing individual stalks and heads. The overall scene is bright and open, suggesting a clear, sunny day.

# Perten Instruments

Bengt Sahlin VP Marketing & Sales

May, 2013

# Agenda

Company introduction

Grain production in Kazakhstan

Agriculture Quality Control solutions

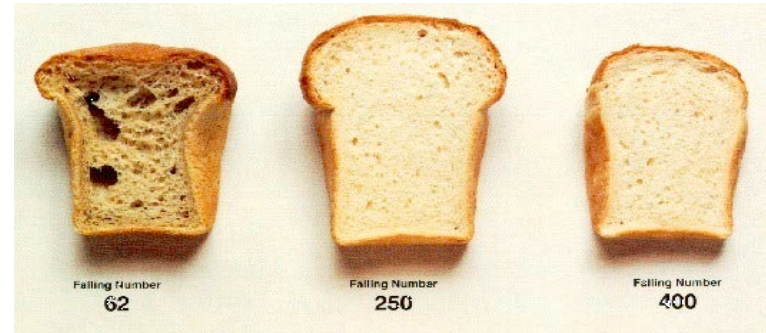
Perten in Kazakhstan



Improving production efficiency, product quality  
and profitability in the food, flour, feed and  
grain industries

# Innovation & Quality

50 years ago Perten developed the Falling Number method and instrumentation.



Falling Number, and later Gluten Index, were accepted as the world standards.





# Company overview

## Vision, mission and business model

### Vision and Mission

- Perten's vision:
  - *“Be the leading and most respected provider of solutions for quality measurement of the agri/food industries”*
- Perten's mission:
  - *“Supply solutions that facilitate industry to produce high quality agri/food products efficiently”*

### Core values
























### Business model

- Perten's business model is based on development and sales of high-end products and customer oriented service and support:
  - **Instruments:** ~85% of revenues derive from sales of instruments for quality control within the segments grain, flour, food and feed
  - **Services:** ~10% of revenues stem from services to customers
  - **Consumables:** around ~5% of revenues stem from sales of consumables and spare parts
- Extensive global distribution network enables Perten to be very close in contact with customers
  - Direct sales through subsidiaries in Americas, Europe, China and Australia
  - Distributors cover remainder of ~100 countries

# Company overview

## Overview of customer benefits by market segment

			Customer Problem	Application	Perten Solution						
<b>Grain Trade</b>  <table border="1"> <tr> <th>Share of sales</th> <th>Growth</th> <th>Customers</th> </tr> <tr> <td> ~60%</td> <td></td> <td> <ul style="list-style-type: none"> <li>Grain traders</li> <li>Breeders</li> <li>Processing companies</li> </ul> </td> </tr> </table>			Share of sales	Growth	Customers	 ~60%		<ul style="list-style-type: none"> <li>Grain traders</li> <li>Breeders</li> <li>Processing companies</li> </ul>	Pay the right price Avoid bad shipments	Moisture, Protein, Oil Falling Number (FN) Moisture, Falling Number	AM, IM 9500, FN, DA AM, IM 9500, FN
Share of sales	Growth	Customers									
 ~60%		<ul style="list-style-type: none"> <li>Grain traders</li> <li>Breeders</li> <li>Processing companies</li> </ul>									
<b>Grain Processing and Feed Production</b>  <table border="1"> <tr> <th>Share of sales</th> <th>Growth</th> <th>Customers</th> </tr> <tr> <td> ~30%</td> <td></td> <td> <ul style="list-style-type: none"> <li>Oil seed crushers</li> <li>Flour mills</li> <li>Feed producers</li> </ul> </td> </tr> </table>			Share of sales	Growth	Customers	 ~30%		<ul style="list-style-type: none"> <li>Oil seed crushers</li> <li>Flour mills</li> <li>Feed producers</li> </ul>	Test raw material suitability Optimize process Verify end products	Moisture, FN, Gluten Moisture, Protein, Ash Moisture, Protein, Ash	DA 7250, FN, GM DA 7250, DA 7300 DA 7250
Share of sales	Growth	Customers									
 ~30%		<ul style="list-style-type: none"> <li>Oil seed crushers</li> <li>Flour mills</li> <li>Feed producers</li> </ul>									
<b>Processed Foods</b>  <table border="1"> <tr> <th>Share of sales</th> <th>Growth</th> <th>Customers</th> </tr> <tr> <td> ~10%</td> <td></td> <td> <ul style="list-style-type: none"> <li>Snack food producers</li> <li>Meat producers</li> <li>Dairy producers</li> </ul> </td> </tr> </table>			Share of sales	Growth	Customers	 ~10%		<ul style="list-style-type: none"> <li>Snack food producers</li> <li>Meat producers</li> <li>Dairy producers</li> </ul>	Correct & improved consumer experience Improve margins	Texture, Viscosity, Size Moisture, Fat, Protein	TVT, RVA, BVM DA 7250, DA 7300
Share of sales	Growth	Customers									
 ~10%		<ul style="list-style-type: none"> <li>Snack food producers</li> <li>Meat producers</li> <li>Dairy producers</li> </ul>									

# Company overview

## Overview of relevant quality parameters

### Quality parameters

#### Basic physical

- Weight
- Size
- Volume
- Density
- Color
- Etc.

#### Toxicology

- Pesticides
- Bacteria
- Heavy metals
- PCB
- Mold
- Etc.

#### Compositional & Quality parameters

- Moisture
- Protein
- Fat
- Starch
- Fiber
- Amino acids
- Etc.
- Gluten characterization
- Sprout/Weather damage
- Dough characterization
- Pasting performance

#### Process parameters

- Temperature
- Concentration
- Pressure
- Etc.
- Time
- Speed
- Image/colors

# Company overview

## Overview of Perten's two key technology platforms

### Compositional analysis

#### NIR

- % analysis of constituents
- Replace old tedious methods
- Possible to use in lab and for on line process control
- Strong growth



**AM 5200**

#### Aquamatic



**IM 9500**



**DA 7200 & DA 7300**



### Functional analysis

#### Rheology

- Properties rather than constituents
- Used as de facto or official standard
- Used in Food product development & research



**FN 1700**



**GM 2200**

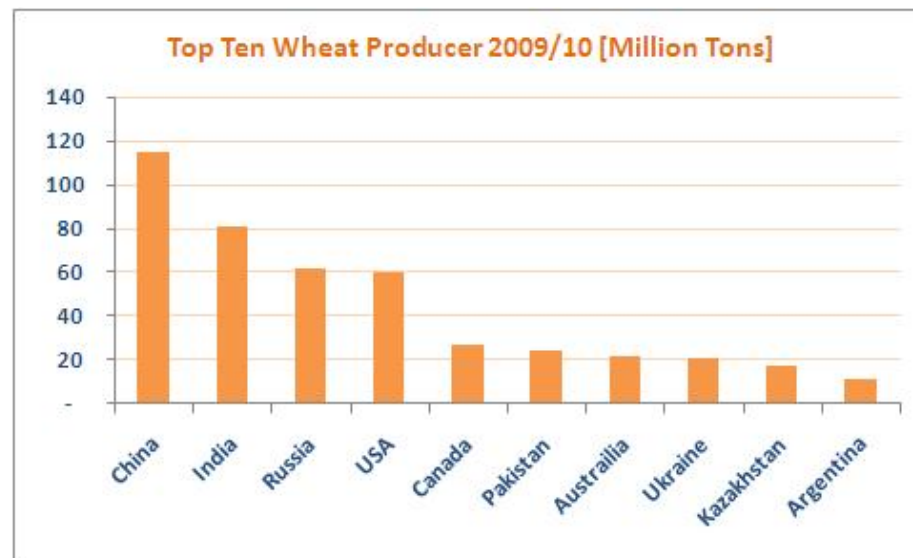


**RVA 4500**

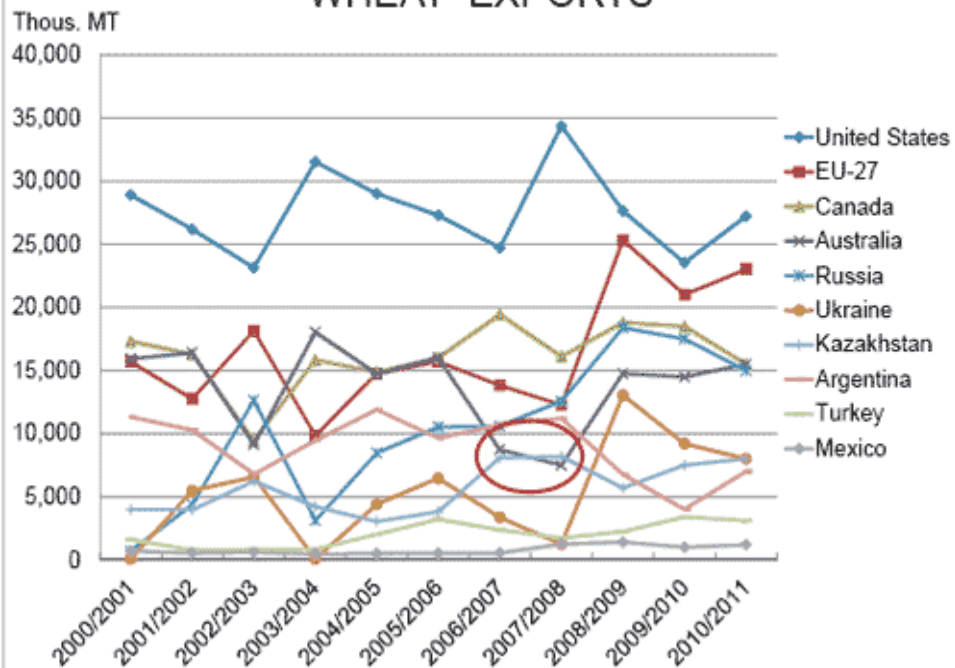


# Grain Production in Kazakhstan

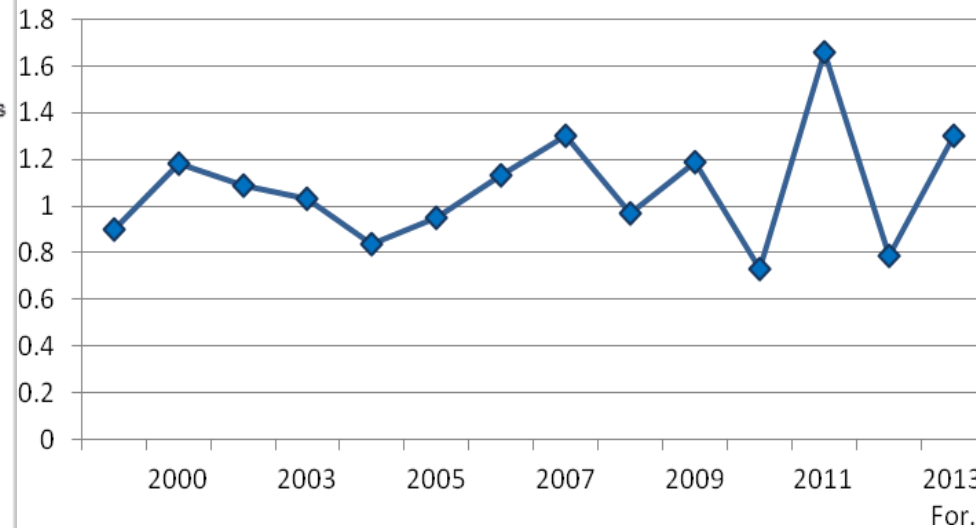
- In 2011 near 24 Mtons was produced, but in 2012 only 13 Mtons; due to weather conditions.
- Soil and climate provide ideal conditions for growing all types of the grain and oilseeds.
- Every year it exported near 6-9 million tons.
- Because of Kazakhstan's semiarid climate wheat quality is very high
- But, Grain yields are low



## WHEAT EXPORTS



## Wide Wheat Yield Swings in Recent Years



## WHEAT YIELD BY COUNTRY

Country	Wheat yield (Hg/Ha), 2008
Germany	80 873
Ukraine	36 698
US	30 177
Canada	28 520
Russia	24 458
Australia	15 788
Kazakhstan	9 714

Source: FAO statistics.

# Can QC instrument help Kazakhstan?

- Implementing a quality control system improves overall quality – Breeding- Farming- Storage
- Making sure producers (farmers) get payment for good quality
  - Accurate and quick moisture testing
  - Protein payment
- Quality systems will secure that consistent products can be offered to global producers
- Good and consistent Quality gives a competitive edge on the global Grain market and attracts foreign investments

# OECD Report



## Agri-business sector: grains

### RECOMMENDATIONS FOR SECTOR REFORM:

- **Develop stronger links between farmers and processors:** for example, processors could act as guarantors for farmers vis à vis financial institutions.
- **Attract foreign retailers** to spur development of the entire supply chain in line with international retailers' standards.
- **Encourage deep processing** of wheat end-products.
- **Increase promotion** of wheat exports. (The US invests USD 10 million per year to promote its products, which provides a return of USD 23 for every USD 1 spent).

## Agri-business: meat

### RECOMMENDATIONS FOR SECTOR REFORM:

- **Promote modern retail and access to finance schemes** to increase quality of feed and increase cattle inventory.
- **Implement standardisation and regulation** to upgrade standard of beef products.
- **Target markets:** to develop its export potential Kazakhstan should focus on the high-growth Russian, Central Asia and the Middle East markets.
- **Move up the value chain:** explore higher value-added beef products.
- **Further develop producers' organisations** and extension programmes to educate farmers.
- **Promote better quality standards** through producers' organisations.

## Agri-business: dairy

### RECOMMENDATIONS FOR SECTOR REFORM:

- **Increase access to finance schemes:** to improve milk quality, to grow the share of pedigree cattle, to apply innovative technologies and to promote modern retail chains.
- **Support the development of producer organisations and extension services** to promote the sector to improve the quality of feed and increase the inventory of milk animals.

# Grain Processing

## Grain

- Coops, traders
- Breeders
- Oilseed crushing
- Ethanol production
- Other grain processing

## Key drivers

- Payment analysis
- Moisture monitoring
- Sorting grain according to quality
- Process optimization
- Fast analysis for breeders





# What are other countries doing?

## Turkey

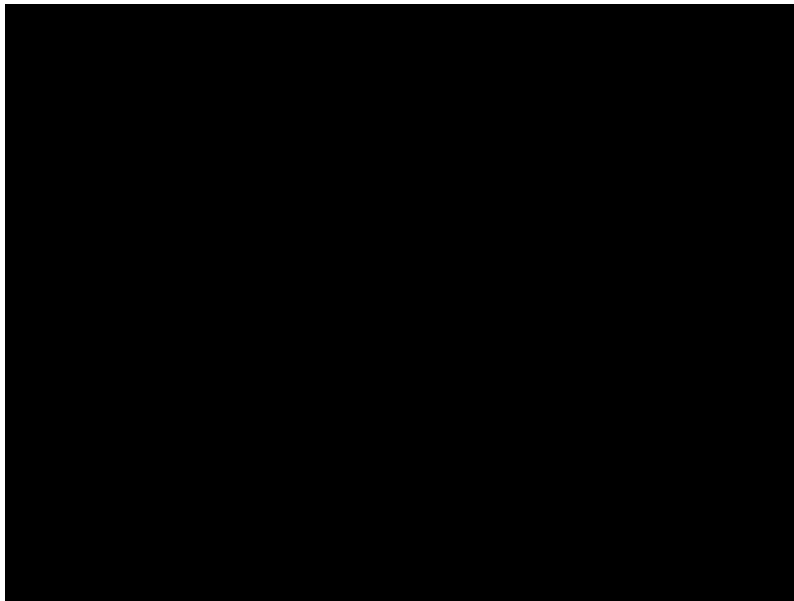
### TMO Turkish Grain Board

- Decided in 2009 to improve their global competitiveness
- High quality should give a premium
  - Change from one size fits all (protein < 11 %)
- Traditionally only measure moisture and density – now changed to protein, Zeleny, gluten and oil (oil seeds)
- Develop grain processing and increase global competitiveness
- Farmers paid for producing good quality and quantity

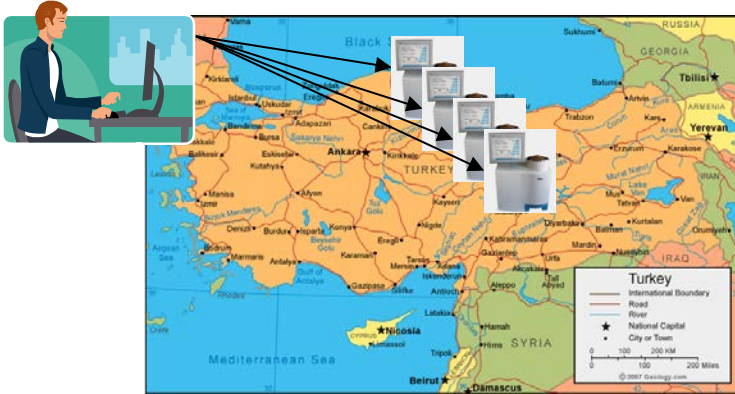


# Inframatic 9500 – Whole Grain analysis

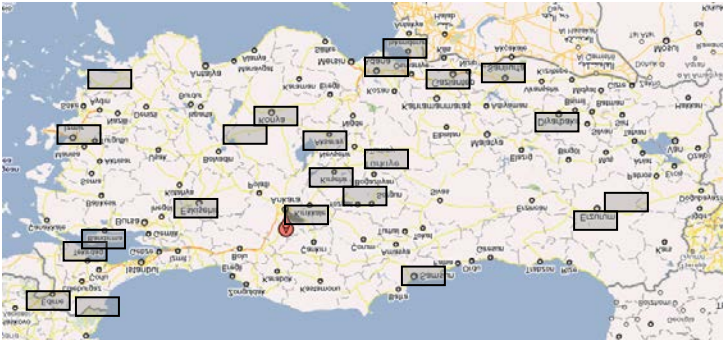
- All grains and oil seeds
- Moisture, Protein, Oil, Starch and more
- Test Weight through optional module
- 1 minute analysis time



# Whole Grain Analysis Network



- 350 Whole Grain Analyzers ensures uniform payments
- Reports harvested quantities and quality daily
- Remote service and support
- Help set bias if needed
- Make software updates
- Download and upload data.



18	İLLERE GÖRE IM 9500 SERİ NUMARALARI VE TEAMVİWER ID' LERİ				
19					
20	SIRA NO	SERİ NOSU	KURULDUĞU İŞYERİ	TEAMVİWER ID	YETKİLİ KİŞİ
21	1	1133906	BİNGÖL EKİP		
22	2	1113744	ELAZIĞ AJANS AMİRLİĞİ	733071615	
23	3	1103565	KOVANCILAR GEÇİCİ EKİP	669083159	
24	4	1103564	DIYARBAKIR SUDE MÜDÜRLÜĞÜ	607172730	

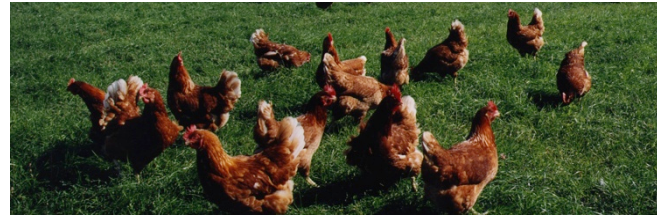
# Feed industry

## Feed

- Feed mills
- Pet food
- Additives
- Rendering

## Key drivers

- Final product Quality control
- Optimizing recipe according to nutrition and costs
- On line control to increase throughput and save energy





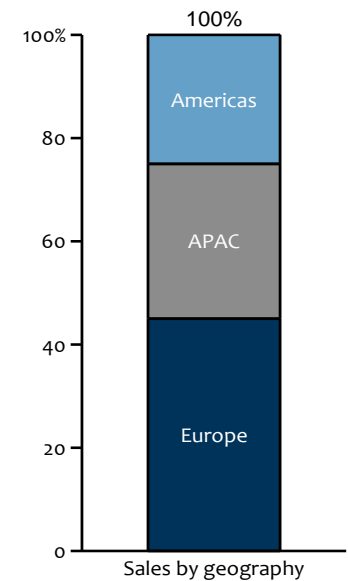
# Geographic presence

## Geographic presence



– Local SAS offices in the USA, China, Germany, Italy, France, Australia and Argentina

## Sales split estimate



- Europe: ~50% of sales
- APAC: 25-30%
- Americas: 20-25%



# Perten Instruments in Kazakhstan

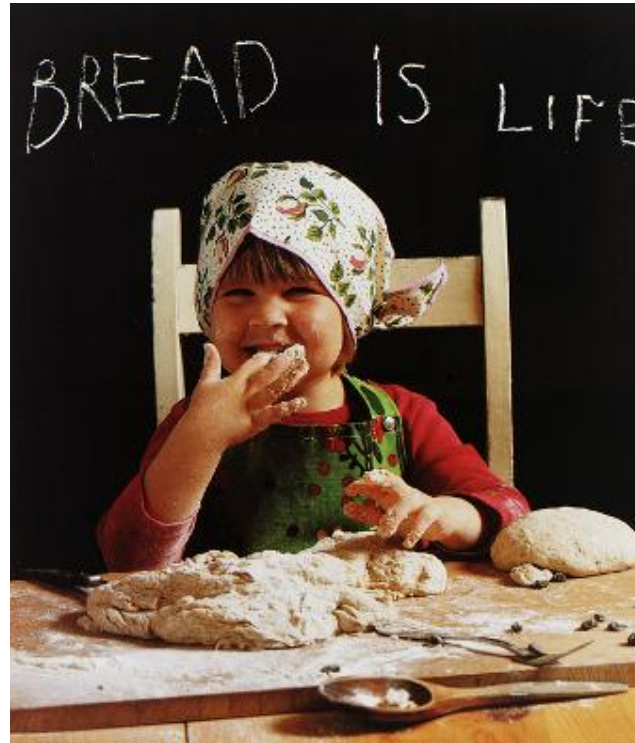
- Sales through a distributor
  - SocTrade
  - Since 1990
  - Sales of analytical instruments
- Business support through Perten Instruments Representation Office in Moscow



# So, Can QC instrument help Kazakhstan?

**YES, it will:**

- **Improv Agri/Food supply chains management**
  - Global competitive edge
  - Better Feed
  - Higher Meat and Dairy production
- **Create less tension between sellers and buyers**
  - Internally – encourage produce of value added products locally
  - Externally – trustworthy and stable supplier
- **Easier to attract foreign investments**



**THANK YOU**