

Soy in the Netherlands – a practical experience Ruud Tijssens / Director Corporate Affairs

What is Agrifirm? In a nutshell

- > Started in 2010 as a merger of co-ops Cehave Landbouwbelang and Agrifirm.
- > Holding with subsidiaries in livestock and arable farming.
- > International company, worldwide sales, production in Europe and China.
- > Members in the Netherlands: 18,000 farmers.
- > 2,956 fte, over 3,500 employees.
- > Turnover 2013: € 2.5 billion.



Financial 2013

Turnover:

€ 2,5 billion

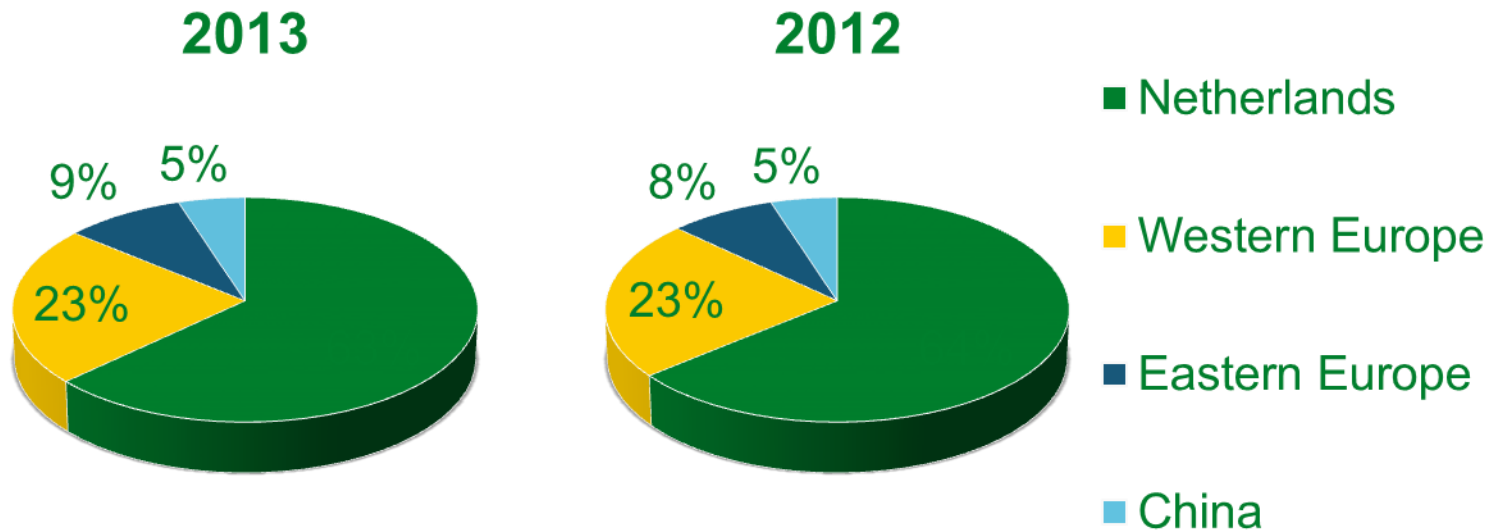
Group Equity:

€ 393 million

Solvency:

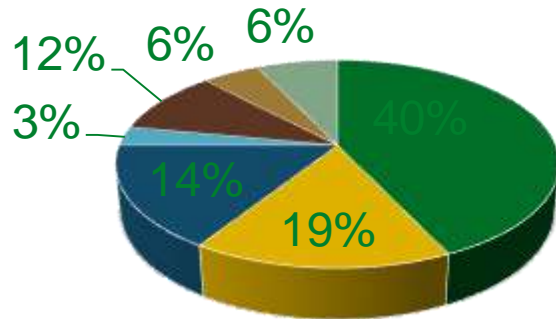
48,6%

Agrifirm geographical turnover by region

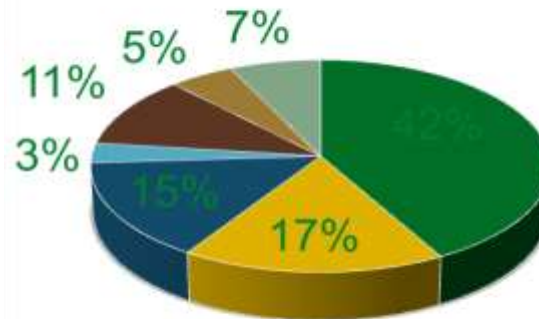


Agrifirm turnover by activity

2013



2012



- Feed Netherlands
- Feed Europe
- Plant Netherlands
- Plant Germany
- Nuscience
- Co-products
- Other activities

Background

> Background

- Discussion imports of soy
- Regional protein production
- 2009
 - Experiments with Faba Beans
 - Protein / Starch content
 - Feed value calculation Faba Beans
 - Value calculation for the arable crop farmer

	Crude protein (g/kg)	Crude fat (g/kg)	Crude fibre (g/kg)	Starch (g/kg)	Sugars (g/kg)	NSP (g/kg)	EW (units/kg)
Potato protein	803,0	4,0	7,3	0,0	0,0	99,0	102,9
Wheat gluten meal	763,0	69,0	5,0	30,0	0,0	0,0	117,6
Fish meal	660,0	93,0	2,0	0,0	0,0	0,0	104,2
Maize gluten meal	607,0	37,0	11,0	167,0	1,0	102,4	112,2
Brewers yeast	475,0	16,0	4,8	141,0	18,0	223,4	87,7
Soybean meal 50%	469,0	18,0	37,0	55,0	105,0	207,5	94,4
Lupine	360,0	60,0	60,0	90,0	50,0	363,0	98,3
Wheat DDGS	358,0	47,0	71,0	13,0	20,0	450,0	70,2
Linseed expeller	311,0	77,0	102,0	76,0	46,0	387,6	87,5
Rapeseed expeller	308,0	94,0	140,0	50,0	90,0	328,0	95,7
Sunflower meal 35%	303,0	20,0	215,0	44,0	52,0	432,4	67,5
Maize DDGS	292,0	119,0	64,0	37,0	20,0	417,4	94,5
Sunflower meal 28%	271,0	14,0	270,0	44,0	42,0	488,5	58,5
Horse beans	253,0	12,0	77,0	337,0	34,0	216,7	98,9
Vinasse	244,0	0,0	0,0	0,0	63,7	303,9	48,4
Lentil	230,0	12,0	52,0	402,0	40,0	154,7	101,1
Full fat linseed	218,0	351,0	94,0	55,0	34,0	236,0	145,9
Blauwmaanzaad	216,0	423,0	100,0	0,0	30,0	200,2	174,0
Maize gluten feed	212,0	39,0	74,0	153,0	25,0	426,6	83,1
Peas	206,0	11,0	55,0	438,0	40,0	157,0	108,7
Full fat rape seed	203,0	412,0	105,0	35,0	56,0	193,7	180,5
Wheat gluten feed	169,0	27,0	64,0	231,0	75,0	295,0	88,3
Palm kernel meal	152,0	113,0	212,0	20,0	19,0	591,0	86,2
Alfalfa (dehydrated)	152,0	22,0	286,0	28,0	21,0	564,6	48,3

Illeal digestible lysine

	Cprotein gr/kg	Lysine gr/kg	IV lysine gr/kg	IV lysine/ Cprotein
Potato protein	803,00	64,24	58,46	7,28%
Fish meal	660,00	51,48	45,82	6,94%
Peas	206,00	14,63	11,89	5,77%
Lentil	230,00	15,64	12,98	5,64%
Horse beans	253,00	15,94	14,25	5,63%
Dried Brewers yeast	475,00	31,26	26,57	5,59%
Soybean meal 50%	469,00	28,66	25,50	5,44%
Lupine	360,00	17,28	15,29	4,28%
Rapeseed meal	308,00	16,48	11,83	3,84%
Full fat rapeseed	203,00	10,15	7,51	3,70%
Blauwmaanzaad	216,00	8,66	6,41	2,97%
Linseed expeller	311,00	11,51	9,09	2,92%
Full fat linseed	218,00	8,07	6,37	2,92%
Sunflower meal 35%	303,00	10,61	8,06	2,66%
Sunflower meal 28%	271,00	9,21	7,00	2,58%
Wheat gluten feed	169,00	5,66	4,13	2,45%
Maize gluten feed	212,00	6,36	3,75	1,77%
Wheat DDGS	292,00	7,90	5,06	1,73%
Alfalfa (dehydrated)	152,00	6,54	2,61	1,72%
Wheat gluten meal	763,00	12,97	12,45	1,63%
Palm kernel meal	152,00	4,26	2,43	1,60%
Maize gluten meal	607,00	10,32	8,67	1,43%
Maize DDGS	358,00	7,52	4,59	1,28%
Vinasse	244,00	1,61	1,34	0,55%

Feed value calculations showed fababeans close to wheat price (+ 2- 3%)

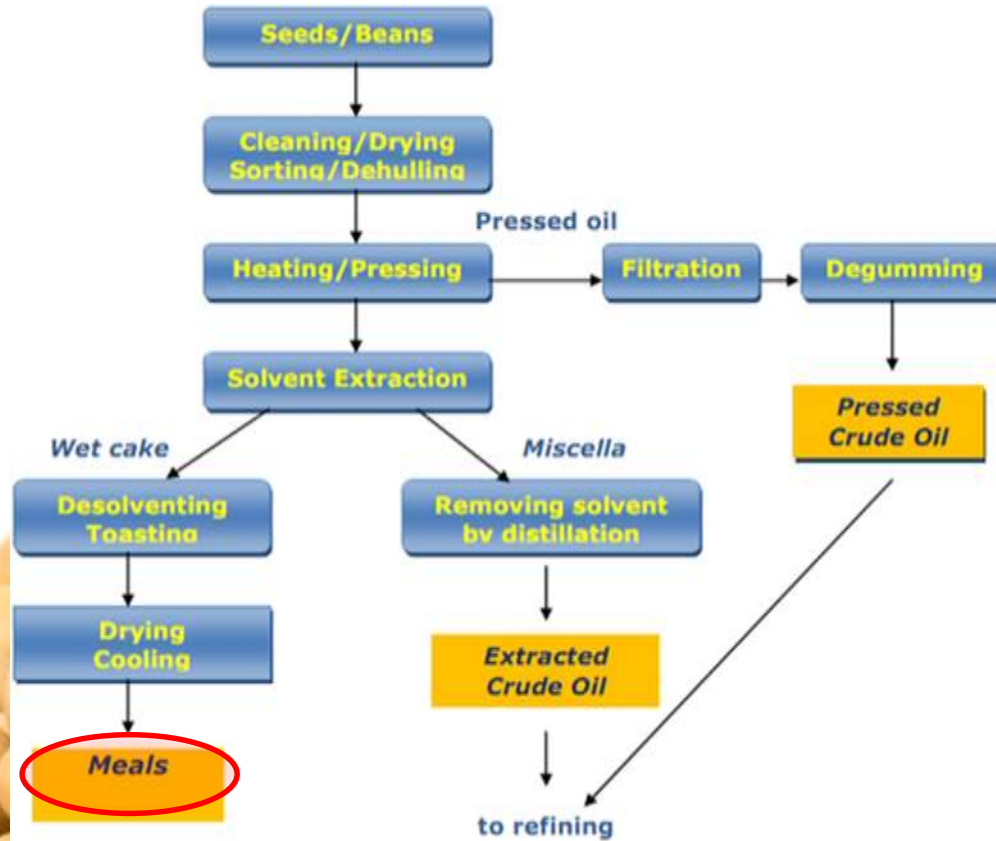
- > Several raw material sources
- > Containing nutrients, e.g.:
 - Starch
 - Energy
 - II. Lysine,
 - Etc.
- > Most optimal mix to meet constraints

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Saldo per hectare → target price

	Wheat	Horse beans	Horsebeans (+25% Yield)	Peas	Lupines
yield (kg/ha)	9000	6000	7500	4500	3000
price (euro/kg)	0,12	0,209	0,167	0,303	0,42
Price of mainproduct (euro/ha)	1080	1254	1252,5	1363,5	1260
Price of byproduct (euro/ha)	200	0	0	140	0
Total Price (main+by product) (euro/ha)	1280	1254	1252,5	1503,5	1260
Cultivation Costs (euro/ha)	570	540	540	790	550
Saldo (euro/ha)	710	714	712,5	713,5	710
Logistics (euro/ton)	0,01	0,01	0,01	0,01	0,015
Final price at plan	0,13	0,22	0,177	0,313	0,435

Feed industry is applying Soybean meal



Soy experiments

- > 2011 – trials in Poland
- > 2011 – 2012 - seed development – filing Adsoy & Sunrise
- > 2013 – field trials: 11 farmers / 30 hectares
- > 2014 – field trials: 34 farmers / 110 hectares
- > 2015 – continuation of field trials





SOY FROM THE NETHERLANDS!



4 October 2013

Recently Both ENDS and agricultural and horticultural cooperative Agrifirm organised a field visit for members of the Dutch Soy Coalition. The group visited two farmers in the province of Drenthe who have been participating in the first practice test to grow Soy in Netherlands. One of them is an organic poultry farmer and the other a conventional dairy farmer. Both use soy in animal feed on the farm. Tamara Mohr of Both ENDS was there and explains about this initiative.

Cultivation

Disease prevention



Sclerotinia

- Soy: vulnerable to Sclerotinia
- Organic crop protection: Contans
- Crop protection
 - Switch
 - Prosaro
- Coming soon to market: Luna Experience

Seeding

The seed bed



Seed bed conditions

- Flat
- Close connection seedlings with seed bed
- No structure problems from earlier harvests

The seeder

- Precision seeder for best results
- Pneumatic or cam wheel can be used
- Can be done by a contractor owning a bean seeder



Seeding

Sowing seeds



Ready-To-Use

- Varieties:
 - Adsoy
 - Sunrise
- Sowing seeds in 25 kg bags
- Rhizobium inoculated seeds
- Ease of use

Cultivation

Fertilizing



Minerals

- Nitrogen
 - Rhizobium
 - During flowering extra N 50-80 kg
 - Lodging
- Phosphate
- Potassium

The growing season

Sowing of soy starts mid-April



The growing season

First half of June the plants have grown 15 centimeters high.



A photograph showing a field of young green plants, likely soybeans, growing in rows. The plants are lush and green, with some showing signs of flowering. The background is a cloudy sky. A semi-transparent white box with rounded corners is overlaid on the left side of the image, containing text.

The growing season

Early July the plants have grown 30-40 centimeters high.



Primeur!
Sojateelt in Nederland

 agrifirm

toekomst in succes

The growing season

Early July the field is completely covered by soy plants.



The growing season

Late August. The plant is covered with pods.



The growing season

Early September. The plant changes from green to yellow and finally brown.



The growing season

End of September. Harvest time

Soy experiments – main findings

- > Field trials: 2800 - 3000 kg/ha
- > Sales in the food chain:
 - Premium appr. 200 €/ton – competitive with barley
 - Challenge: strict conditions on protein content
 - If not meeting conditions: application in feed chain – currently no premium
- > To be competitive for wheat / barley without premium:
4000 – 4500 kg/ha

Soy experiments – path forward is on two legs

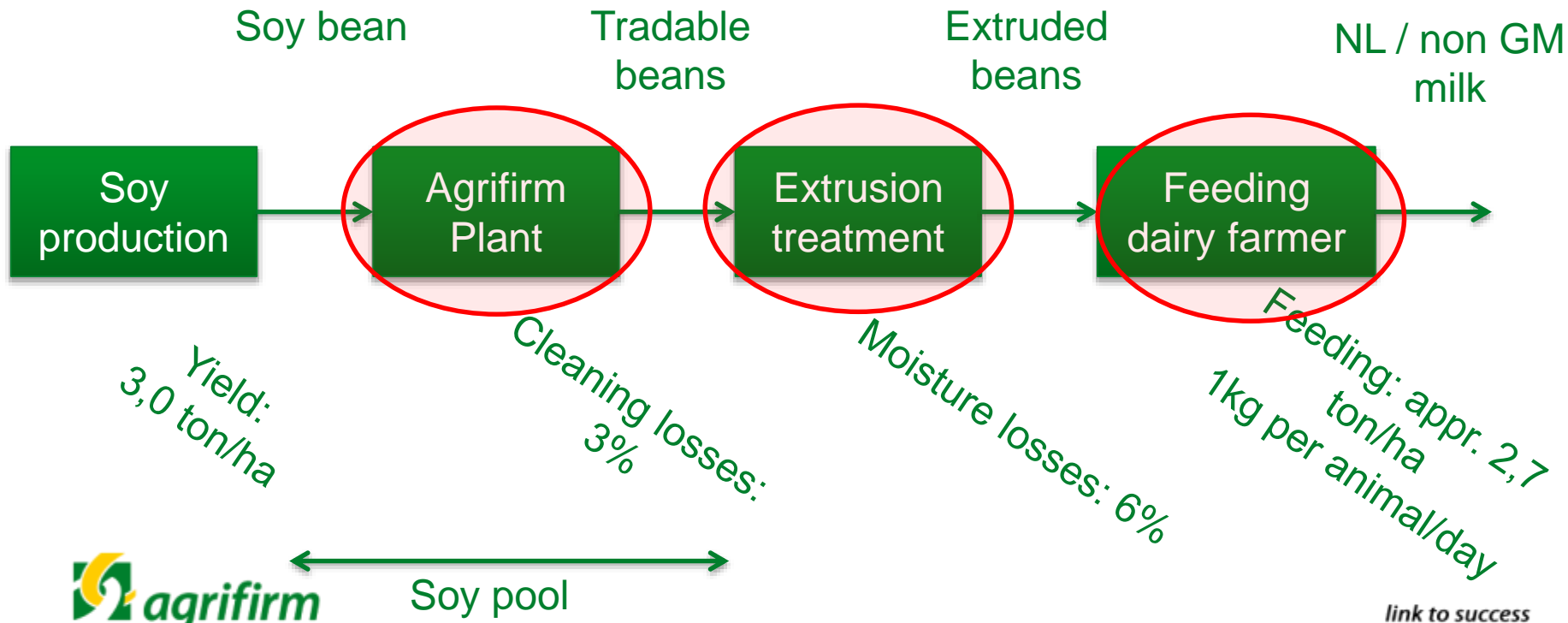
> Competitiveness – develop ‘high end chains’

- Added value chain (food) – 200 €/ton
- Non-GM chain – 100-150 €/ton
- All European feed chain – 0 - 50 €/ton (estimate)

> Increase yield

- Seed development
- Crop knowledge & experience

Soy experiments – dairy feed application



Main development issues

- > Seed developments
- > Crop protection “small crops”
- > Practical experience
 - N-application
 - Sowing and harvesting
- > Market development

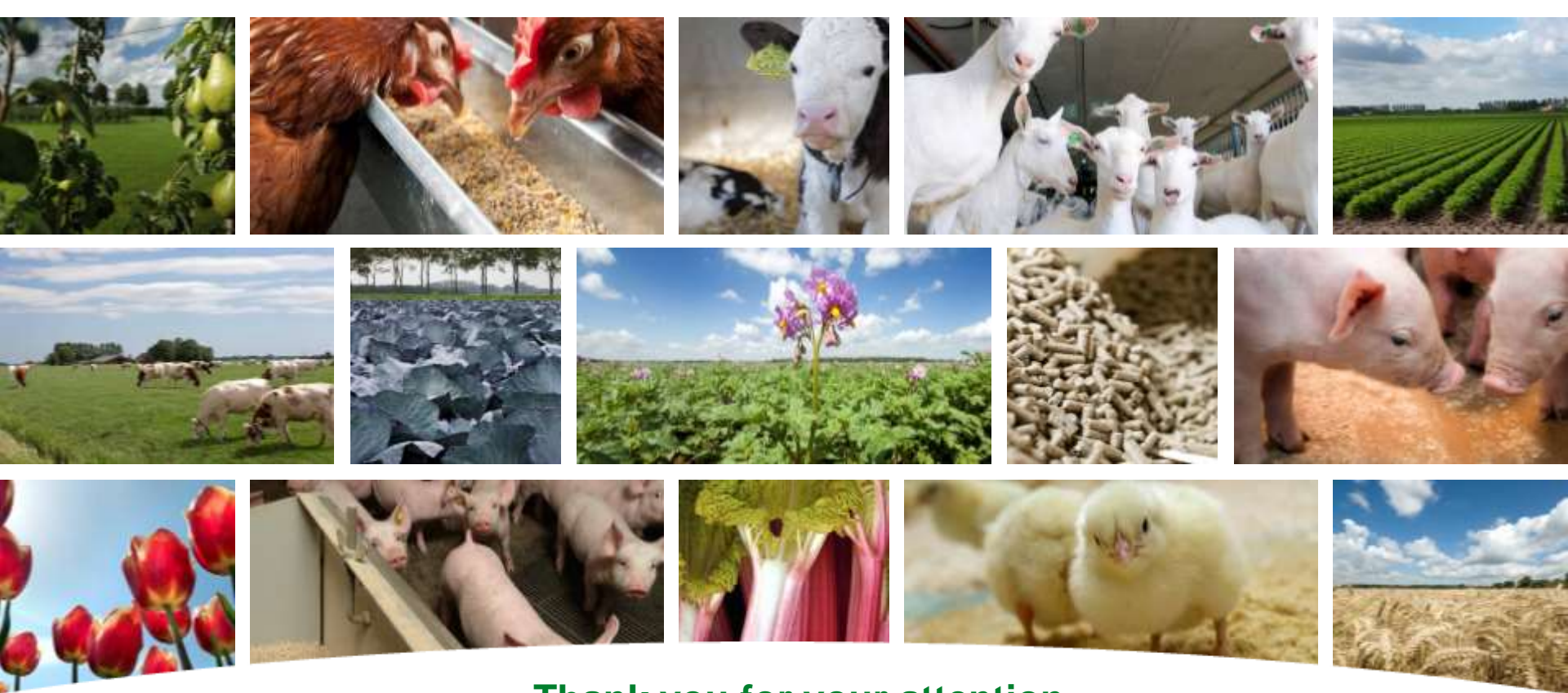
Market development

> Substantial price premiums necessary:

- 1000 ton soy: € 200.000 premium
- Quality requirements
 - Food: Protein content > 38 – 40% protein
 - If you loose part of this market: fall back is “regular feed application”
——→ non-competitiveness arable crop farmer
 - Selling in the Soy Pool

Development programs

- > Stimulate breeding
- > Stimulate application crop protection development and application “small crops”
- > Stimulate large scale practical trials / field trials
- > Stimulate market development studies
- > Including “financial backup or insurance systems”



Thank you for your attention

Soy experiments

Species	Afrijping Sept LE	Opbrengst 15% vocht LE	Eiwit % LE	Afrijping Sept VP	Opbrengst 15% vocht VP	Eiwit % VP
Adsoy	7.5	3251 (100)	40.0	5.8	3229 (100)	34.7
Sunrise	7.8	2819 (87)	40.2	6.7	2895 (90)	34.5
Gallec	2.7	3559 (109)	39.6	3.0	2910 (90)	34.5
Toliman	1.5	2950 (91)	39.2	1.7	3302 (102)	35.6
06.039	7.0	2406 (74)	40.5	5.0	3430 (106)	39.2
06.094	5.7	3385 (104)	38.2	3.8	3787 (117)	36.6
Isd (0.05)	0.7	301		1.3	329	