

ETHIX ROUNDTABLE ESG Risks and Opportunities in Agriculture and Farmland Investing

24 October 2012

Your partner in responsible investment

Instant response – Proactive advice – Your investment universe – International leading experts



Today's agenda

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15.00	Welcome
15.10	Agriculture – strong demand and limited supply Sergej Kazatchenko, Pareto Öhman
15.25	Agricultural investments Christina Olivecrona, AP2
15.45	Sustainability strategies to enhance farmland returns Forbes Elworthy, Craigmore Research
16.00	ESG - Risks and opportunities in agriculture and farmland investing Johan Elmquist, Tundra Fonder
16.15	Panel Discussion Speakers and Ulrika Hassselgren
16.45	Sum up and drinks

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Agriculture – strong demand and limited supply

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Please refer to important disclosures at the end of this document

Long term macro trends

Global development in agriculture

- The demand growth for grain has accelerated over the past 10 years => as a result inventory levels for all grains globally have fallen from above 30% to below 20% in around 10 years.
- Historical production was driven by productivity improvements (higher yields) but over the past 10 years this has not been enough. The productivity improvements were supported by an increase in the harvested area.
- Despite this, the stock-to-use ratios have still declined.
- Therefore, the increase in agricultural land harvested will play an important part in future production growth. At the same time, there are few areas in the world with available new land that can be taken into.

Consumption and ending stock for all grains (world)



Global average yield and harvested area for grains



(Pareto Öhman 5

... and the growth is set to continue



Land is a limited asset

- The total area harvested today for oilseeds and grains worldwide is around 950m HA, according to the US Department of Agriculture (USDA). We compare this with the available land in Russia and Ukraine of 154m HA making it the third-largest area globally after the USA and India.
- However, more important, is the utilisation of the arable area. We see that according to statistics of the Food and Agriculture Organization of the United Nations (FAO) and the USDA that many of the larger producers of grain are cultivating most of the available areas.
- Russia and Ukraine only utilise 40% and 69%, respectively, of their potential arable land, which means that in absolute HA terms they offer the largest potential increases in land for agriculture.

Arable land by country



Utilization rate of arable classed land



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The importance of the new land – example of E Europe

- East European land assets are becoming more and more important as the demand for new land is increasing.
- Total land used for grain and oilseed production has increased from 860m HA to 960m HA over the past 20 years.
- The percentage of Russian and Ukrainian total utilised land fell directly after the collapse of the Soviet Union but has since increased to around 7.5% from around 6-6.5% 10 years ago, as shown in the chart below.
- Note: the utilised area of 70m HA is still low compared with the available area of 154m HA.
- Africa is another region were there is an expansion potential.



World harvested area

Harvested area in Russian and Ukraine



US drought has highlighted this trend

USA – an important global commodity player

Burma

South Africa

- China, United States and Russia are the biggest agricultural players overall.
- The main issue for the global agricultural supply has become the development in the USA as USA is an important agricultural player globally, especially for corn.
- The country is the largest producer of corn and soybeans and represents 35-36% of global production. USA is a noticeable producer of wheat as well producing 8% of global production.

Corn	2011/2012	%	Wheat	011/2012	%
United States	313,918	36%	EU-27	137,383	20%
China	192,780	22%	China	117,920	17%
Brazil	70,000	8%	India	86,870	13%
EU-27	64,636	7%	Russia	56,231	8%
Ukraine	22,838	3%	United States	54,413	8%
India	21,300	2%	Australia	29,500	4%
Argentina	21,000	2%	Canada	25,260	4%
Mexico	19,000	2%	Pakistan	24,200	3%
South Africa	11,500	1%	Kazakhstan	22,732	3%
Canada	10,700	1%	Ukraine	22,124	3%
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Sunflower	011/2012	%	Soybean	011/2012	%
Russia	9,627	25%	United States	83,172	35%
Ukraine	9,500	24%	Brazil	65,500	28%
EU-27	8,215	21%	Argentina	41,000	17%
Argentina	3,340	9%	China	13,500	6%
China	2150	6%	India	11,000	5%
Turkey	925	2%	Canada	4,246	2%
United States	925	2%	Paraguay	4,000	2%
Pakistan	750	2%	Bolivia	2,200	1%

700

515

2%

1%

Ukraine

Russia

2.200

1.749

1%

1%

The hole Corn Belt is under pressure



(Pareto Öhman 11

Production and the USDA estimates

- This month, the US Department of Agriculture (USDA) suggested that corn production would be 274m tons, implying a yield of 7,74 which is a drop of only 16% on the previous year.
- Historically the prices have accelerated with lower production while we see an opportunity that the prices will be able to stay at high levels for a longer period of time.
- On top of that there is a risk that we would repeat the situations in 1988 and 1974. This would open up for even lower production and therefore lower stock-to-use ratio.



(Pareto Öhman 12

1988 and 1974 case are confirmed

- Development during 1973-1975 may serves as a good pointer for current events when the lowest stock-to-use levels were during 1973 at 11.8%.
 - The stock-to-use ratio has declined for the past couple 6 of years, while productivity has increased.
 - In 1974, production was hit by a 20% when there was a couple of year with unfavorable weather.
 - This resulted in the lowest stock/use ratio ever.
 - As a result, the price more than doubled and stayed at high levels for several years while the process of increasing inventories was ongoing.
- During 1988 there was a similar drought in the USA according Palmer Drought Rating. During that season the productivity dropped by -20%.
- The same development is taking place this year. The production if falling and so is the consumption in the short term. However the rebound in the consumption will course an opportunity for the industry.







The Demand and supply equilibrium is changed

Supply declines explain price increases...

- Historically, price increases have followed supply declines, as shown below. This has been the case for a couple of years and is the reason why prices are likely to fall somewhat in the coming year although we expect them to still stay high given the supply increase limitations.
- The main reason why we believe prices will not fall substantially in the coming year is the level of inventories. The inventory level is one of the lowest ever and therefore it will take several years before stocks are at sufficient levels to motivate price levels.



Supply growth and price growth

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1960

1963 1966 1969

Av. Price

1978

1981 1984 1987

(Pareto Öhman 15

20%

15%

2008

2011

2005

2002

Stock/Use

1996 1999

1990 1993

...but price has a limited effect on demand

- The main supporting factor for prices is consumption in a single year; consumption can decline due to pricing. Over the long run, however, prices have no effect on consumption as it is being driven by the strong underlying demand growth from emerging markets.
- The trend has been the same for corn (shown above) and wheat (shown below). The only time we have seen a price decrease was after the collapse of the Soviet Union when consumption from the former Soviet states fell substantially.

1,000,000 350 900,000 300 800,000 250 700,000 200 600,000 150 500,000 100 400,000 50 300,000 200,000 Λ 1966 960 1969 1978 2005 2008 1972 1990 1993 1996 1999 2002 2011 63 1984 1981 1987 1975 Domestic Consumption Av. Price

Corn consumption and average prices

Wheat consumption and average prices million tons



High prices confirms further supply/demand challenge



Stock-to-use development

Stock-to-use ratios for corn and other crops are at historical lows. Corn saw stock levels at 11.6% of consumption expectations at the beginning of 2012. This suggests that production will need to increase to cover the demand and also to raise stock levels which motivates that prices will stay high next season, in line with historical trends.

Stock-to-use ratios has pressured the supply – as a result the prices have accelerated. Given that we do not see any major change in this trend, the prices are likely to stay at levels above historical averages.

Global prices (USD/ton)



(Pareto Öhman 17

ock Exchange Composite Index 5268.02101 NIKREI 225 (NIK/D) 803

Andra AP-fonden Second Swedish National Pension Fund - AP2

Agricultural Investments Ethix Roundtable October 24, 2012 Christina Olivecrona

(UKX100)4229.2164.75 1.55% London, FTSE 1001,55 34 310,83 Russell 2000452.903.29 0.73% ., RTSI1,20518,48

AP-fonden Second Swedish National Pension Fund - AP2

Andra

AP2 in brief 2012-06-30

- Fund capital: SEK 227,3 billion SEK
 (US-dollar 32.9 billion, EUR 25.9 billion)
- Of which 50% in equities, 37% in fixed-income securities and 13% in private equity funds and real estate
- In-house asset management 72%, external asset management 28%
- No. of employees: 59
- e CEO: Eva Halvarsson



Our mission in brief

freely interpreted from Swedish Government Bill 1999/2000:46

- Our primary mission is to maximize longterm return in relation to investment risk. Investment risk shall be well diversified, featuring a low overall level of risk
- Commercial and regional policy considerations shall not be permitted to affect investment decisions
- Consideration shall be paid to environmental and ethical issues, but without compromising the overall objective of a higher return

Andra

Second Swedish National Pension Fund



Why does AP2 invest in agricultural real estate?

- Part of diversification strategy
- 😑 🛛 Stable return
- Low covariance with other investments (equities and bonds)
- Contribute to increased food production
- Promote efficient and environmentally smart technology





AP2's investments in agriculture

Joint-owned companies: TIAA-CREF Global Agriculture and Teays River Investments





Sustainability due diligence

- AP2's external management team is responsible for identifying suitable investment.
- AP2's sustainability analyst perform a sustainability due diligence.
- Sustainability due diligence includes:
 - Structural analysis of the managers policys and management systems
 - Sustainability risk and opportunities with the proposed investment strategy
 - \rightarrow Comply with the Farmland Principles



Principles for Responsible Investment in Farmland

- Promoting environmental sustainability
- Respecting labour and human rights
- Respecting existing land and resource rights
- Upholding high business and ethical standards
- Reporting on activities and progress towards implementing and promoting the principles



Andra

AP-fonder

Second Swedish National Pension Fun



Sustainability follow-up and reporting

- Regular contact regarding sustainability issues
- Regular reporting to investors (also including sustainability issues)
- Annual review of managers implementation of the Farmland Principles
- AP2 reports on its implementation of the Farmland Principles in the annual Corporate Governace Report





ESG risks and opportunities



OXFAM BRIEFING NOTE

OCTOBER 2012



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'OUR LAND, OUR LIVES'

In the past decade an area of land eight times the size of the UK has been sold off globally as land sales rapidly accelerate. This land could feed a billion people, equivalent to the number of people who go to bad hangry each night, in poor countries, foreign investors have been buying an area of land the size of London every six days. With food prices spiking for the third time in four years, interest in land could accelerate again as rich countries try to secare their food supplies and investors see land as a good long-sem bet. All too often, forced evictions of poor farmers are a consequence of these rapidly increasing land deals in developing countries. As the world's leading standard-setter and a big investor itself, the World Bank should freque its own land investments and review its policy and practice to prevent land-grabbing. In the past the Bank has chosen to these lending when poor standards have caused dispossession and suffering. It needs to do so again, in order to play a key role in stopping the global land rush.





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Sustainability Strategies to Enhance Farmland Returns



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Summary:

Within the context of NZ farming we:

Illustrate Environmental, Social and Governance challenges

And demonstrate techniques to address them, which provides **opportunities** for both:

1

- Enhancing farmland returns
- A "public good" impact





1. Environmental challenges and strategies

2. Social / societal challenges and strategies 3. Governance challenges and strategies

CRAIGMORE RESEARCH

1.1 Example environmental challenge and opportunity

Challenge: Pollution of waterways

Opportunity: Premium price for responsibly grown foods



Nitrogen trends in NZ rivers, 1989–2007

Source: National Rivers Water Quality Network

A Farm Assurance Strategy:

Limited use of fertiliser and ag chemicals under the following standards:

- The Fonterra Farm Dairy Assessment
- Good Agricultural Practices (GAP)
- OVERSEER nutrient management
- SafeNZ: Craigmore's horticultural solution



1.2 Public good impacts of Farm Assurance strategy

- Clear quantified limits to fertiliser and agricultural chemical usage
- Which leads to cleaner rivers and lakes

safenz™ Low Chemical Spray Application Practises – especially for AEON Green Eye Programme					
Growth Stage	Action	Product	Application	Rate	Reason
Pre-Planting	Herbicide	Dimethanimid	1	0.751/ha	Weed Control

Standard New Zealand Spray Programme Practises						
Growth Stage	Action	Product	Application	Rate	Reason	
Pre-Planting	Herbicide	Glyphosate	1	51/ha	Weed Control	
	Herbicide	Dimethanimid	1	1 - 1.5 l / ha	Weed Control	



1.3 Financial impacts of example Farm Assurance strategy



- A recognised brand: SafeNZ is Craigmore's best selling horticultural contract
- Commanded a 20% price premium initially (from 1998)

Since then, other new food standards in the market give supermarkets similar assurances. Competition has led to SafeNZ to fall to ca. 5% premium

Craigmore is widening its farm assurance programme





1. Environmental challenges and strategies 2. Social / societal challenges and strategies

3. Governance challenges and strategies



2.1 Example social challenge and opportunity

Challenge:

- It is hard to enter agriculture in NZ: at least NZ\$ 1 mm equity to buy a farm
- Hence ageing rural populations



Opportunity:

Many talented farm managers willing to contribute capital and work as minority equity partners
CRAIGMORE RESEARCH

2.2 Public good impact of a recruitment, selection, and share-farming programme

Formalised career planning:



Equity stakes and 'share-farming':

- Managers holding small stakes in their farming businesses
- Providing a structured pathway to farm ownership

Building the next generation(s) of family farms, sustaining rural communities

2.3 The financial impact of example social strategy

- Attracting the best agricultural students and young farmers
- Share-farming partners 'self select': they are ambitious and capable
- 'Top quartile farmers' are 50% more profitable than average



Source: DairyNZ Economic Survey 2009-2010



1. Environmental challenges and strategies 2. Social / societal challenges and strategies 3. Governance challenges and strategies



3.1 Example governance challenge and opportunity:

Challenge:

For landlords it is difficult to compel tenants to invest proactively to lift productiv in the medium to long term

Opportunity:

- Operational farming provides unified accountability
- In the US owner-operators outperformed landlords by 5.7% p.a. 1950-2010



US Farmland annual returns per type of investors

3.2 Public good impact of operational farming Governance

Emulating the **long-term commitment** of family farmers

- To the environment, where they have long-term custodial relationships
- To communities, supporting schools and hospitals, and participating in local churches, sports clubs and theatre groups





3.3 Estimated financial impacts of operational strategy

- Higher average operational and capital returns than landlord strategies
- However, higher annual volatility of returns, and higher managerial input

Outperformance by operational farming strategies of 3.5% p.a. (possibly 5% to leveraged equity)

Returns Factor	Fund of Commercial Property - as Landlord	Fund of Farmland - as Landlord	Fund of Owner- Operators as Share farmers	"Outpeformance" of Farm Owner- Operators vs. Landlords
1) Cash Yield / Capitalisation	7.0%	4.0%	6.0%	2.0%
2) Productivity and Development gains	0.0%	0.75%	3.0%	2.25%
3) Changes in Terms of Trade i.e. farm output and input prices	0.0%	2.0%	2.0%	0.0%
4) Inflation	2.5%	2.5%	2.5%	0.0%
5) Depreciation	-2.5%	-0.25%	-0.75%	-0.5%
6) Fees and Governance	-0.75%	-1.0%	-1.25%	-0.25%
Total Return (in equilibrium)	6.25%	8.00%	11.50%	3.5%

Source: Craigmore Research Ltd

CRAIGM®RE RESEARCH



"The farm. Best home of the family. Main source of national wealth. Foundation of civilized society. The natural providence."

Charles W. Eliot, President of Harvard University 1869-1909

CRAIGM®RE RESEARCH

Ethix ESG - Risks and opportunities in Agriculture and Farmland Investing

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Tundra Agri&Food

More and more people are better off in emerging markets



Tundra Agri&Food



From pasture to plate in emerging markets

We invest in the whole value chain:

- Fertilizer
- Farmland
- Food production
- Value added food processors
- Food wholesalers and retailers



Agriculture sector globally



Unchanged corn prices in nominal terms during 30 years (until 2006)



Until recently low returns for farmland and low investment levels



Falling harvest levels in FSU



Rapid consumption increase in emerging markets



Global demand increase grain



World population will increase from current 7 bn to 9 bn in 2046 (about 1% per annum)



"Middle class" will increase from 450 m to 1,15 bn 2030 (source: the World Bank) (about 1% per annum)



Biofuel sharp increase from low levels (0,2-0,3% per annum)

Total demand increase 2.2-2.5% per annum

Grain production and consumption in China



Import is increasing at high pace. Current level twice the total wheat export from FSU.



Strong demand – but who will invest?

The UN Food and Agriculture Organization (FAO) reported in 2011 that the sector needs USD 100 bn annually in emerging markets to avoid shortages and much higher prices than current



Pension funds started but small amounts



Globally pensions funds invested USD 25 bn (source: High Quest)



Value of global farmland USD 15 000 bn



Forestland attracted USD 200 bn of investments from global pensions funds

Tundra Agri& Food –Investment process



More than 3000 companies in the sector

Focus on long term returns and corporate governance

Not necessarily investing in the cheapest stocks based on financial key ratios but "Best in class" in every subsector



Tundra Agri& Food - ESG



Business ethics and corporate governance is our key focus



Hypothesis: The companies that care about minority investors care in general



Ethix makes ESG screening based on UN principles, UN Global Compact



Tundra - Corporate Governance

Top priority in evaluating investments in emerging markets and integrated in our investment process



We evaluate major shareholders and management view on shareholder value based on our long experience in emerging markets



Ownership situation and other corporate governance issues will impact social and environmental issues



Tundra Agri& Food - ESG

Raising the issue – a sector that is keen to raise additional capital



Incidents – focus on fact finding and discussing with corporates and other sources



Removing stocks from portfolio is the last option



ESG case - JBS

- Fourth largest food company in the world by turnover
- Largest beef producer in the world with presence in all continents besides Africa



- 135 000 employees at 280 sites
- - **Greenpeace allegation** sourced cattle from companies that are involved in illegal practices with human right issues and environmental implications.



Prohibit deforestation

Voluntary agreement to meet demand from European customers to stop deforesting of Amazon





Farmer must keep 80% of the land as forest and maintain vegetation on creeks and water sources



From JBS – sustainability

ETHICAL SOURCING OF CATTLE

JBS commitment:

- Rejection of illegal deforestation
- Rejection of slave labor and/or child labor
- Rejection of land disputes and/or squatting
- Rejection of the invasion of Indigenous lands or Protected areas



ESG impact beyond equity markets







Other sources

Annerstedts Flodin (owned by Scan/ Swedish farmers) importing meat from JBS during 14 years

- Regular visits many times a year
- Satellite surveillance

Greenpeace have not added any new information since June 2012. Scorecard as been removed from their site.



ESG – impact in JBS case

Immediate impact on their sales as they loose customers in Europe



- Fine by local authorities
- Ongoing pressure by international and domestic investors
- Company actively searching and working towards a long term solution. Identification of every single cattle in Brazil, which would make it difficult for illegal farms to sell



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