

Swedish Black Earth: The trials and tribulations of the publicly listed, investor-led, Western farming model in Russia and Ukraine.

Authors: Brian Kuns (Stockholm University), Oane Visser (International Institute of Social Studies), Anders Wästfelt (Stockholm University)

This is the authors' version. Please refer to the original article:

Kuns, Brian, Oane Visser and Anders Wästfelt (2016) The stock market and the steppe: The challenges faced by stock-market financed, Nordic farming ventures in Russia and Ukraine', *Journal of Rural Studies*. No. 45, p. 199-271, <http://dx.doi.org/10.1016/j.jrurstud.2016.03.009>

Abstract:

With an analysis based on the performance of large-scale Nordic farms in Russia and Ukraine, this article deals with the frictions of the publicly listed, super large farming model. These farms began operations in 2006 and 2007 with much fanfare. Despite high initial expectations, however, these publicly traded companies (agroholdings) continue to disappoint investors, both with respect to agricultural performance and profitability (although with considerable variation among them). The main question to be addressed is: why have these investments not been successful? We will locate the reasons for this current lack of success in (1) the mixed role that finance has played in the development of these companies, and (2) an initial failure on the part of investors to appreciate the unique climatic and other local challenges presented by agriculture (compared to other economic endeavors). The contribution we seek to make is in critically examining and contextualizing claims concerning the degree to which super large corporate farms financed by stock market capital do indeed achieve superior agricultural performance. Based on an in-depth examination of four Nordic agroholdings, we arrive at an assessment of super large corporate farms that points to an incompatibility between land speculation and agricultural production and other contradictions and risks.

Keywords: agroholdings, financialization, agriculture, Ukraine, Russia, farmland

Figures: 5 (at the end of the paper)

Acknowledgements:

This research benefitted from financial support from the European Research Council (ERC) grant 313871 of principal investigator Oane Visser. The authors would also like to thank Sandra Backman of Handelsbanken in Stockholm for helping the authors attend a shareholder meeting.

Brian Kuns: Brian.kuns@humangeo.su.se

Oane Visser: visser@iss.nl

Anders Wästfelt: anders.wastfelt@humangeo.su.se

Swedish Black Earth: The trials and tribulations of the publicly listed, investor-led, Western farming model in Russia and Ukraine

Brian Kuns, Oane Visser and Anders Wästfelt

Introduction and Aims

Super large-scale Nordic owned and run farms in Russia and Ukraine began operations in 2006 and 2007 with much fanfare. Their goal – other than to earn high returns of course – was to ‘revolutionize agriculture’ (Lundin 2008) in post-Soviet Russia and Ukraine. They would, in the words of Black Earth Farming, ‘unlock the potential of Russian agriculture.’ (Black Earth Farming 2009, 4). These six words look both to the future and the past at the same time. What they suggest is that only now – when it is possible to tap the deep pockets of western investors via stock exchanges and deploy international best practice agronomy with western machines and management – will agricultural production increase and become more efficient in the former Soviet Union. The Nordic companies are part of a larger trend of the growth of domestic and foreign agrohholdings¹ in Russia and Ukraine (Walther 2014; Visser and Spoor 2011), and these super large corporate farms can be seen as a vanguard of well-financed and hyped foreign investors. In contrast to the high initial expectations, the results of these Nordic agrohholdings, both in terms of agricultural performance and profitability, continue to disappoint (although with considerable variation among them).

The main question to be addressed in this paper is: why have these investments, begun with much optimism, not been successful? We will locate the reasons for this current lack of success in (1) the mixed role that finance has played in the development of these companies, and (2) an initial failure on the part of investors to appreciate the unique climatic and other local challenges presented by agriculture (compared to other economic endeavours), even when sophisticated equipment and global best agronomy practices are implemented. Access to finance is usually seen as one of the primary advantages for large-scale agriculture, but we will detail how the preferences and pressures emanating from investors have resulted in a number of unintended consequences that have in some cases negatively impacted both corporate and agricultural performance. Likewise the use and deployment of top-of-the-line western farm machinery and international best practice agronomy were also seen as crucial advantages for

¹ ‘Agriholdings are farming companies that are made up of multiple operations under a more or less centralized management. In literature, the terms agrohholding and agrohholding are used synonymously. ... There is wide agreement that agrohholdings have a head company that controls a number of other companies... Some authors include as part of their definition that agriholdings are projects of companies who have their core business outside primary agriculture. Some, while not making it a defining criterion, point out that that this is often the case.’ (Walther 2014, 5).

these investments, and yet agricultural performance has (with the possible exception of 2014) also been a disappointment. We will look at the discourse and ideas behind the production optimism and relate this to the adapting practice in the fields.

More broadly, we seek to critically examine and contextualize claims concerning the degree to which super large corporate farms financed by stock market capital do indeed achieve superior agricultural performance. Some (Balman et al 2013) argue that the agroholdings are finally now starting to arrive at this promised superior performance, while others have not found evidence for increasing returns to scale in Ukrainian agriculture (Deininger, Nizalov, and Singh 2013, Lerman et al 2007). While studies of mega corporate farms from other parts of the world do wonder if, as Chaddad (2014, 580), who studied publicly traded BrasilAgro, puts it, ‘these experiments in corporate style agriculture... will survive’, the general tone is not pessimistic (For a Canadian perspective, see Magnan 2012). The Nordic companies studied here, over seven years after their start (which is often the maximum period for financial investments by private equity) still show a performance that is clearly below expectations. The one possible exception to this tendency is, as detailed below, the exception that proves the rule. Based on an in-depth examination of the Nordic agroholdings, we arrive at an assessment of super large corporate farms that points to major contradictions and risks.

Farmland, Scale and Finance: a Review

This article addresses two recent trends which, although closely interrelated, involve quite separate theoretical debates: namely, the emergence and performance of super large corporate farms (a theoretical issue of scale) and, secondly, the emergence and performance of farm companies listed on stock exchanges (an issue of financialization of agriculture, and shareholder value in particular). Though this article will touch on the first issue, the focus here will be on the latter. ‘Finance’ here refers mostly to private and institutional investors, and in particular stock market investors, but in this paper it is also shorthand, following Epstein (2005, 3), for when financial motives – such as boosting shareholder value – become relatively more important in determining corporate strategy in non-financial sectors (like agriculture).

Why Farms Want Financial Investment

Proponents of finance in agriculture see finance helping farming in two main ways. First, finance is seen as helping companies achieve a large scale of production, where it is argued there are economies of scale, i.e. that total factor productivity will rise above and beyond the increase in factors of production (See for example Black Earth Farming 2008, 6, 17; Alpcot Agro 2010a, 16). Beyond economies of scale of production, a large-size helps farms achieve so-called external economies of scale (Johnson and Ruttan 1993, 693). In other words, large farms have more negotiating heft with input suppliers, on the one hand, and grain traders on the other, allowing them to reduce cost and capture a greater share of the revenue stream in their own profits. This was something also cited by interviewees in this study. External economies of scale, it is argued, can be particularly important in markets or economies where institutions actually undermine economic activity (Rylko and Jolly 2005; Koestler 2005; Deininger and Byerlee 2012; Walther 2014).² Horizontal and/or vertical integration within large companies can

² Indeed Koestler (2005) essentially argues that external economies of scale in relation to local and national governments is the key advantage of large agroholdings in the former Soviet Union. It is harder, in other words, for

similarly help companies overcome market imperfections and/or a lack of infrastructure (Deininger and Byerlee 2012; Walther 2014). Second, beyond helping negotiate down the price of inputs, finance helps farms afford increasingly expensive and sophisticated inputs, capital and otherwise, to agriculture (Deininger and Byerlee 2012, Deininger, Nizalov, and Singh 2013; Magnan 2012). These new technologies, it is argued, can help large-scale agriculture overcome what are seen as some of its traditional disadvantages with respect to monitoring and transaction costs (Deininger and Byerlee 2012).

What Financial Investors See in Farms

In order to understand the finance aspect of the farm-finance relationship, it is important to take into account structural changes in the global economy that have ushered in what is called the third global food regime (McMichael 2012). Until recently, agriculture did not get much private financial investment, as agriculture was seen as far too risky. Several regulatory and market trends have spurred the recent (closer) connection between agriculture and private finance (Martin and Clapp 2015 forthcoming) since the early 2000s.

- *First*, the global surge of food prices (and in the slipstream farmland prices) has changed the (perceived) risk profile of agricultural investment. Higher food and farmland prices harbour the promise that the traditional risks associated with climate-related volatility, for instance, can be compensated with higher margins. Also, as food and farmland prices were increasing, traditional equities and bonds – in the run-up to and during the global financial crisis – were seen to be becoming less reliable, and thus investors turned to farmland to diversify investments (Buxton, Campanale and Cotula 2012).
- *Second*, in many parts of the world there has been a decline in state finance for agriculture, usually within the framework of structural adjustment or market transition programmes in developing and post-socialist countries. Farming in these countries has, as a result, become more dependent on private finance (Martin and Clapp 2015 forthcoming). Since banks often find lending to agriculture producers (except for the super large ones) too risky without state guarantees and subsidies (ibid), novel financing schemes for agriculture such as stock exchange listings and bonds have emerged.
- *Third*, regulatory changes, championed by international development institutions, have taken place over the past decade (and are still ongoing), that enable external investors to enter farming with less transaction costs and risk (Martin and Clapp 2015 forthcoming). For example, the World Bank and International Finance Corporation, in facilitating the implementation of land titling and registration programs, have made farmland operations more transparent and less risky in emerging economies (and in particular in post-socialist countries). International agencies have also worked in other ways to diminish the risks for investors. For instance, investment treaties have been promoted and signed and state guarantees and insurance for investors have been extended to the agricultural sector by states and state-funded agencies like the European Bank for Reconstruction and Development and the World Bank (See Borodina 2014).

corrupt officials to seek rents from or otherwise disrupt the work of large agrohholdings compared to smaller operations.

On the back of these structural shifts, farmland, which had traditionally been seen by investors as a ‘store of value’ or an inflation hedge in unstable times (Fairbairn 2014; see also Luyt et al 2013, 18), is now increasingly viewed as a lucrative ‘asset play’, i.e. a source of capital gains if the investment is timed right in terms of economic cycles or policy changes (such as land titling and registration) that might drive up land values (Russi 2013, 82; Fairbairn 2014). Also, (some) investors have come to see farmland *both* as a potential capital gain *and*, especially with rising food prices, as a productive asset. Investors in other words also see possibilities to earn returns off the cash flow generated by the asset (Fairbairn 2014; Grene 2014). This is sometimes called a ‘yield-play’, which refers more specifically to when investors see an opportunity to raise yields from regional or historical averages. The interplay of asset play and yield play strategies are central elements in understanding the actions and results of the Nordic companies. These will be discussed extensively in the following sections.

Despite these changes, farmland normally still entails major risks for investors in terms of its liquidity – ‘the time it takes to sell an asset and still receive full market value (Kluger and Stephan 1997, 19) and transparency (see TIAA-CREF 2013b, 8; Luyt 2013, 32). Traditionally of course farmland is illiquid – selling a farm takes time. Investors however want to be able to sell off assets fast in response to changing conditions, particularly if the asset has become unprofitable. As quoted in an article about European pension fund investments in farmland in the *Pensions and Investment* newsletter (Carter 2010), ‘Before anyone invests now [in farmland], they want to know how to exit.... It’s the first thing they want to know.’

Making agricultural investments liquid and transparent, then, are the key challenges in trying to attract investors and thereby raise capital on financial markets. The solution to this challenge pursued by the companies under review for this paper was a stock market listing. ‘All listed shares should be more liquid than those that are not listed, all else being equal’ (Luyt et al 2013, 52), and, moreover, the size of a publicly listed company, as measured in market capitalization, and the number of shareholders, are highly correlated with greater liquidity (Kluger and Stephan 1997, 20; Bhide 1991, 33). Publicly traded companies additionally have the benefit – from the investor point of view – of greater transparency, since public companies regularly have to disclose information about the company’s operations and finances.

The Consequences of Financial Investment in Agriculture

After this review of the case for financial investment in agriculture, and some of its background, we now turn to some of the contradictions and potential negative effects. The critical literature on ‘farmland investment’ (or ‘land grab’) has mostly focused on the socio-economic consequences for rural communities and the environmental impacts. An area that has not been sufficiently examined is the way in which finance affects the performance, agricultural and otherwise, of the farm companies invested in. Indeed ‘we are only beginning to understand the mechanisms and implications’ (Visser, Clapp and Isakson 2015 forthcoming) of investment in farmland and food.

Despite the early stage of research on the topic, some tentative insights on the consequences of the entrance of finance in agriculture for farming operations can be sketched.

- *First*, various authors have argued that financialization, or more concretely the entrance of investors from the financial sector in another sector, tends to result in a *prioritization of speculative strategies over production-oriented strategies*. Within agrarian studies, financialization has been investigated predominantly with regard to commodity exchanges. Many authors have argued that the growing presence of financial actors on food commodity exchanges (such as the Chicago Board of Trade) have brought about a shift towards speculative instead of production-based hedging (Breger-Bush 2012; Russi 2013). Based on those findings, one might suspect that such a tendency can also be found with regard to the connection between *stock* exchanges and agriculture, which this article examines. However, practically no research has been conducted on this connection, probably because the emergence of listed agricultural companies is such a novel phenomenon. Especially in developing countries with low land prices, strong speculative trends, might create a strata of investors which do not cultivate land, with negative consequences in terms of land access for (young) local farmers, and local food security.
- *Second*, financialisation tends to go hand in hand with a shift to more *short-termism*, of which speculative behaviour could be seen as just one aspect (see for instance Visser and Kalb 2010). Private equity funds, and listed companies tend to have a much shorter time horizon than for instance large family owned companies (Daniel 2012). A short-time investment horizon, tends to deliver higher shareholder value in the short term, at the cost of for instance investment in R&D which is important for the long term viability of an enterprise. Meanwhile, agriculture is a sector which traditionally has a very pronounced long-term horizon.
- *Third*, while investors often entered farmland in search of a ‘safe investment’ in times of uncertain and volatile equity prices, growing involvement of the financial sector in agriculture, might in fact make the latter, which is already volatile due to the weather and fluctuating commodity prices, even more uncertain and volatile (Fairbairn 2014). The increased risks due to such volatility might subsequently inhibit other investors, who are primarily interested in productive (yield play) strategies.
- *Fourth*, financialization results in the ‘sweeping’ industrialization of agriculture (Fairbairn 2014), according to what James C. Scott (1998) would call the ‘catechism of high modernist agriculture’. Elements of this discourse include, among other things, ‘the superior technical efficiency of large farms’ and industrialized farming’s ability to create a ‘uniform’, manipulable environment where local ecological and climate risks can be handled (Scott 1998, 271-272). In the post-Soviet case, it is important to note that, instead of a shift to industrialization, there has been a recommitment to the catechism of high modernist agriculture, albeit under different forms, and the question is if the same criticism applied to Soviet agriculture – that in its modernist and centralist fervour it failed to take into account local climatological and ecological circumstances (Ioffe and Nefedova 1997) – can (ironically) be directed at the capitalist agroholdings?
- A *fifth* consequence of financialization is related to the fourth, and involves a growing distance between consumers and producers, both in that ‘more decision points are added from production to consumption’ and because ‘distancing [encourages] a greater

abstraction of agricultural commodities from their physical form' (Clapp 2014, 4). Clapp looks primarily at the relationship or distance between producers and consumers, arguing that this distancing has made it more difficult to mobilize resistance to the current global food regime. In this paper, however, we look at the relationship between investors and the farms they are investing in. However, in a sense, investors are also consumers, in that they purchase a product, ownership shares in these farms, after a sales pitch has been made. Just as one can ask with respect to consumers, the question is if investors know what they are buying?

Below, we will examine the Nordic agroholdings in light of these emerging consequences of financialization of agriculture.

Background and Method

The main companies to be examined here are: Black Earth Farming (BEF), Agroklutura (previously Alpcot Agro), Trigon Agri and Grain Alliance AB.³ The first three are listed on the Stockholm OMX Nasdaq Stock Exchange, while Grain Alliance has the stated ambition of an IPO ('Initial Public Offering'), and, importantly, publishes regular, interim financial statements, operational reviews and annual reports. The three listed companies mentioned above are among the top four foreign farm investors in Russia; the other being German Ekoniva, which is not listed (Visser, Spoor and Mamonova 2014). Being part of this foreign 'vanguard' is one reason these companies are interesting. The fact that they are publicly traded is also interesting from a research perspective – being listed requires a level of transparency with which private actors do not have to comply.

Table 1 around here

A third reason these companies are interesting is that their business model reflects an emphasis on 'pure-play' (Luyt et al 2013, XV) or 'broad-acre' (Byerlee et al 2012) agricultural production. These companies focus mostly on arable crop production and are not examples of vertically integrated companies that receive significant revenues from value-added lines of production such as: dairy or meat production; sugar, vegetable oil or other food processing; or grain trading (as for example Kernel, Astarta or MHP).⁴ There are today seven such pure-play agroholdings in Ukraine and Russia that are also public companies (See Table 1). Of the seven public companies in Table 1, one other – Agrogenation – is primarily foreign. The other four are Ukrainian owned companies where only a minority of shares in the company are traded on a stock exchange. While there have been critical studies and overviews of post-Soviet agroholdings before (Visser and Spoor 2011; Visser, Spoor and Mamonova 2014; Luyt et al 2013), the dynamism of the sector underscores the importance of continued study of large-scale farming in Russia and Ukraine.

³ One of the authors of this study owns a small amount of shares in each of the publicly traded Nordic companies.

⁴ Here Trigon Agri is an exception, as they have dairy operations in Estonia and outside St. Petersburg in Russia. They are in fact Estonia's largest dairy producer. That being said, Trigon has repeatedly indicated that dairy is not a core business activity and they have been looking to spin-off or sell their dairy operations for quite some time. Trigon also owns a Grain Trading operation in Ukraine, though they are trading less and less third party grain.

Another important point is that each of the companies under review here represents an example of ‘investor-led farming’, a form of farming which has quickly expanded beyond the West in the last decade. Investor-led farming can be defined as when investors, whose main experience is in non-agricultural sectors⁵, particularly but not limited to other ‘real’ sectors such as commercial real-estate, mining and oil, or forestry, are active direct investors in (i.e. play a leading role in the management of) and/or literally create farming operations under the assumption that access to capital from financial markets plus the deployment of international best practice agronomy and top of the line machinery will ensure good financial returns (cf McMichael 2012, 690). Such investors include Vostok Nafta and Kinnevik, two of the principal early shareholders of BEF who are themselves stock-listed but dominated in each case by a family⁶, Trigon Capital, the founder of Trigon Agri, and Alpcot Capital Management, the founder of Agroklutura.⁷ Claesson Fastigheter AB, a private Swedish real-estate company that purchased a controlling share of Grain Alliance AB in 2008, does not play as active a role in the management of the farm as the main owners of the three publicly traded firms, but they do help set the overall direction and strategy of the firm. The motivations and assumptions of such actors are also important for this analysis.

The sources used for this study are corporate documents (annual and quarterly reports and prospectuses and company descriptions before stock emissions and bond solicitations) and newspaper coverage of these companies and investors in the Swedish, Russian and English language business press. We have also conducted thirteen semi-structured interviews with both current and former managers of the Nordic companies and with investors in these companies. The interviews were semi-structured to allow reflection on the part of respondents concerning why the companies have thus far not been as successful as hoped – something which virtually all respondents readily did. Finally, the authors, either separately or together, have attended a total of eight shareholder meetings, and listened to or read transcripts of numerous quarterly results presentations made by the companies.⁸

A presentation of the empirical material follows, in which investor preferences and assumptions are detailed,. How these views have collided with on-the-ground realities are evaluated, and some of the lessons-learned on the part of the companies and investors are presented. In the

⁵ Trigon Capital, founder of Trigon Agri, and Kinnevik, main shareholder in BEF, did have prior experience with farming. Trigon Capital invested in agriculture in the early 2000s in the Baltic countries before branching out into Ukraine and Russia, while the Kinnevik concern started in the 1930s with a farm and sugar factory, both of which stayed in the concern’s ownership portfolio until the 2000s. However, Kinnevik’s agriculturally related investments – now restricted only to BEF – are, and for a long time have been, a minor portion of the overall portfolio, which is today focused on media, telecoms and internet commerce. Trigon Agri being one of their larger investments and having invested agriculture for over 10 years, Trigon Capital can make a more credible case to being specialized in agriculture, though they are in essence a fund and portfolio manager. The larger point is that these are all financial investment firms, whose investments in Russian and Ukrainian agriculture, represent either a branching out into a new sector (agriculture) or a significant expansion into the agricultural sector.

⁶ The dominant owner in the Kinnevik concern is the Stenbeck family, while Vostok Nafta was founded by the Lundin family, whose other interests include Lundin Petroleum.

⁷ In each of these three cases, these companies’ top managers were or are actually provided through a so-called management agreement between the main owner and the company. Thus KinnAgri, an agricultural consultancy that until the beginning of 2015 went into the Kinnevik concern, has a contract with BEF to provide management services. Trigon Capital similarly has a contract to provide management services to Trigon Agri, and Alpcot Capital Management until 2014 had a management contract to provide management services to Agroklutura.

⁸ Only BEF and Trigon Agri hold quarterly results presentations

ensuing discussion, a series of contradictions are posited with respect to financial engagement in farming and discussed in light of the emerging consequences presented in the theoretical section. We conclude with reflections on what the performance of foreign investors says about the whole sector, the universality of ‘international best practice’ agronomy, and the mismatch between stock market expectations and agriculture.

Investors, Land Speculation and Liquidity

Investor Preference for Land Speculation

While the business plans for the public Nordic companies tried to appeal to both views of the potential for farmland to generate returns (i.e. as a capital gain and a productive asset), the primary interest of the investors in the public Nordic companies was in the possibility of earning high returns off the rising value of the land, i.e. an asset play. This relates particularly to Russia, where land reform in 2003 allowed the buying and selling of agricultural land, even, thanks to a loophole in the legislation, by foreign investors. This is in contrast to Ukraine where a moratorium on agricultural land sales has been prolonged on various occasions since the new land code was adopted in 2002. In other words, land (in Russia) was seen as under-priced, and, in the environment of 2005-2008, when food prices were going up, and against the backdrop of rising global population, ‘the case on paper [for making an asset play on Russian agricultural land] was very, very good’ (Interview with Stock market analyst, August 2014).

Archibald Hamilton, an early investor in Agrokultura (then called Alpcot Agro), was quoted in the media making the case for an asset play:

‘I believe it will be a fantastic trip. In Russia, land costs around 3000 SEK (319.15 Euro) per hectare, while in Sweden it costs between 50,000 and 60,000 SEK (5319,15 and 6382.98 Euro) per hectare, but it takes time to get some structure on the land. It [the land] has been mismanaged since the 1920s. The big thing is not cereals, but the growth in land prices’ (Östlund 2008).

Investors were in fact keen that these companies purchase as much land as possible very fast. As a former board member of Agrokultura relates (interview January 2014): ‘there was a very big interest for this asset class in 2007 and 2008. Even the investors really wanted us to expand very fast. In the same vein, a former manager with Agrokultura said the following:

‘... you do not control the financial treadmill (*ekorrhjul*) yourself. When you have AP-funds, hedge funds involved, investors from Switzerland, everyone chiming in with 2.2 or 2.3 *billion* kr. That is ridiculous money. ... The expectation was: ‘buy land, buy land always’. They wanted us to buy land. They gave us money to buy land. Mainly. ... They really wanted to see the distribution of money in acquired land.’ (Interview with a former manager of Agrokultura, November 2014).

Even BEF, whose business plan made a special point of emphasizing the importance of production (a ‘yield play’) for an asset-play strategy, was not immune to this pressure to buy land. As a former manager with BEF stated ‘...when I met investors up to November 2008, the first question I got was [inaudible]: ‘What proportion of your land is registered? [meaning legally owned by the company]’ (Interview with a former BEF manager, January 2014).’ As the CEO of Trigon Agri put it, describing the initial period of the investments in post-Soviet agriculture,

‘the whole story [was about] going out there to buy cheap land’. (Notes from Trigon Agri General Shareholder Meeting April 2014).

The Nordic companies fulfilled investors preferences for acquiring land, which can be seen in Figure 1. This shows the unharvested controlled land (grey) for each of the three publicly traded Nordic companies in relation to land under cultivation (black). It was not until 2011 – four or five years after beginning operations that the companies cultivated at least half of their holding, which is the level of cultivation where Trigon and Agroklutura remain today. While one can reasonably make the argument that not much land would be cultivated in an initial build-up phase, it is harder to make that argument now seven or eight years after these investments began.

Figure 1 around here

Figure 1: Land Bank Dynamics of Publicly Traded Nordic Agroholdings. Agroklutura’s expansion can be described as more haphazard or opportunistic than the other two companies, as they expanded both by directly acquiring land in Russia and Ukraine, and by taking over so-called ‘distressed assets’. The latter refers to Agroklutura’s takeover of Polish PKM’s (Polski Koncern Mięśny Duda) 7,500 ha in western Ukraine, Swedish BBAH’s (Biodiesel Bioethanol Agricultural Holding) 16,000 ha in Kaliningrad, and British Landkom’s 79,000 ha spread out throughout Ukraine. Trigon started in Ukraine, where they initially cultivated most of the land that they had acquired (by lease), and later expanded to Russia, where much of the land remained uncultivated. Trigon has since sought to divest from and restructure their Russian holdings. BEF gathered the largest territory, which was, with the exception of a brief foray in Samara in eastern Russia, relatively concentrated, and, reflecting their more clearly stated intention of pursuing a ‘yield-play’ alongside an asset-play, they were relatively fast in terms of bringing a significant portion of their holding under cultivation. Land bank totals were compiled from the annual reports of the listed companies.

Liquidity and the Rush to be Publicly Traded

Though the land was in international terms relatively cheap, large amounts of capital were still needed to purchase it. BEF, Trigon Agri and Agroklutura all sought to get that capital via a stock market listing, which they achieved relatively fast. Trigon Agri and BEF, founded in 2006 and 2005 respectively, were first listed in 2007, while Agroklutura, after a delay caused by the financial crisis (Thulin 2009) was listed (under the name of Alpcot Agro) in 2009. When asked why they were in such a hurry to be listed, BEF chairman of the board Per Brioloth said: ‘The possibilities for Russian agricultural land is now. That is why we want to be able to finance investments now and not in a half-year or a year’ (Storwall 2007).⁹

The companies were rather successful in raising capital on the stock markets. In total BEF, Trigon Agri and Agroklutura raised 1.2 billion USD, which encompasses pre-IPO stock emissions, stock emissions concurrent with or after the IPO and the issuing of Eurobonds, convertible instruments, or the taking on of other types of loans. BEF raised the most capital, at over \$ 600 million, Trigon raised just over \$ 300 million, while Agroklutura raised just under \$ 300 million.¹⁰ Raising money is important of course, but the purpose of an IPO is also to broaden

⁹ All were first listed on the Stockholm Exchange’s First North index for small and mid-cap firms, but BEF and Trigon Agri later switched to the main index at the Stockholm Exchange, while Agroklutura had plans, later scrapped, to switch to the London AIM exchange.

¹⁰ This information is based on own calculations from information compiled from a variety of sources. Exchange rates used to convert from Swedish Kronor (SEK) or Euro to US Dollars are average exchange rates for the year in

the ownership base of the company and promote liquidity in the share. (See for example Alpcot Agro 2009a, 9; Trigon Agri 2007, p.8). In these terms, the companies have generally been less successful. Agrokultura's shares, for example, tended (before delisting) to be 'illiquid', which means that, in the words of deputy managing director Hannes Sjöblad, 'small orders can move the market significantly' (Agrimoney.com 2011a). The number of trades of Trigon Agri's shares¹¹ is roughly at the same level as Agrokultura, while BEF's shares are more actively traded. In the case of all companies the current share-price is far below IPO valuations. Beyond the initial success in raising money, the share performance of these companies has, in other words, been disappointing.

The liquidity of the stocks is important, since creating conditions for liquid ownership is in fact another important reason for pursuing an IPO, particularly as farmland's traditional illiquidity is a reason why investors have shied away from such investments previously. However, liquidity is not a problem-free quality in agricultural companies, as indicated by a manager with Grain Alliance AB:

'...Even if our owner had said, we like this asset, something appropriate for family investors to have, he still wants to have the possibility to sell this at some point... That some big institution is just going to come and buy it... that isn't so likely. Then let's see... If we at some point want to have liquidity in our ownership, then we have to in any case aim for an IPO and therefore you have to just go and try to be big.' (Interview with a manager from Grain Alliance AB, December 2013).

The respondent, as was clear in subsequent discussion in this interview, explained that 'big' in terms of market capitalization entailed that the company is 'big' in terms of the land bank. Luyt et al (2013, 20) also report that there is a connection between land bank size and market capitalization: 'initial approaches to valuing farmland companies at IPO in the Russian Federation and Ukraine were based on the valuation of the land bank'. Similarly speaking to the relationship between larger land bank size and greater liquidity, Agrokultura is quoted in the business press as stating that, following the takeover of Landkom in Ukraine, the combined company 'will be an attractive, more liquid vehicle for investors' (Agrimoney.com 2011b). The larger point is that investors see agricultural corporations in Ukraine and Russia through the prism of their land banks, even if the company, like Grain Alliance, is less interested in trying to make an asset play. IPO valuation and market capitalization, in other words, go hand in hand with the size of the land bank, and the bigger the better.

Also, in other respects the desire (or need) to attract external capital (such as loans) brings with it the condition of (increasing) size. Ukrainian agroholdings, for example, have found that larger landholdings have meant the possibility to secure larger loans, both from the private banks and from donor financial institutions such as the European Bank for Reconstruction and

question. See Black Earth Farming (2014a, 9; 2008 p. 28 appendix; Black Earth Farming 2012b; Alpcot Agro (2011b, 17, 31; 2011c; 2010b; 2009c); and Trigon Agri (2008, 4; 2009, 5; 2011c).

¹¹ Trigon Agri warned in a risk disclosure in 2007 that shares on the First North exchange tend to be illiquid shares (Trigon Agri 2007, 28).

Development (EBRD) and the International Finance Corporation (IFC). The EBRD and IFC have been particularly active in Ukraine over the past five years in support of the largest Ukrainian agroholdings (Borodina 2014). Remarking on the role of EBRD and IFC, The Grain Alliance manager complained:

‘And they [Kernel, Mryia, UkrLandFarming] have all, they are financed by IFC, EBRD, and part of World Bank programs and such like. This is something we have come across, I have come across in any case, I have applied for financing, when it was the bad days of 2008, 2009, to get support from both IFC and EBRD, and they said: ‘you are too small. The scale is not good enough. We can’t go in. If we would go in with the money that we go in with, then we own half the whole company. We can’t do that. Come back when you have become much bigger.’ But it’s maybe not so damn good to be so big.’ (Interview a manager from Grain Alliance, December 2013).

Thus, the need to access external finance drives an increase in size up to a magnitude, or at a pace, that is not always sensible from a production perspective (see below).

The persistence of investor preferences for land speculation

The asset play bubble burst almost as soon as it began. BEF’s and Trigon Agri’s share price, which had risen considerably at the beginning of 2008 on the back of rising grain prices, took a significant dive already in March 2008. While BEF’s share price was considerably higher than Trigon’s, the share-price for both companies, as shown below in figure 2, dropped by a similar order of magnitude, such that the minimum share price at the end of 2008 was roughly 16% of the maximum share value from the spring of the same year. These share price remained at this level, even when the rest of the stock market started to recover. Investors have been, needless to say, disappointed with the performance of these shares. The companies have shifted emphasis and seek to highlight their potential to generate returns off of agricultural production. In the words of the stock analyst interviewed as a part of this study ‘...they [the companies] realized that they have to deliver a rate of return off of cash flow.’ (interview with Stock market analyst, August 2014). That being said it is important to note that more recent share price fluctuations of the three publicly listed Nordic companies still reflect asset-play thinking on the part of investors. Again the stock analyst:

‘there is a difference between operations and value of the company. And Trigon is the company that has delivered the best operational result, but they have not created shareholder value in the past half-year, while Agroklutura, which has been worst operationally, has managed to create shareholder value [by...] showing that they can restructure the company and create value in the future... If they just close the company, they can get 6 kr per share, [2 kr more per share than the value at the time of the interview.] (Interview with stock market analyst, August 2014)

Trigon Agri has in fact complained about this, not in relation to Agroklutura, but in relation to BEF: ‘We have half the valuation in certain key-figures compared to BEF, but we have done much better than them operationally’ said the Chairman of the Board Joachim Helenius when Trigon Agri moved from the First North Exchange to the Main Exchange in Stockholm (Svensson 2010). One of the main reasons Trigon Agri’s stock has been discounted compared to

BEF's is that BEF has title to most of their land, while Trigon, because much of its operation is in Ukraine, can only rent their land. 'It is always a risk to improve land that actually belongs to someone else and it is difficult for Trigon to create value by selling off land compared to BEF' writes stock market analyst Daniel Svensson (2009; Trifonov 2011 also states that investors first look at how secure the ownership of land is in agroholdings).

Figures 2 and 3 around here

Figure 2: Daily closing share price of BEF and Trigon Agri in 2007 and 2008. The initial drop in the share price in March 2008 was caused by the first signs that grain prices, having risen meteorically the previous year, would go down (Linstedt 2008, 388-389; see also Voronina 2008). The continued drop in the share price was also affected by a statement in July 2008 by the Russian agricultural minister that the Russian government would review how much land is owned by foreigners (Linstedt 2008, 389). Additional factors depressing the share-price as the year continued, were the brewing global financial crisis and the war in Georgia in August 2008 (This was cited by one respondent, but see also Bush 2008 and Hammar 2008 for more on the effect of the Georgian war on foreign investment in the Russian economy). The source for share prices is Stockholm Stock Exchange (2014).

Figure 3: Daily closing share price of BEF, Agrookultura, and Trigon Agri in 2013 and 2014 (Stockholm Stock Exchange 2014).

More recently, the companies themselves emphasize, when discussing recent divestments of parts of their respective land banks, the fact that the share price is undervalued with respect to the assets of the company, meaning that buying shares in the company at current prices is a good deal. So for example, despite failing to lift production of the Kaliningrad cluster, Agrookultura's divestment of this land in late 2013 was seen as a success by the market, which rewarded Agrookultura's share price with a brief lift. This is because the price that Agrookultura fetched for this land, while nominally close to book value, was, according to current Agrookultura CEO Stephen Pickup: 'significantly in excess of the attributed value according to the company's share price...' (Agrimoney.com 2013a). This is in stark contrast to when Agrookultura announced a shift towards more profitable crops in their crop plan, an announcement which actually saw share prices fall (Agrimoney.com 2012a). Also revealing latent interest in land speculation, when BEF divested from a block of land in Voronezh in 2014, a business journalist noted that if all of BEF's land were to be revalued taking into account the sales value of recent divestments in Voronezh (in Russia), the substantive value of the shares, around 2 to 2.5 kr per share when the article was published, would be closer to 9 kr per share. (Rolander 2014).

In summary, investors prefer land speculation to production, which had a great impact on the main orientation of these companies in the early years. The biggest problem related to this asset-play phase – as will be described below – was the rapid expansion itself, which happened before systems had been in place to efficiently cultivate and sell crops.

[Agriculture in the former Soviet Union as seen from the Corporate Board Room](#)

When the bubble burst on land speculation, the other profit generating strategy – agricultural production – became more important. The fundamental assumption informing these investments is that investment in farming can be done successfully without the need for much agricultural expertise on the board. Farming is seen as a 'real' investment like any other 'real' investment such as forestry, mining or commercial real estate. Farmland investment funds seek to promote the view that agriculture is just another real investment (see TIAA-CREF 2013a), so this view on the part of the investors behind the Nordic agrohholdings is in and of itself perhaps not so

surprising. Still it is interesting to see how top investors characterized their investment. For instance Richard Spinks the founder of Landkom (later bought out by Swedish Agrokultura) dismissed the idea that his lack of experience in farming would be a hindrance, saying: ‘It’s just like the fish business [in which he worked before], you need to make sure you have professionals who can supply the raw material’ (Miller 2008; see also Katz and Robison 2011).¹² Michael Orlov speaking about making presentations for potential investors in BEF, was quoted by Lindstedt (2008, 63) as saying ‘it is scary how superficial the process is when these large institutions invest their money’.

Given this view, it is moreover not surprising that the boards of directors of these companies – the body that is supposed to represent the owners of the company in relation to the manager – contained very few people with agricultural experience. In fact, in the first year of operation for the three publicly traded companies not one non-executive board member in any of the companies had agricultural experience, as defined by having earlier occupied a management or executive position in an agricultural company. Instead, the sector experience of board members tended to be concentrated in the real-estate sector, finance and investment, and oil and mining. Roughly one-fifth of all board members had had prior experience in Russia and / or spoke Russian. Later, BEF and Agrokultura acquired non-executive board members with experience in farming, the food industry or grain trading. However, in Agrokultura’s case, there has been a great deal of turnover in board membership, as well as top management positions. While none of Trigon Agri’s board members had experience with agriculture upon taking a position on the board, Trigon has exhibited the most stability in board membership. It is possible that board members, particularly those who have been on the board for seven or eight years, have learned on the job.

In line with the assumption that agriculture is just like any other real investment, the stock-listing prospectuses of the publicly traded companies give short shrift to specific, locally based agro-ecological risks to the business. To be sure, all of the companies, in virtually identical language, state that ‘poor or unexpected weather conditions’ can be a ‘significant’ risk for agriculture, and that the growing season in Russia is relatively short. (Black Earth Farming 2007, 17; Trigon Agri 2007, 15; Alpcot Agro 2009a, p.11) However, these statements are general, formulaic and/or obvious in nature. They do not reference specific weather trends in Russia and Ukraine, and occupy only a small portion – one paragraph – of a risk disclosure statement that runs from 10 to 15 pages, and that focuses more on the kind of legal and political risks that, as Agrokultura states (2009a, 16): ‘are applicable to any investment in Russia and are not specific to a certain investment’. Also, the general warning on weather-related risk in Trigon Agri’s case should be set against later statements in the same document that ‘the Black Earth region is less susceptible to extreme weather conditions’ (Trigon Agri 2007, 30) than Germany, France and the U.S. and that the Black Earth region has ‘predictable climatic conditions’ (Ibid, 32).¹³

¹² Others expressed themselves more carefully. The first Chairman of the Board of BEF, Per Brilioth, is quoted in Lindstedt (2008, 180) as saying the following: ‘Orlov’s [founder of BEF] project was so appealing because I saw so many parallels with the investments we already had made in Russia in oil and gas. Agricultural land in Russia could be as good an investment as raw materials. But because we hadn’t invested in agriculture earlier we had respect for the fact that we are getting ourselves into a new line of business’.

¹³ In terms of the entire prospectus, BEF does make more frequent mention than the other two companies of the impact weather has on yield, while still not going into detail about local, Russian weather patterns and historical volatility.

This general risk presented by weather would be dealt with by weather hedging, which is the geographic dispersion of land holdings such that poor weather in one area can be offset by more favourable weather on holdings elsewhere. Again, this is generally a recommended strategy among farmland investors (see TIAA-CREF 2013b, 6, 8), and an explicit strategy in the early years for Agrokultura (see for example Agrimoney.com 2011b) and Trigon Agri (See for example Trigon Agri 2011b, p.7). Weather-hedging is such an established ‘best-practice’ in the sector that Mryia Agroholding, a Ukrainian company, actually saw their credit rating downgraded by Fitch because their concentrated land holdings in Western Ukraine did not reflect an attempt to mitigate their weather risk (Roswadowski 2014).

Similarly, there was little or no reference to the Soviet experience of agriculture in corporate documents or statements to the press. Instead, emphasis was on the fact that many of the fields these companies took over were abandoned or ‘fallow’ (Sjölund 2007; Alpcot Agro 2008a, 3; Black Earth Farming 2008, 15) – which of course is true – and also that the region’s black earth soils are, as oft-repeated in corporate literature and in the media: ‘the most fertile in the world’ (Hammar 2008; Lundin 2008; Black Earth Farming 2008, 12). There was a sense that, as expressed in the *New York Times*, ‘Russia has millions of acres of untouched, pristine land that could be used for agriculture’ (Kramer 2008). In other words, post-Soviet farmland was a tabula rasa waiting for investment, and the main risks were of a political nature.

In the few references to Soviet agriculture to be found in public statements and the corporate literature, poor Soviet agricultural performance is ascribed to, as Agrokultura (then Alpcot Agro) states: ‘mismanagement’ and ‘neglect’ (Alpcot Agro 2009a, 4). Vostok Nafta, a major owner of BEF, commented to the media ‘that 70 years of neglect (*vanskötsel*) and unprofitable agricultural operations have led to a situation where fields are uncultivated’ (Sjölund 2007). The post-Soviet problems of agriculture are similarly ascribed to poor management and neglect (Janson and Schäring 2008), and also a lack of working capital (Trigon Agri 2007, 37) – issues which the Nordic agroholdings would address with ‘modern techniques’ (Sjölund 2007), western inputs, and capital raised on financial markets. The message here is clear: the Nordic agroholdings have nothing to learn from Soviet and post-Soviet agriculture experience.

The emphasis on Western inputs and know-how, however, while also standard boiler-plate language, is important because it is this that marks the discursive and material difference with the Soviet and post-Soviet farms that the companies try to reinforce. This strategy would, it was initially promised, ensure a significant yield increase compared to Soviet and post-Soviet averages. BEF is quoted as stating that they would deliver yield increases of 200% (Lindstedt 2008, 226, Lundin 2008) and even 300% (Lindstedt 2008, 181). In terms of winter wheat – where the local Russian average at the time was 2 to 2.5 tons per ha – this yield projection would amount to 5 tons per ha. The yield improvement projection was important to the asset play strategy. As BEF stated: ‘This [yield improvement] is going to become the determinant factor in determining land prices and the main vector in creating value for our shareholders’ (Black Earth Farming 2008, 15).

Trigon projected similar increases in yields from local averages (Trigon Agri 2009, 20), stating that, after three years under Trigon management, wheat yield in their Ukrainian clusters would

average 7 tons per ha and 6.3 tons per ha in their Russian clusters. In the business press, the yield improvement promises could be connected to unconsidered comparisons with Western and Northern Europe, as in this quote below from a Swedish business journalist:

‘The land, which has been mismanaged for decades, is actually the most fertile in Europe. But the long-term mismanagement means the soil is a long way from its glory days. There are for example many farms in Skåne [Sweden’s premier farming region in the south of the country] that yield almost 10 times more wheat per hectare than what the Russian land has been yielding over the last years. You notice this, on the other hand, with respect to prices. One hectare of land costs today around 500-600 USD. In Poland, land costs for example around ten times more. In Skåne the prices are even higher.’
(Isacson 2007)

While all the publicly traded companies posted record yields for winter wheat during the summer of 2014 (see Figures 4 and 5), these yields are still not up to initially promised levels. Also, the Nordic Agrohholdings’ yields do not vary significantly from regional yields. While an improvement trend may be visible over the last two years, it is still too early to make conclusive statements in this regard, as the recent improvements are partly caused by favourable weather.¹⁴

Figures 4 and 5 around here

Figure 4: Winter Wheat and Sunflower Yields for BEF and Agrokultura compared with regional averages. The regional averages are the unweighted, averaged yield for farm enterprises from Voronezh, Lipetsk, Tambov and Kursk (Rosstat 2015) – the four oblasts where BEF has been consistently (Black Earth Farming 2015, 2014a, 2013, 2012a, 2011a, 2010, 2009, 2008), and where Agrokultura has been concentrated, with the exception of Kaliningrad, since 2011-2012 (Agrokultura 2015, 2014; Alpcot Agro 2013). Note that Agrokultura reported yield results from Kaliningrad separately, i.e. the figures shown in Figure 4 come from their operation in the central black earth district. With respect to both companies, net yields – after storage and other losses – are reported. BEF in their Third Quarter Report in 2014 (Black Earth Farming 2014b, 2) stated that their yields for spring crops, including winter wheat, were ‘significantly higher’ than regional yields. Figure 4 appears to contradict this statement, though there can be several valid reasons for this discrepancy. It should further be noted that these companies are two of the largest farm companies in these four oblasts and would therefore constitute a portion of the regional averages. The purpose of this and the following figure is to put initial yield projections in context. These figures have only limited use as a benchmark of agricultural performance because they contain no information on cost per hectare.

Figure 5: Comparison of Trigon Yield in Kharkiv with Regional Averages in Kharkiv. Note that in contrast to Russian statistics, Ukrainian regional averages for wheat yield include spring wheat yield, which will pull down the average somewhat in relation to Trigon’s figures, which are just winter wheat yield. Yield information comes from Trigon Agri Annual Reports (2015, 2014, 2013a, 2012, 2011b, 2010a, 2009, 2008). The source for Kharkiv regional wheat yields are State Statistical Services of Ukraine (2014).

Lessons Learned: Changing expectations and practice

The promised yield improvements and financial returns have been, to say the least, disappointing. In light of this, the three publicly traded companies have adjusted their

¹⁴ Favorable weather in the spring and early summer of 2014 was definitely a factor in pushing up 2014’s early crop yields. As there have been a slew of warnings concerning the condition of winter wheat in Russia going into 2015 (see Agrokultura 2014b; Agrimoney.com 2014b; United States Department of Agriculture 2014; Agrimoney.com 2014c), further progress on improving wheat yields seems in danger.

expectations and instituted new practices and strategies to improve the agricultural production side of the business.¹⁵

For example, there is more appreciation among the Nordic agroholdings for the vagaries of the Eurasian climate. BEF has for example tempered yield expectations: ‘...the climate means crop yields levels are lower than say W. Europe and the risk higher...’ (Black Earth Farming 2012a, 6). The former BEF manager interviewed for this study, an agronomist by training, said that he did not think yields could increase significantly due to the climate, stating for example that when the humidity declines to 20% (as it can in Russia and Ukraine) wheat physically stops growing during the heat of the day (interview January 2014). A current high-ranking manager in BEF also noted a greater risk to yield in Russia, compared to North America, again due to the climate (interview May 2014). A current manager in Trigon Agri noted the importance of micro-climates for production purposes, stating ‘...I think the only way to find out... just to work in these regions, because that, over time, will show which the better areas are. [sic]’ (Interview July 2014). Trigon Agri has also, in subsequent risk disclosure statements to investors (See Trigon Agri 2010b, 15; Trigon Agri 2011a, 28-29), revised its assessment of the weather to include a much more detailed description of the specific farming-related weather challenges in Russia and Ukraine.

The three publicly traded companies are also shrinking, consolidating and geographically shifting their respective land bank so that, as one respondent put it: ‘the land isn’t spread out over half of Russia.’ (Interview with former BEF manager, January 2014). At a macro level, this new geography reflects primarily climatic and logistical concerns, though it also reflects a rationalization of some of the lower quality land inadvisably acquired during the scramble for land in 2006-2008.¹⁶ In terms of climate, companies have moved out of the drier production clusters in the east (Samara, Penza, Volgograd, Stavropol’, and Kurgan) towards areas with better rainfall (See Figure 6). As Agrokultura CEO Steven Pickup said: ‘few units less sun is not going to bankrupt you, but getting no rain will’ (Agrimoney.com 2013b). Even BEF, which in contrast to Agrokultura and Trigon Agri, never sought to diversify holdings as a weather hedge, is re-balancing its holdings away from relatively drier Voronezh towards the northern part of its production area where rainfall is somewhat better.

Figure 6 around here

Figure 6: Land holdings of Nordic agroholdings 2008-2014. Sources for location of land holdings come from the annual reports of the companies. In some cases interviewees could give more accurate information of the location of production clusters within oblasts (regions). If such information was not available, the holding was positioned in the center of the oblast. (Black Earth Farming 2014a, 2013, 2012a, 2011, 2010, 2009, 2008; Agrokultura 2014; Alpcot Agro 2013; 2012, 2011a, 2010a, 2009a, 2009b, 2008a; Trigon Agri 2014, 2013a, 2012, 2011, 2010a, 2009, 2008, 2007; Grain Alliance 2014, 2013, 2012).

The exception is Trigon Agri’s holdings in southern Ukraine and in Russia. However, both of these clusters have irrigation potential, and, Trigon notes that ‘if the region as a whole has decent weather then the farms in the south should always do well because they’re close to the export ports, so effectively we retain a much larger part of the price that we get for selling our crop, because the implicit and explicit transport costs are so much lower than they are from further

¹⁵ Grain Alliance AB is an exception, as they came into this process rather well advanced on the learning curve.

¹⁶ BEF has for example divested from 27000 ha of land that they described as lower quality.

out' (Trigon Agri 2013b, 11-12). Thus, the importance of getting crops to export markets in a timely and inexpensive manner also helps to explain the shift eastwards in the macro-geography of this production. Ukraine with its relatively well developed railroad network and its access to Black Sea ports is particularly important in this regard. As Jens Bruno from Grain Alliance stated to the press: 'people talk about the black earth and that is unique. But the most important thing is logistics, how cheap you can get your products to the export countries' (Blomgren 2012).

The geography of production is also changing as Nordic agroholdings are consolidating for reasons of control and logistics, a change that is happening at a macro-level, but also at the farm or production cluster level. This is a process most visible in AgroKultura in Ukraine. As CEO Stephen Pickup rather dramatically stated at the Annual General Shareholder meeting in 2014: '[AgroKultura's] Ukrainian empire of land was impossible to control' (Notes from Shareholder Meeting 2014). Pickup also stated, in a comment specifically on AgroKultura's consolidation of land in Ukraine: 'inefficiencies are the real enemy of profitability' (Agrimoney.com 2013b). In other words AgroKultura's holdings in Ukraine were so dispersed that they could not exercise proper oversight over operations, which is a main reason they divested from holdings in southern, central and north-western Ukraine (see figure 6).

Oversight in large-scale farming is important for two reasons. One is related to the timeliness of operations. 'Large-scale farming is just logistics' said the former BEF manager (interview January 2014). Moreover, because 'all your operations are sequentially dependent' (interview with current AgroKultura manager December 2014), if one operation is late, it has a cascading effect on all the other operations, negatively affecting yield. Both BEF and AgroKultura in Ukraine have made a big, and apparently successful, push in 2014 to improve the timeliness of operations (Interview with current AgroKultura manager; notes from BEF General Shareholder Meeting 2014; see also Black Earth Farming 2014c, p.3). Without this big push on timings, argues the current AgroKultura manager, AgroKultura would not have been able to capitalize on the favourable weather (Interview December 2014). A larger point to make is that logistics and the fact that it has taken some companies quite some time to master the logistical part of the operation weakens the argument that larger farms have external economies of scale in purchasing inputs. There may indeed be efficiencies in purchasing inputs (Walther 2014), but those inputs still have to be purchased on time, and distributed to all the fields in a timely manner or the yield suffers, and that challenge grows as the size of the land bank grows.

The most consistent lessons learned or perspective shared across the companies was that dispersing holdings for the purposes of weather hedging proved to be suboptimal. As the Trigon Agri manager interviewed for this paper said: 'Initially when we started we thought that we would spread across the regions, and with that would diversify the weather issues... but the fact is, that when there is a drought, it could be quite large areas at the same time, but always the better micro-climates are struggling less than the worst microclimate areas.' Providing a somewhat different perspective, the former BEF manager stated that weather-hedging tended to be supported in internal BEF discussions by 'those who do not have a lot of knowledge [about agriculture]' and that 'if you're in it for the long-term it doesn't matter, because it will go up and down.' (Interview with former BEF manager January 2014). BEF of course ultimately never pursued a weather hedging strategy. A manager in Grain Alliance – another company that did not pursue a weather hedging strategy – said that dispersed holdings are impossible to control and

that both he and the Grain Alliance CFO (who works as a de facto CEO) visit each field cultivated by the company three times a season (Interview with Grain Alliance manager November 2014), something that would not be possible in a dispersed holding. The current Agrokultura Ukraine manager similarly stressed the importance of control and visiting each field multiple times, and focusing on core crops to build up expertise (Interview December 2014). In sum, consolidation for purposes of control and logistics trumps dispersion for purposes of weather hedging.¹⁷

Discussion: The Contradictions of Investor Led Farming

The empirical material presented here confirms the emerging picture of financialized agriculture presented in the theoretical section that the leadership or heavy involvement of financial investors in agriculture corporations leads to a set of contradictions that actually harm the productive possibilities of the company. For example, it was clearly demonstrated that investors still to this day see investment in these companies as an ‘asset-play’, i.e. land speculation is a higher priority than production in the eyes of investors. This preference has contributed to the prioritization of land acquisitions to the extent that land banks swelled so rapidly that they were unmanageable, at least initially, from the perspective of production.

A second contradiction is that between the short-termism of financial investors and the longer-time horizon needed to make a productive agricultural company. While many investors in these companies, such as Vostok Nafta (Janson and Schäring 2008), Alpcot Capital Management (Alpcot Capital Management 2015) and Kinnevik (Brink 2013), claim to be long-term investors, in practice some of the principal investors have already pulled out, or announced their preference for pulling out of these projects. Thus, Vostok Nafta, the first major shareholder in BEF, divested from the company after six years, while Alpcot Capital Management, the leading original investor in Agrokultura, called for the company’s liquidation in 2013, seven years after the company’s founding (Affärsvärlden 2013). On the other hand, the founding investors of Trigon Agri continue, after seven years, to exercise a key role in the company. Kinnevik another early and major shareholder in BEF, similarly has not given any indication that they might divest soon. That being said, there has been speculation in the Swedish business press commenting on Kinnevik’s ‘patience’ and ‘over-optimism’ (Rolander 2014) with respect to BEF or posing the question of how long Kinnevik will retain ownership in BEF (Forsberg 2014; Jakobsson 2013). This chatter in the business press is itself a kind of marker of investor short-termism. Both the former and current manager from BEF interviewed for this study and the former manager from Agrokultura argued, however, that it simply takes more time than five to seven years to build up a successful farming company at such a scale (see also Nikitina et al 2013 and Voronina 2011).

¹⁷ However, weather hedging still has its adherents among competitors to the Nordic companies. Among the Western big agrohholdings, Ekoniva is an exception with landholdings stretching from the Western most part of the Black Earth into Siberia. Stefan Dürr, director of the German Ekosem/Ekoniva agrohholding, said in 2012 that the group had ‘more than offset the lower harvest in Siberia, which suffered from a severe drought, with higher crop yields in the important black soil region’... ‘This once again proves the benefits of the climatic diversification of our farmland at various locations throughout Russia.’ (Agrimoney.com 2012b). Also Agrogeneration, representing the most extreme case of weather-hedging, farms in Ukraine and Argentina.

Third, a factor driving this short-termism is the emphasis on liquid ownership in connection with placement on a stock exchange. The need for liquidity even drives companies not interested in land speculation to scale up. This paper has not examined the degree to which large-scale farming is more efficient or not. However, we can question the actual motivation for achieving large-scale production in these companies. Financial interests – in terms of making an asset-play or achieving liquid ownership – seem to weigh just as much, if not more, than expected production efficiency in the decision to scale up production. The fact that BEF, Agrokultura and Trigon Agri are now ‘shrinking to victory’ (Agrimoney.com 2014a) suggests that the synergy between finance and large-scale agriculture was overplayed. Also, while larger farms may enjoy external economies of scale, inputs still have to be purchased on time and spread out onto fields in time or yield suffers, a challenge that some of the investigated companies did not master until relatively recently.

Liquidity is in turn related to another contradiction, which is the speed, with which finance enters and exits a company and how this erodes cost discipline and introduces a greater element of overall volatility to the companies in question. The three publicly traded companies were rather successful in raising a large sum of money fast, but that money came into the companies before the internal control systems had been put in place. This is, in fact, a common concern among investors considering investment in young companies going public (Ernst and Young 2013, 7), but it is a special concern in pure-play agriculture companies that are price-takers in terms of selling their harvest, which means they have to be disciplined on the cost side. Speaking of Landkom, which Agrokultura took over, a respondent stated:

I mean everybody had a pickup, everybody had telephones, everybody had this, everybody had that. Everybody had uniforms. I mean, it was just, everybody had everything and Landkom went out and the equipment they bought was extremely high priced and so there was a lot of that financial undiscipline [sic]... (interview with current Agrokultura manager, December 2014).

The liquidity offered by the stock market also allows investors to flee companies with relative ease. This is what happened to BEF and Trigon Agri in 2008. The share price was unnaturally pushed up by investors seeking new outlets as the financial crisis was brewing in Europe and the U.S. and grain prices were shooting through the roof, and it came crashing down at the first sign that grain prices would start to fall (see Linstedt 2008, 388-389; see also Voronina 2008). While grain prices certainly affect the profitability of the companies, the stock market dynamics in 2008 had less to do with company performance or conditions in the local market and more to do with investors reacting to changing global conditions. Stock market fluctuations in effect add another layer of volatility to an endeavor that is already volatile due to weather unpredictably and commodity price fluctuations.

Even investors are starting to see a mismatch between stock markets and agriculture. There have been several delistings in recent years of pure-play companies, such that the 11 publicly traded pure-play companies active in Russia and Ukraine in 2012 (Luyt et al 2013, 53-66 and note 139) have now been reduced to seven. The same year that Vostok Nafta divested from BEF, the Lundin Family, the founders of Vostok Nafta, announced a separate investment in agriculture in

South America. This time however, they indicated that they will not seek stock market financing (di.se 2013). There is in other words a movement away from the stock market as a source of capital for agricultural investments. As a former board member of Agrokultura said:

‘one can question if these big companies as a model work or if it is better that the companies are run by the owner. That they shouldn’t be public, maybe they should be privately owned. The stock market sets horribly tough demands, and doesn’t like uncertainty, doesn’t like volatility and if you are a long-term private owner, I am 100% convinced that this [agriculture] is the right investment’. (interview with former board member of Agrokultura, January 2014).

Another contradiction concerns a clash between the case made on paper for farmland investments in Russia and Ukraine and concrete realities encountered on the ground. The main elements of the case for farmland investments in Russia and Ukraine rest on so-called ‘global drivers’, and are still being made, as indicated in the following quote from a Swedish business magazine in 2013:

‘...At the same time we know that access to grain is one of our biggest global challenges, a challenge that the recent extreme weather reminds us of, but which otherwise increases successively as the world population increases, people are living longer and getting a higher quality of life – all while agricultural area is decreasing. To be in Russia as Trigon Agri and Black Earth Farming are, where there is a large unexploited potential of earlier cultivated black earths, has to be right.’ (Veckans Affärer 2013).

Thus global trends are used to promote and justify farmland investments in Russia and Ukraine. In building their case for investing in Russian farmlands, investors also often pointed to the Brazilian experience. As Luyt et al (2013, 20) put it investors believed that: ‘farmland bought for USD 600-800 per ha [in Russia] would, over a relatively short period, converge towards the prevailing Brazilian market level of around USD 3,500 per hectare’. Investors and business journalists as seen above also made comparative references to land prices in Europe. Finally, there was an assumption that the actual farming part would be relatively easy (Luyt et al 2013 22), based on confidence in international best practice, an assumption that Soviet and post-Soviet agriculture suffered only from neglect, mismanagement and lack of capital, and on unconsidered notions of yield gaps between Europe and the former Soviet Union.

However trends with respect to land prices in the regions of Russia have not followed global trends, as there has actually been an oversupply of farmland in much of Russia’s black earth belt (Visser 2013). Local commodity prices, while correlated with international prices in the long term, can in the short term substantially deviate from global trends as well. The local climate, it turns out, does present serious challenges that most companies have been unable to eliminate with the help of weather-hedging. The local matters, in other words. The final point to make, in this regard, is that the case for these investments, informed as they were by ‘global drivers’, and the (oftentimes) unconsidered reference to benchmarks from other regions to promote these investments – Brazil in terms of land prices, Europe in terms of yield gaps and land prices – plus the fetishization of the black earths, effectively distances investors from the real conditions on

the ground where they are placing their money. In other words, financialization, ironically, has driven a distancing between investors and the farms they invest in (at least initially), just as it has done elsewhere between farms and consumers (Clapp 2014).

Conclusion

We have shown that access to finance on the one hand did indeed result in the companies being well capitalized, but on the other hand also resulted in a series of contradictions that harmed the farming side of the business. While the current conflict in the region has hampered operations for all the companies under investigation (with the possible exception of Grain Alliance), all of the problems outlined above pre-date the current conflict. Beyond the contradictions discussed above, this study has pointed to some broader questions that should be addressed. First, to what degree are the problems seen in the Nordic Agroholdings special to foreign farm investors or do they reflect problems among the agroholdings in general?

Some observers might argue that the foreign companies did worse than the domestic companies, as the observed tendency of relying on global best practices instead of knowledge of local circumstances was stronger among the former. While some domestic agroholdings probably had an advantage in this respect, many of the domestic investors (oligarchs) also came from outside the agricultural sector (Visser and Spoor 2011) and had only a rudimentary knowledge of agriculture. Moreover, about a third of all the top 25 largest agroholdings in Russia (both domestic and foreign) are facing major financial difficulties (Visser, Spoor and Mamonova 2014). Thus putting aside the foreign owned companies as atypical, would preclude getting insight into the wider contradictions that characterise the agroholdings, and the public ones in particular.

When the Nordic companies are compared with other listed pure-play companies, the somewhat better performance of two of them, IMC and Agrogenation, at first seems to contradict the tendencies described for the Nordic companies. However, a closer look at these companies in fact, shows us the centrality of the contradictions we discussed for agroholding performance. Thus, their presence in Ukraine, with its moratorium on agricultural land sales, precludes an asset-play strategy, and both companies have expanded at a measured pace.¹⁸ As Luyt et al (2013, 63) state, speaking specifically of IMC and delisted Continental Farmer's Group: '[the successful companies] achieved operational efficiency in a single cluster before ramping up operations to a larger scale'. These same arguments also apply to unlisted, but more profitable Grain Alliance, which is also exclusively in Ukraine, has expanded at a measured pace and has all local management. The regulatory context, thus seems to have imposed important constraints on the speculative tendencies that being listed otherwise entails.

Second, a question that deserves further study is the notion of 'international best practice agronomy'. The problem is not that the agronomists employed by the Nordic agroholdings were not sufficiently talented. The agronomists and indeed the managers among our respondents gave

¹⁸ Agrogenation had 40,000 ha of land in Ukraine upon being listed on the Paris Stock Exchange, and expanded to around 51,000 ha whereupon they merged with Harmelia in 2013, resulting in a total landbank (in Ukraine) of 120,000 ha. Agrogenation had a string of profitable years from 2010 to 2012, but then with the rest of the sector suffered losses in 2013.

the impression of being highly knowledgeable and capable professionals. The problem is rather how investors relate to ‘best practice agronomy’ and their naïve belief that it can be deployed all over the world, replacing previously ‘unmodern’ or ‘ineffective’ methods, with relatively fast positive effects on agricultural productivity. In other words, the notion of ‘international best practice’ agronomy and its universal applicability should be unpacked and problematized (Scott 1998).

Third, beyond the mixed role of finance, is it the stock market in particular that is a problem for agricultural companies? This study indicates that this is indeed the case, as the stock market appears to be a platform for short-term investors, whose interest in agriculture is restricted mostly to the land and not to production. However, this conclusion is based on an analysis of a handful of companies, and further study of the broader population of public agricultural companies (including vertically integrated companies) in the former Soviet Union and in South and North America would be warranted.

References

- Affärsvärlden. 2013. Storägare vill likvidera Agrokultura. Affärsvärlden 30 September. <http://www.affarsvarlden.se/hem/nyheter/article3774191.ece>. Accessed 1 October 2013.
- Agrimoney.com. 2011a. How to make a ‘global top player’ in farming, the Alpcot way. Agrimoney.com 21 December. <http://www.agrimoney.com/features/feature.php?id=127>. Accessed 23 July 2014.
- _____. 2011b. Landkom agrees takeover to create ‘global player’. Agrimoney.com, December 20. <http://www.agrimoney.com/news/landkom-agrees-takeover-to-create-global-player--3986.html>. Accessed 23 July 2014.
- _____. 2012a. Alpcot quest for quality fails to cheer its shares. Agrimoney.com 12 October. <http://www.agrimoney.com/news/alpcot-quest-for-quality-fails-to-cheer-its-shares--5313.html>. Accessed 15 December 2014.
- _____. 2012b. Black Earth Lauds Russian open wheat-export policy. Agrimoney.com 23 November. <http://www.agrimoney.com/news/black-earth-lauds-russian-open-wheat-export-policy--5252.html>. Accessed 3 August 2014.
- _____. 2013a. Kaliningrad land sale lifts Agrokultura shares. Agrimoney.com 23 December. <http://www.agrimoney.com/news/news.php?id=6619>. Accessed 17 January 2013.
- _____. 2013b. Agrokultura seals disposals in land grab reversal. Agrimoney.com 26 July. <http://www.agrimoney.com/news/agrokultura-seals-disposals-in-land-grab-reversal--6093.html>. Accessed 14 January 2014.
- _____. 2014a. Black Earth Farming Cuts Plantings to Help Profits. Agrimoney.com 16 May. <http://www.agrimoney.com/news/black-earth-farming-cuts-plantings-to-help-profits--7068.html>. Accessed 8 December 2014.

_____.2014b. SovEcon, Trigon Agri stock fears for Russia grains. Agrimoney.com 28 November. <http://www.agrimoney.com/news/sovecon-trigon-agri-stock-fears-for-russia-grains--7745.html>. Accessed 4 February 2015.

_____.2014c. Russian grains in even worse condition than 2009. Agrimoney.com 22 October. <http://www.agrimoney.com/news/russian-grains-in-even-worse-condition-than-2009--7632.html>. Accessed 6 February 2015.

Agrokultura. 2015. Annual Report 2014. Stockholm. <http://www.agrokultura.com/financial%20reports.aspx>. Accessed 28 April 2015.

_____. 2014. Winter Planting Report 2014 [Press Release]. <http://www.agrokultura.com/rnsnews.aspx?releaseid=942698>. Accessed 17 January 2015.

_____. Agrokultura. 2014. Annual Report 2013. Stockholm. <http://www.agrokultura.com/financial%20reports.aspx>. Accessed 4 May 2014.

Alpcot Agro. 2013. Annual Report 2012. Stockholm. <http://www.agrokultura.com/financial%20reports.aspx>. Accessed 10 May 2013.

_____. 2012. Annual Report 2011. Stockholm. <http://www.agrokultura.com/financial%20reports.aspx>. Accessed 15 January 2014

_____. 2011a. Annual Report 2010. Stockholm. <http://www.agrokultura.com/financial%20reports.aspx>. Accessed 15 January 2014

_____. 2011b. Offering to subscribe for shares in Alpcot Agro AB (publ). March. http://www.agrokultura.com/uploads/alpcot_prospekt_eng.pdf. Accessed 16 December 2014.

_____. 2011c. The rights issue in Alpcot Agro fully subscribed [press release]. <http://www.agrokultura.com/rnsnews.aspx?releaseid=564968>. Accessed 30 January 2015.

_____. 2010a. Annual Report 2009. Stockholm. <http://www.agrokultura.com/financial%20reports.aspx>. Accessed 15 January 2014

_____. 2010b. The rights offering in Alpcot Agro fully subscribed [press release]. <http://www.agrokultura.com/rnsnews.aspx?releaseid=467950>. Accessed 30 January 2015.

_____. 2009a. Company Description. Stockholm. <http://www.agrokultura.com/uploads/alpcotagrocompanydescription.pdf>. Accessed 17 December 2014.

_____. 2009b. Annual Report 2008. Stockholm. <http://www.agrokultura.com/financial%20reports.aspx>. Accessed 15 January 2014.

_____. 2009c. Alpcot Agro has raised SEK 65 million in an issue of convertible instruments [press release]. <http://www.agrokultura.com/rnsnews.aspx?releaseid=417881>. Accessed 30 January 2015.

- _____. 2008a. Annual Report 2007. Stockholm.
<http://www.agrokultura.com/financial%20reports.aspx>. Accessed 15 January 2014.
- _____. 2008b. Alpcot Agro has successfully raised SEK 520 million in a new share issue [press release]. <http://www.agrokultura.com/rnsnews.aspx?releaseid=356643>. Accessed 30 January 2015.
- Alpcot Capital Management. 2015. Investment Philosophy. Alpcot Capital Management Home Page. <http://www.alpcot.com/en/about-alpcot/investment-philosophy/>. Accessed February 4 2014.
- Balmann, Alfons, Jarmilla Curtiss, Taras Gagalyuk, Vlodymyr Lapa, Anna Bondarenko, Karin Kataria, Franziska Schaft. 2013. Productivity and Efficiency of Ukrainian Agricultural Enterprises. Agricultural Policy Report, German-Ukrainian Agricultural Policy Dialogue.
- Bhide. Amar. 1993. The hidden cost of stock market liquidity. *Journal of Financial Economics* 34: 31-51.
- Black Earth Farming. 2015. Annual Report 2014. Stockholm.
<http://ir.blackearthfarming.com/reports.cfm>. Accessed 28 April 2015.
- _____. 2014a. Annual Report 2013. Stockholm. <http://ir.blackearthfarming.com/reports.cfm>. Accessed 4 May 2014.
- _____. 2014b. Black Earth Farming Interim Report 1 January – 30 September 2014. Stockholm.
http://ir.blackearthfarming.com/common/download/download.cfm?companyid=ABEA-4N3O94&fileid=794685&filekey=DE111DB8-87BB-4BEC-B184-9A75C52EA3A9&filename=BEF_Q3_Report_2014.pdf. Accessed 1 December 2014.
- _____. 2014c. Black Earth Farming Interim Report 1 January – 30 March 2014. Stockholm.
http://files.shareholder.com/downloads/ABEA-4N3O94/3863033178x0x755561/0FCC61BC-4513-456C-9390-20244FA538D0/Black_Earth_Farming_Q1_report.pdf. Accessed 15 May 2014.
- _____. 2013. Annual Report 2012. Stockholm. <http://ir.blackearthfarming.com/reports.cfm>. Accessed 10 May 2013.
- _____. 2012a. Annual Report 2011. Stockholm. <http://ir.blackearthfarming.com/reports.cfm>. Accessed 15 January 2014.
- _____. 2012b. Black Earth Farming's Rights Issue Oversubscribed [Press Release].
<http://ir.blackearthfarming.com/releasedetail.cfm?ReleaseID=726296>. Accessed 10 February 2015.
- _____. 2011. Annual Report 2010. Stockholm. <http://ir.blackearthfarming.com/reports.cfm>. Accessed 15 January 2014.
- _____. 2010. Annual Report 2009. Stockholm. <http://ir.blackearthfarming.com/reports.cfm>. Accessed 15 January 2014.

- _____. 2009. Annual Report 2008. Stockholm. <http://ir.blackearthfarming.com/reports.cfm>. Accessed 15 January 2014.
- _____. 2008. Annual Report 2007. Stockholm. <http://ir.blackearthfarming.com/reports.cfm>. Accessed 15 January 2014.
- _____. 2007. Invitation to subscribe for depository receipts in Black Earth Farming LTD. Stockholm. http://files.shareholder.com/downloads/ABEA-4N3O94/3863033178x0x518759/CFB7FA53-345F-4F98-AD65-ACA361379E5F/BEF_Int_Prospectus_Non_US.pdf. Accessed 15 December 15, 2014.
- Blomgren, Jan. 2012. Skördetid i det korrumperade landet. Svenska Dagbladet 11 November. http://www.svd.se/naringsliv/nyheter/varlden/skordetid-i-det-korrumperade-landet_7657296.svd. Accessed 11 November 2012.
- Borodina, Elena. 2014. Neravnyy brak bez gosudarstvennogo rascheta. Zerkalo Nedeli 21 August, no. 29 [in Russian]. http://gazeta.zn.ua/ariculture/neravnyy-brak-bez-gosudarstvennogo-rascheta-o-rol-i-agrokorporaciy-v-dostizhenii-celey-razvitiya-selskogo-hozyaystva-_html. Accessed 4 October 2014.
- Brink, Erik. 2013. Black Earth har tappat 90 procent. Jordbruks aktuellt 12 December. <http://www.ja.se/?p=43825&pt=105&m=3433>. Accessed 22 January 2014.
- Breger Bush, Sasha. 2012. Derivatives and development. A political economy of global finance, farming and poverty. New York: Palgrave Macmillan.
- Bush, Jason. 2008. The Credit Crisis Hits Russia. Spiegel Online 8 October. <http://www.spiegel.de/international/business/risky-times-in-moscow-the-credit-crisis-hits-russia-a-582844.html>. Accessed 15 December 2014.
- Buxton, Campanale and Cotula. 2012. Farm and funds: investment funds in the global land rush. Briefing: the Global Land Rush, January. International Institute for Environment and Development. <http://pubs.iied.org/pdfs/17121IIED.pdf?>. Accessed 4 December 2014.
- Byerlee, Derek, Alex Lissitsa and Paula Savanti. 2012. Corporate Models of Broadacre Crop Farming: International Experience from Argentina and Ukraine. *Farm Policy Journal* 9(2): 13-25.
- Carter, Drew. 2010. Fertile Ground for Investment: European pension funds target farmland in emerging markets. *Pensions and Investments*, 19 April. <http://www.pionline.com/article/20100419/PRINT/304199989/fertile-ground-for-investment>. Accessed 15 December 2014.
- Chaddad. Fabio. 2014. BrasilAgro: Organizational Architecture for a High Performance Farming Corporation. *American Journal of Agricultural Economics* 96(2): 578-588.
- Clapp, Jennifer. 2014. Financialization, distance and global food politics. *Journal of Peasant Studies* 41(5): 797-814.

- Daniel, Shepard. 2012. Situating private equity capital in the land grab debate. *The Journal of Peasant Studies*, 39 (3-4): 703-729.
- Deininger, Klaus and Derek Byerlee. 2012. The Rise of Large Farms in Land Abundant Countries: Do They Have a Future. *World Development* 40(4): 701-714.
- Deininger, Klaus, Denys Nizalov, Sudhir Singh. 2013. Are Mega Farms the Future of Global Agriculture? Exploring the Farm Size Productivity Relationship for Large Commercial Farms in Ukraine. Policy Research Working Paper 6544, World Bank. <http://elibrary.worldbank.org/doi/pdf/10.1596/1813-9450-6544>. Accessed 15 August 2013.
- Di.se. 2013. Lundin satsar på ny råvara. *Dagens industri* 16 January. <http://www.di.se/artiklar/2013/1/15/lundin-satsar-pa-ny-ravara/>. Accessed 16 October 2014.
- Levchenko, T. and N. Shpygotska. 2013. Agriculture in Ukraine: Record High Harvest a Double Edged Sword. Kyiv: Dragon Capital.
- Epstein, G. 2005. Introduction. In *Financialization and the World Economy*, ed. Gerald Epstein, 3-16. Northampton, Massachusetts: Edward Elgar Publishing.
- Ernst and Young. 2013. Right team, right story, right price: Institutional investors support IPOs that come to market well prepared. [http://www.ey.com/Publication/vwLUAssets/Investment_appetite_up_for_IPOs_among_institutional_investors/\\$FILE/Institutional_Investor_Survey.pdf](http://www.ey.com/Publication/vwLUAssets/Investment_appetite_up_for_IPOs_among_institutional_investors/$FILE/Institutional_Investor_Survey.pdf). Accessed 13 December 2014.
- Fairbairn, Madeleine. 2014. 'Like gold with yield': evolving intersections between farmland and finance. *Journal of Peasant Studies* 41(5): 777-795.
- Forsberg, Birgitta. 2014. Stenbecks sanslösa shoppingtur. *Affärsvärlden* 21 January. www.affarsvarlden.se/tidningen/article3799261.ece. Accessed 21 January 2014.
- Grain Alliance. 2014. Annual Report 2013. Stockholm. <http://www.grainalliance.com/investor-relations/reports-presentation/>. Accessed 15 October 2014.
- _____. 2013. Annual Report 2012. Stockholm. <http://www.grainalliance.com/investor-relations/reports-presentation/>. Accessed 2 December 2013.
- _____. 2012. Annual Report 2011. Stockholm. <http://www.grainalliance.com/investor-relations/reports-presentation/>. Accessed 2 December 2013.
- Greene, Sophia. 2014. Investors bet the farm on agriculture. *Financial Times*. 12 October. <http://www.ft.com/intl/cms/s/0/7249ba26-4e0c-11e4-bfda-00144feab7de.html#axzz3Pcg0Oe9I>. Accessed 23 January 2015.
- Hammar, Ian. 2008. Ukrainiskt företag utmanar Black Earth Farming. *Realtid.se* 5 September. http://www.realtid.se/ArticlePages/200809/04/20080904210839_Realtid946/20080904210839_Realtid946.dbp.asp. Accessed 15 December 2014.
- Ioffe, Grigory and Tatiana Nefedova. 1997. *Continuity and Change in Rural Russia: A Geographical Perspective*. Boulder: Westview Press.

- Isacson, Torbjörn. 2007. Rysk jord an förförisk krydda. Svenska Dagbladet 17 January. http://www.svd.se/naringsliv/nyheter/sverige/rysk-jord-en-forforisk-krydda_7117471.svd. Accessed 17 January 2014.
- Jakobsson, Josefin. 2013. VD: Därför säljer Kinnevik 'kassakon' Billerud Korsnäs. Svenska Dagbladet 9 December. http://www.svd.se/naringsliv/nyheter/sverige/vd-darfor-saljer-kinnevik-kassakon_8806622.svd. Accessed 22 January 2014.
- Janson, Johan and Hampus Schäring. 2008. Det Växer i Ryssland. Aktiespararne.se 31 January. <http://www.aktiespararna.se/ungaaktiesparare/Stock-Magazine/Artiklar/Arkiv/Det-vaxer-i-Ryssland/>. Accessed 8 December 2014.
- Johnson, Nancy L and Vernon Ruttan. 1994. Why Are Farms So Small? World Development 22(5): 691-706.
- Katz, Alan and Peter Robison. 2011. Morgan Stanley Bet the Farm in Ukraine Before Taxpayers' Bailout. Bloomberg 4 October. <http://www.bloomberg.com/news/2011-10-04/morgan-stanley-bet-the-farm-in-ukraine-before-fed-bailout-by-u-s-taxpayer.html>. Accessed: 15 December 2014.
- Kluger, Brian and Jens Stephan. 1997. Alternative Liquidity Measures and Stock Returns. 8: 19-36.
- Koestler, U. 2005. A revival of large farms in Eastern Europe—how important are institutions? Agricultural Economics 32(s1), pp: 103-113.
- Koval'chuk, Anna. 2013. Chto privelo Agroton na gran' bankrotstsva. Forbes Ukraina 6 September. <http://forbes.ua/business/1357657-chto-privelo-agroton-na-gran-bankrotstsva>. Accessed 4 February 2015.
- Kramer, Andrew. 2008. Russia's Collective Farms: Hot Capitalist Property. New York Times 31 August. http://www.nytimes.com/2008/08/31/business/worldbusiness/31food.html?pagewanted=print&_r=0. Accessed 15 December 2014.
- Lerman, Z., D. Sedik, N. Pucachov, and A. Goncharuk. 2007. Rethinking agriculture reform in Ukraine. Halle: Leibniz-Institut für Agrarentwicklung in Mittel-und Osteuropa (IAMO).
- Levchenko, T. and N. Shpygotska. 2013. Agriculture in Ukraine: Record High Harvest a Double-edged Sword. Kyiv, Ukraine: Dragon Capital.
- Lindstedt, Gunnar. 2008. Svart Jord: Kommer jordbruket att leverera vårt dagliga bröd när oljan sinar? Stockholm: Frank Forlag.
- Lundin, Tomas. 2008. Den svarta jorden lockar. Svenska Dagbladet 17 August. http://www.svd.se/naringsliv/nyheter/sverige/den-svarta-jorden-lockar_7085543.svd. Accessed 12 December 2013.

- Luyt, Ian et al. 2013. Emerging investment trends in primary agriculture: A review of equity funds and other foreign-led investments in the CEE and CIS region. Rome: Food and Agricultural Organization. <http://www.fao.org/docrep/019/i3474e/i3474e.pdf>. Accessed 15 November 2013.
- Magnan, André. 2012. New avenues of farm corporatization in the prairie grain sector: farm family entrepreneurs and the case of One Earth Farms. *Agricultural and Human Values* 29(2): 161-175.
- Martin, Sarah J. and Jennifer Clapp. 2015 forthcoming. Agriculture, finance and the state. *Journal of Agrarian Change*.
- McMichael, Phillip. 2012. The land grab and corporate food regime restructuring. *Journal of Peasant Studies* 39: pp. 681-701.
- Miller, John W. 2008. In Ukraine, mavericks gamble on scarce land. *Wall Street Journal* 12 May 12. <http://farmlandgrab.org/post/view/7338>. Accessed 29 July 2014.
- Nikitna, Elizaveta, Anfisa Voronina, and Ian Gordeev. 2013. Komu prinadlezhit Rossii. *Vedomosti* 17 May. http://www.vedomosti.ru/newspaper/article/451561/komu_prinadlezhit_rossiya. Accessed 2 February 2015.
- Östlund, Annelie. 2008. Svenska börskändisar gräver guld i Ryssland. *Svenska Dagbladet* 29 February. http://www.svd.se/naringsliv/nyheter/sverige/svenska-borskandisar-graver-guld-i-ryssland_7101981.svd. Accessed 10 January 2014.
- Rolander, Dag. 2014. De serverar ständigt nya besvikelser. *Svenska Dagbladet* 15 June. http://www.svd.se/naringsliv/pengar/sparande/de-serverar-standigt-nya-besvikelser_3649056.svd. Accessed 15 July 2014.
- Rosstat. 2015. Effektivnost' ekonomiki Rossii / sel'skoe khoziastvo / urozhnainost' sel'skokhoziastvennikh kul'tur v sel'skokhoziastvennikh organizatsiakh. http://www.gks.ru/wps/wcm/connect/rosstat_main/rosstat/ru/statistics/efficiency/#. Accessed: 30 April 2015.
- Rozwadowski, Richard. 2014. Rise and fall of agricultural holdings in Ukraine and Russia. *Kyiv Post* 19 August. <http://www.kyivpost.com/opinion/op-ed/richard-rozwadowski-rise-and-fall-of-agricultural-holdings-in-ukraine-russia-361181.html>. Accessed 19 August 2014.
- Russi, Luigi. 2013. *Hungry Capital: The Financialization of Food*. Winchester UK: Zero Books.
- Rylko, Dimtri and Robert Jolly. 2005. Russia's New Agricultural Operators: Their Emergence, Growth and Impact. *Comparative Economic Studies* 47: 115-126.
- Scott, James C. 1998. *Seeing Like a State: How Certain Schemes to Improve the Human Condition have Failed*. New Haven: Yale University Press.

Sjölund, Åke. 2007. Black Earth Farming – det nya svarta guld. Placera Avanza 1 June. <https://www.avanza.se/placera/redaktionellt/2007/06/01/black-earth-farming-det-nya-svarta-guldet.html>. Accessed 10 December 2014.

State Statistics Service of Ukraine. 2014. Zbirannya vrozha silskogospodarskikh kul'tur ta provedennia inshikh pol'ovikh rabit: stanom na 1 listopada 2014. Statistichnii Bulletin'. Kyiv.

Stockholm Stock Exchange. 2014. Closing Price. <http://www.nasdaqomxnordic.com/>. Accessed 15 December 2014.

Storwall, Anna-Karin. 2007. Brått att notera Black Earth Farming. Svenska Dagbladet 28 December. <http://www.affarsvarlden.se/hem/nyheter/article3774191.ece>. Accessed 17 January 2014.

Svensson, Daniel. 2010. Dags för vinst i ryskt jordbruk. Placera Avanza. 8 December. <https://www.avanza.se/placera/redaktionellt/2010/12/08/dags-for-vinst-i-ryskt-jordbruk.html>. Accessed 4 February 2015.

_____. 2009. Trigon går mot skördetid. Placera Avanza. 7 August. <https://www.avanza.se/placera/redaktionellt/2009/08/07/trigon-gar-mot-skordetid.html>. Accessed: February 4 2014.

TIAA-CREF. 2013a. The case for real assets: Growing world population presents new investment opportunities. [https://www.tiaa-cref.org/public/pdf/real_assets_0513_summary_r5%20\(3\).pdf](https://www.tiaa-cref.org/public/pdf/real_assets_0513_summary_r5%20(3).pdf). Accessed 19 October 2014.

_____. 2013b. The Case for Investing in Agriculture. https://www.tiaa-cref.org/public/pdf/C11718_Agriculture%20Primer_Dec%202013.pdf. Accessed 19 October 2014.

Thulin, Carl. 2009. Försenat jordbruksbolag in på First North. Dagens industri 19 October. <http://www.di.se/artiklar/2009/10/19/forsenat-jordbruksbolag-in-pa-first-north/?screenwidth=1280&screenheight=800>. Accessed 17 January 2014.

Trifonov, Anton. 2011. Pol'ia dlia riska. Vedomosti 30 March. http://www.vedomosti.ru/newspaper/article/257518/polya_dlya_riska. Accessed 3 February 2015.

Trigon Agri. 2015. Annual Report 2014. Copenhagen. <http://www.trigonagri.com/investor-relations/financial-reports/annua-reports/>. Accessed 28 April 2015.

_____. 2014. Annual Report 2013. Copenhagen. <http://www.trigonagri.com/investor-relations/financial-reports/annua-reports/>. Accessed 20 April 2014.

_____. 2013a. Annual Report 2012. Copenhagen. <http://www.trigonagri.com/investor-relations/financial-reports/annua-reports/>. Accessed 15 January 2014.

_____. 2013b. First Quarter Results 2013. Conference Call Transcript. <http://www.trigonagri.com/wp-content/uploads/2013/05/Transcript-Trigon-Agri-First-Quarter-Results-2013.pdf>. Accessed May 20 2014.

_____. 2012. Annual Report 2011. Copenhagen. <http://www.trigonagri.com/investor-relations/financial-reports/annua-reports/>. Accessed 15 January 2014.

_____. 2011a. Prospectus regarding the listing of Trigon Agri A/S maximum SEK 350,000,000 11.00% Bonds 2011/2015. http://www.trigonagri.com/wp-content/uploads/2011/07/TA_Prospectus_2011.pdf. Accessed 15 December 2014.

_____. 2011b. Annual Report 2010. Copenhagen. <http://www.trigonagri.com/investor-relations/financial-reports/annua-reports/>. Accessed 15 January 2014.

_____. 2011c. Trigon Agri successfully closes a four-year bond loan of SEK 350 million [Press Release]. <http://restricted.trigonagri.com/23062011/>. Accessed 5 February 2015.

_____. 2010a. Annual Report 2009. Copenhagen. <http://www.trigonagri.com/investor-relations/financial-reports/annua-reports/>. Accessed 15 January 2014.

_____. 2010b. Prospectus Prepared by the Board of Directors of Trigon Agri in relation to the application for listing of Trigon Agri's shares on Nasdaq OMX Stockholm. http://www.trigonagri.com/wp-content/uploads/2011/07/Trigon_Agri_Prospectus_2010.pdf. Accessed 15 December 2014.

_____. 2009. Annual Report 2008. Copenhagen. <http://www.trigonagri.com/investor-relations/financial-reports/annua-reports/>. Accessed 15 January 2014.

_____. 2008. Annual Report 2007. Copenhagen. <http://www.trigonagri.com/investor-relations/financial-reports/annua-reports/>. Accessed 15 January 2014.

_____. 2007. Company Description in connection with the admission to trading on First North. http://www.trigonagri.com/wp-content/uploads/2011/07/Trigon_Agri_Company_Description_2007.pdf. Accessed 15 December 2014.

U.S. Department of Agriculture. 2014. Ukraine: Establishment Conditions for 2015/16 Winter Grains. Commodity Intelligence Report. http://pecad.fas.usda.gov/highlights/2014/12/ukr_15dec2014/index.htm. Accessed 18 December 2014.

Veckans Affärer. 2013. Hög tid att köpa rysk mark. Veckans Affärer 14 March. <http://www.va.se/nyheter/2013/03/14/va-analys-hog-tid-kopa-rysk-mark/>. Accessed 4 February 2015.

Visser, Oane. 2013. Running out of farmland? Superb Soil, Land Values, and the Sluggishness of Commoditisation in Russia. ISS Conference 'Finance, Food and Farmland' 26 January. Institute of Social Studies, The Hague. http://www.iss.nl/research/research_programmes/political_economy_of_resources_environment_

and_population_per/networks/transition_and_development_cestrad/finance_food_and_farmland_conference_25_january_2014/.

Visser, Oane, Jennifer Clapp and Ryan Isakson. 2015 forthcoming. Land investment, food, financiers and regulation. *Journal of Agrarian Change* 15(4).

Visser, Oane and Don Kalb. 2010. Financialised capitalism Soviet style? Varieties of state capture and crisis. *European Journal of Sociology* 51(2): 171-194.

Visser, Oane and Max Spoor. 2011. Land grabbing in post-Soviet Eurasia: the world's largest agricultural land reserves at stake. *The Journal of Peasant Studies* 38(2): 299-323.

Visser, Oane, Max Spoor and Natalia Mamonova. 2014. Is Russia the emerging global 'breadbasket'? Re-cultivation, agroholdings and grain production. *Europe-Asia Studies*. 66 (10): 1589-1610.

Voronina, Anfisa. 2011. Kto skupaet Rossiu. *Vedomosti* 21 July. <http://www.vedomosti.ru/newspaper/article/2008/07/21/155551>. Accessed 3 February 2015.

———. 2008. Modnie Krest'iane. *Vedomosti* 5 May. <http://www.vedomosti.ru/newspaper/article/2008/05/05/147566>. Accessed 3 February 2015.

Walther, Simon. 2014. Determinants of competitiveness of agroholdings and independent farms in Ukrainian arable production. *Thunen Report* (15). <http://nbn-resolving.de/urn:nbn:de:gbv:253-201403-dn053389-9>. Accessed 15 February 2015.

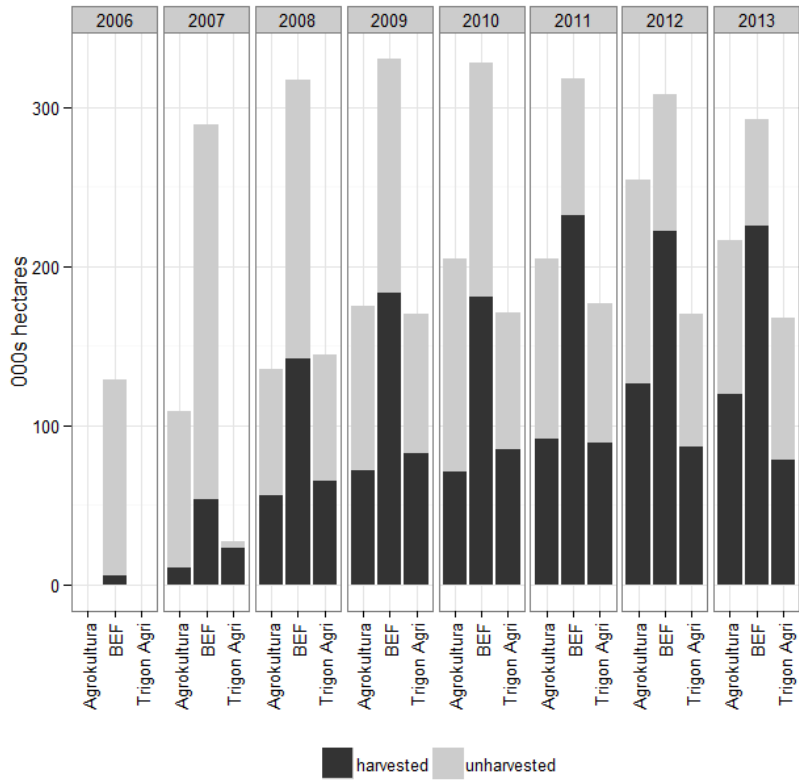


Figure 1

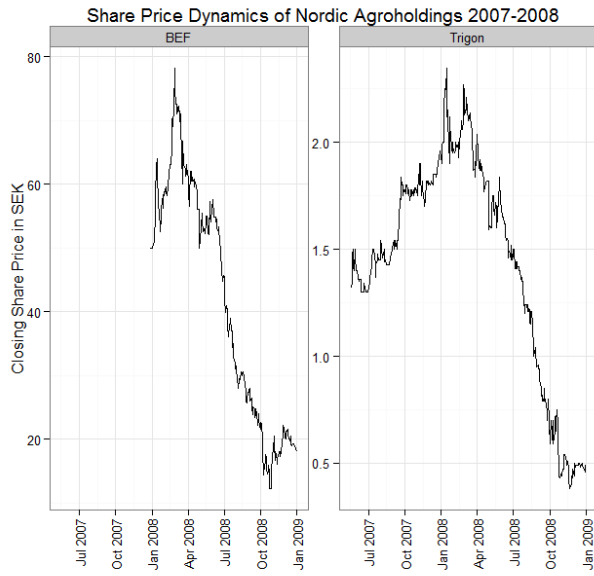


Figure 2

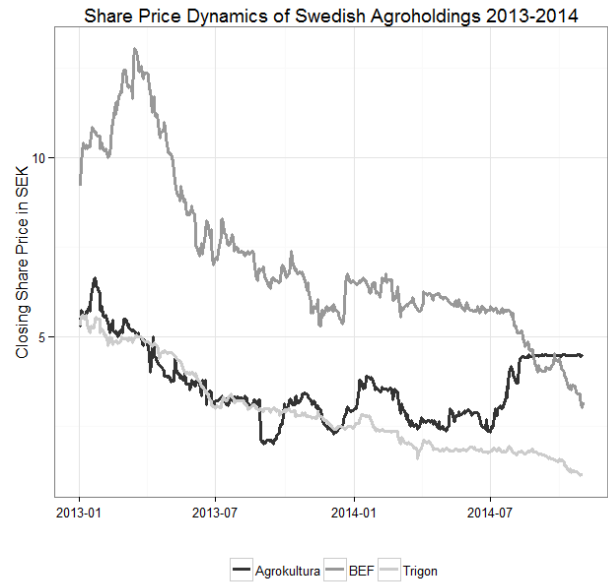


Figure 3

Yield Comparison: BEF, Agrokultura and Regional Average

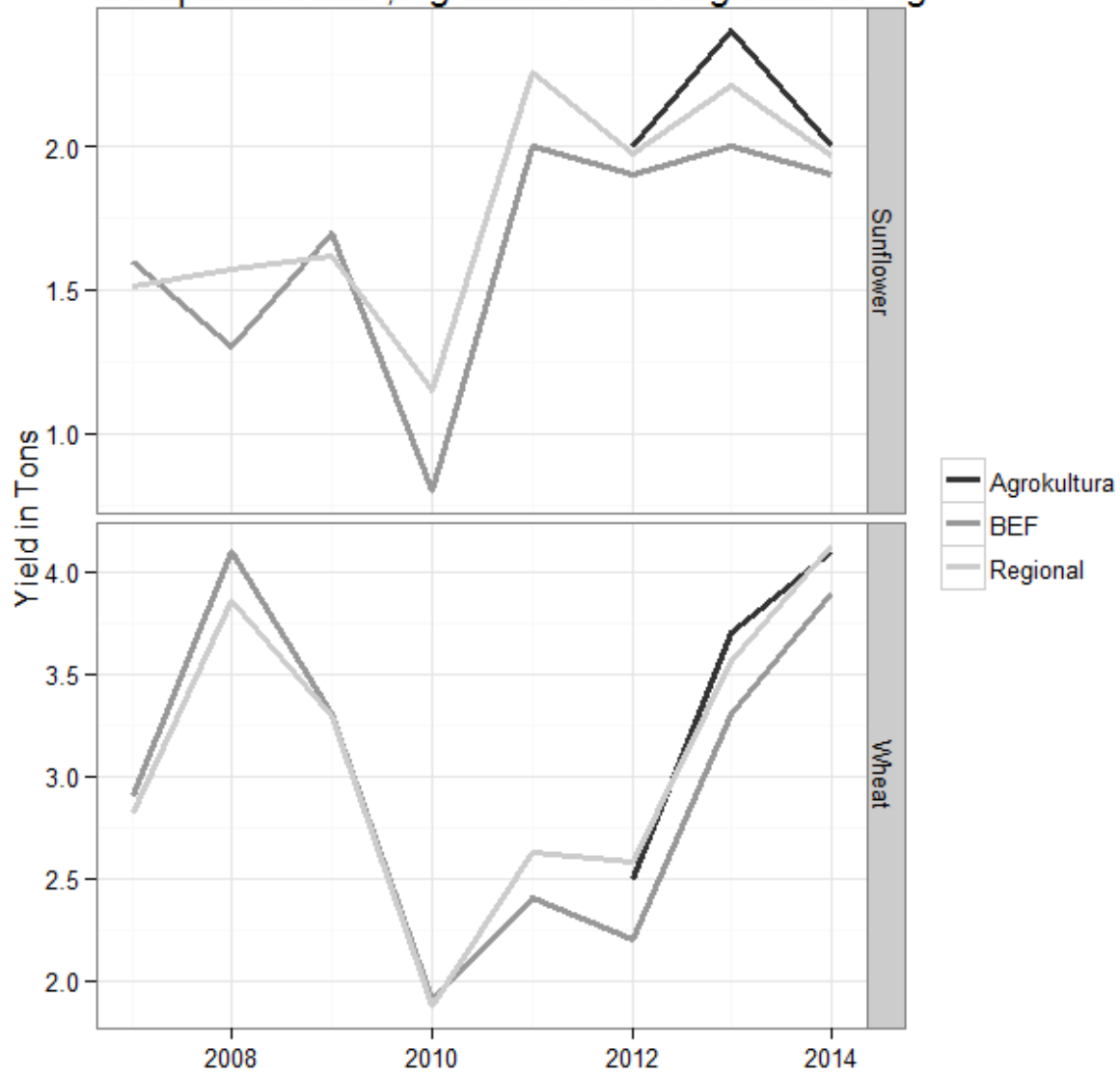


Figure 4

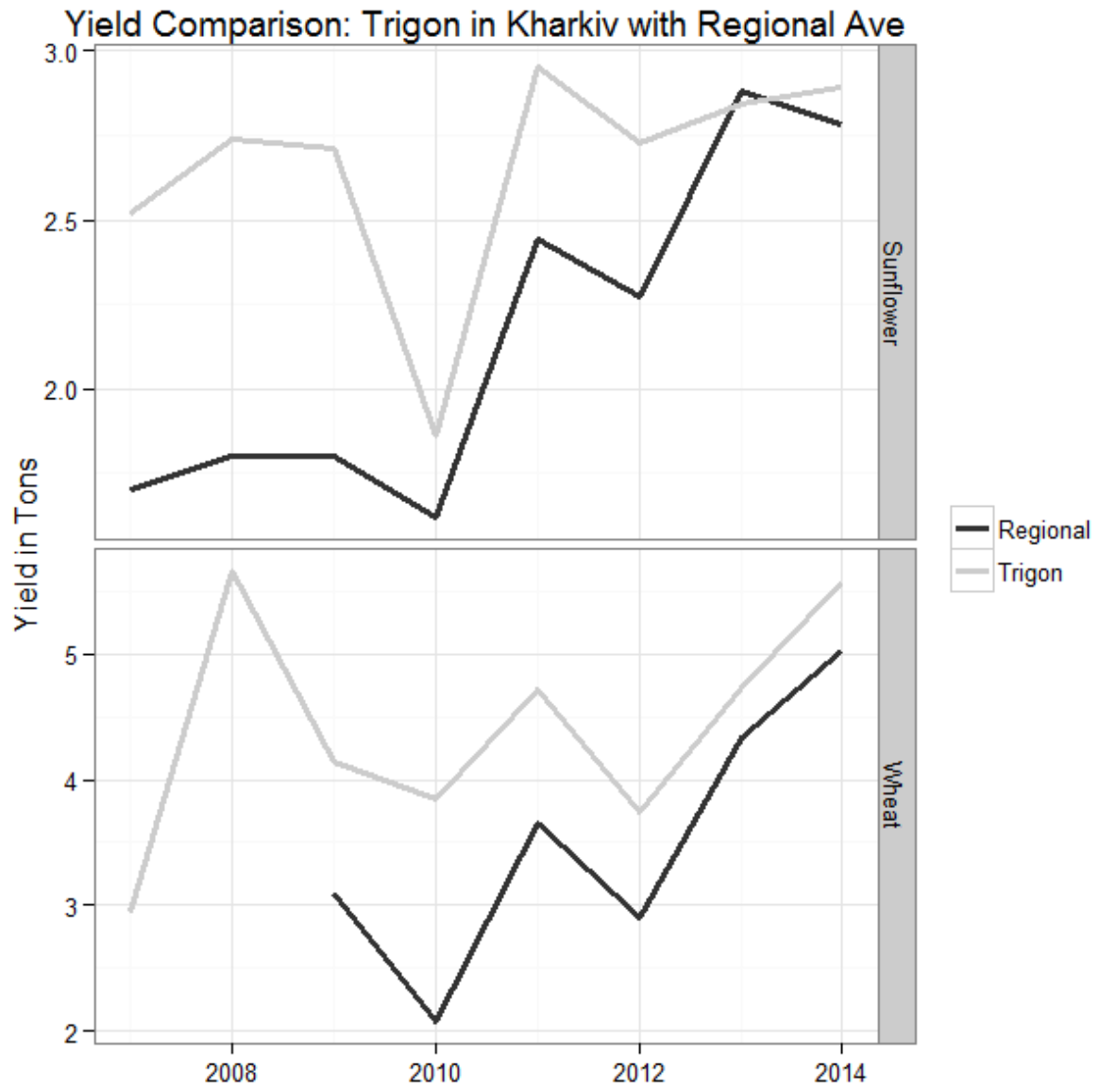


Figure 5

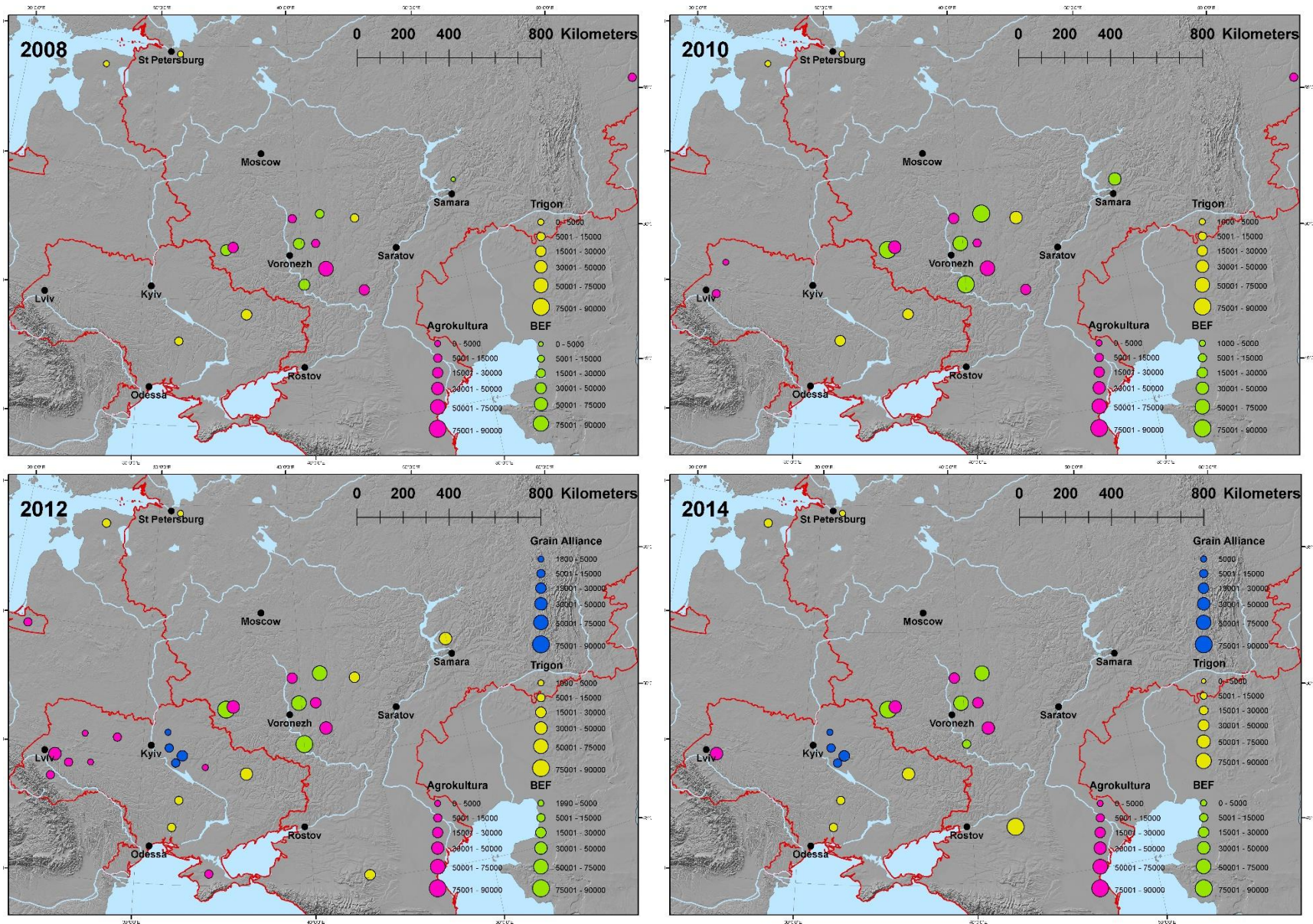


Figure 6