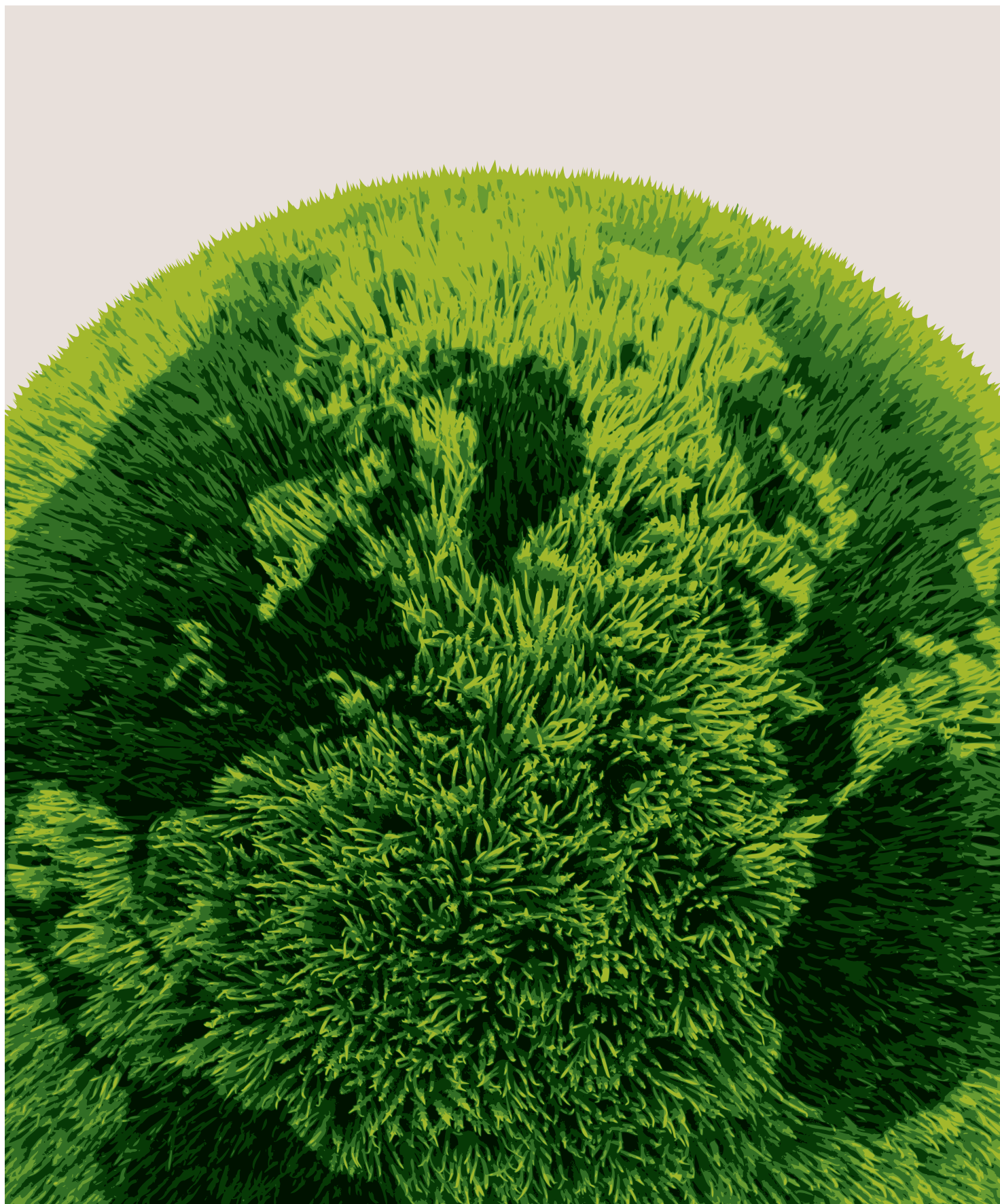


UK Rural - Summer 2019

Q
SPOTLIGHT
Savills Research

Global Farmland Index

savills



Global investment performance • Risk and return • Sustainable agriculture • Future outlook

12.1%

annualised growth in South America, 2002-2018

5.6%

annualised growth in Western Europe, 2002-2018

40%

of Romania is under non-domestic ownership

Welcome to our latest research report on the Global Farmland Index. The importance of farmland in terms of global food and energy security, environmental sustainability and economic growth is unequivocal and continues to attract considerable interest.

Governments and government-backed investment funds have been seeking to acquire land to address domestic food security concerns. This has been exacerbated by regional trading security, climate pressures and local environmental degradation, leading to increasing competition for the best quality overseas farmland. The heightened interest in farmland from these investors has had an impact on domestic food security and industry revenue structures, which alongside domestic social and environmental concerns have forced governments in some jurisdictions to protect their farmland. Policies that restrict and make it more difficult for non-domestic buyers to acquire farmland are increasingly common.

In comparison, private investors and farmland funds have been attracted by the capital appreciation of farmland values and the potential to maximise farming returns through management intervention, particularly in the emerging markets. With competition from domestic buyers and increasing restrictions on foreign ownership, finding the right opportunity remains key.

This report provides an update on farmland values and focuses on the relative opportunities and risks of investing in agriculture in different countries through our Opportunity versus Risk Matrix tool.

GLOBAL FARMLAND INDEX

This is based on data from the average value of crop/arable land in US\$ per hectare from 15 key farmland markets – Argentina, Australia, Brazil, Canada, Denmark, France, Germany, Hungary, Ireland, New Zealand, Poland, Romania, United Kingdom, United States and Uruguay. Converting to US\$ per hectare gives potential investors a good starting point for comparable analysis. It is a common denominator, which corresponds to the currency of global markets. The values are relative to those in the year 2002 (2002 = 100). Exchange rates will affect the performance in domestic currency.

Global investment performance

Since 2002 the level of growth in farmland values has been strong and demand continues to increase

During the past 16 years (2002-2018) our Global Farmland Index recorded an average annualised value growth of 12% (see figure 1). The emerging markets of Central Europe and South America witnessed the strongest growth over this time.

Much of the value growth took place in the early 2000s, with the greatest percentage rises in the five years between 2002 and 2007 when the Global Farmland Index recorded an average annualised increase of 28% (see figure 2). The following five years witnessed slower average annualised growth of 10.9%, resulting in a correction in values notably for Ireland and Denmark, where a substantial rise in farmland prices had previously been recorded.

Compared to the exceptional highs of the

early 2000s and since the 2008 international banking crisis, there has been a softening of average values and our Global Farmland Index has recorded a more subdued annualised rise of just 0.7% in the past six years. But the rate of growth varies considerably between countries and is influenced by many factors (see page 5).

Farmland values have outperformed commodities over the long term (see figure 3) and provide an inflation hedge in recessionary times. The long-term fundamentals of farmland ownership still apply. With a rising global population and a new urgency on climate change responses in some developed economies, the long-term importance of food and energy security is not expected to abate. Globally, we expect the demand for productive farmland to increase.

Average annualised capital growth of values

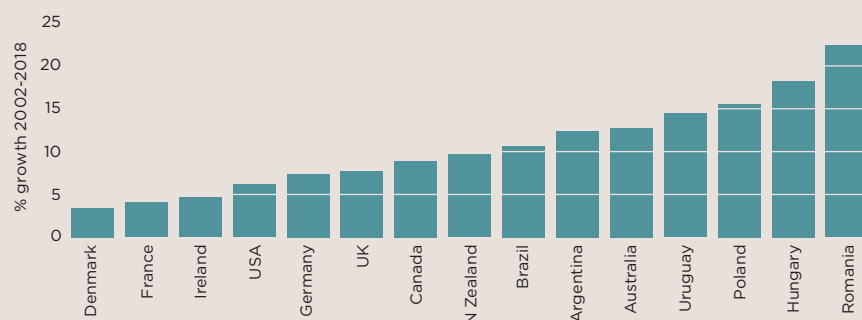


figure 1

Source Savills Research and USDA, Eurostat and various other data sources/estimates

Global Farmland Index

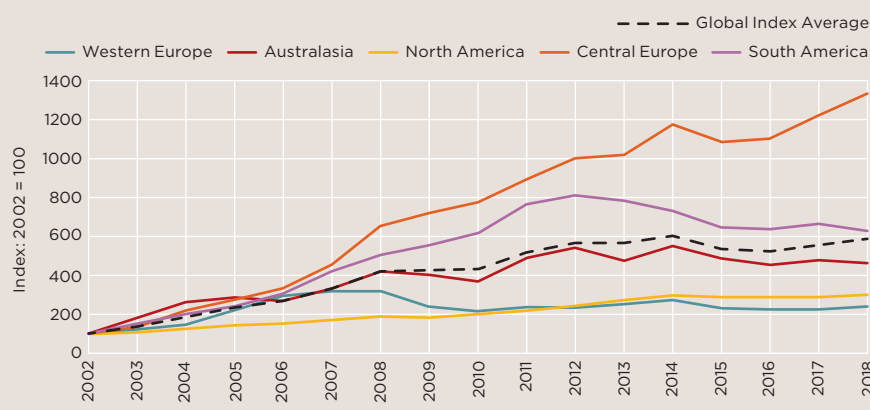


figure 2

Source Savills Research and USDA, Eurostat and various other data sources/estimates

“Farmland is a strong performing asset and investors are attracted by the capital appreciation and the potential to maximise farming returns through management intervention, particularly in the emerging markets”

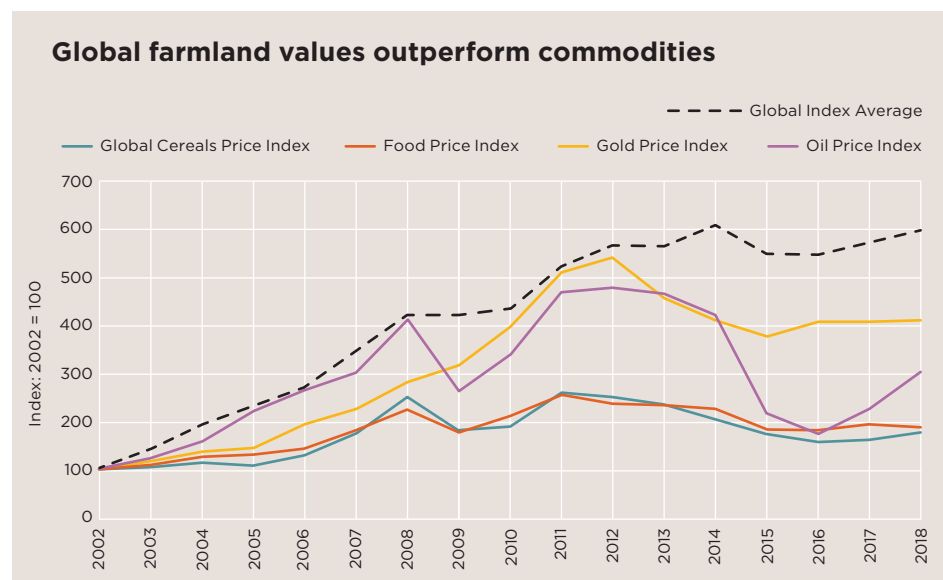


figure 3 Source Savills Research and USDA, Eurostat, WTO, OPEC, FAO and various other data sources/estimates

Regional performance

WESTERN EUROPE

Following a period of strong growth Western Europe has seen a softening in average annualised values over the past five years with the exception of Germany (5.4%). The UK and Ireland witnessed the largest fall at -3.0%, followed by Denmark (-2.9%) and France (-1.5%). Western Europe scores favourably on our Risk Matrix due to sound infrastructure and transport networks providing good access to farms and markets, lower political risk and lower foreign investment restrictions. However, income returns are lower and there is less potential for maximising returns as farming systems are well developed.

SOUTH AMERICA

Between 2002 and 2018 average annualised capital values increased by 12.1% in Brazil, Argentina and Uruguay. However, over the past five years there has been a fall in values of -4.5%. Our Risk Matrix ranks South America as relatively high risk, but the potential to improve agricultural returns through infrastructure investment remains strong. In addition the availability of land, water and labour resource can be higher. The rules on buying farmland are restrictive in Argentina and Brazil, although a change in Brazil's government in 2019 may result in a loosening of restrictions. There are no restrictions for overseas investors in Uruguay.

AUSTRALASIA

Australia and New Zealand have recorded lower rates of growth in recent years, albeit average values continue to rise in Australia, with sales of substantial blocks of land to overseas investors in 2019. New Zealand has experienced a slight

reduction in values, which according to the Real Estate Institute of New Zealand is driven by political and financial issues. Reports suggest the tighter controls on foreign investment have caused a reduction in buyers creating downward pressure on values. Further negative impacts on the sector include increased environmental regulations and the identification of *Mycoplasma bovis* in cattle in July 2017. Australia tightened restrictions for overseas investors seeking to buy farmland in 2018. This means farmland must now be “marketed widely” to Australian buyers for at least 30 days

before it is put on the international market and all overseas buyers must seek approval from the Foreign Investment Review Board. Investors wishing to buy farmland in New Zealand now must apply to the Overseas Investment Office for approval. They must also meet strict criteria, which includes demonstrating substantial and identifiable benefits to New Zealand. Despite this, both New Zealand and Australia score favourably on the Risk Matrix.

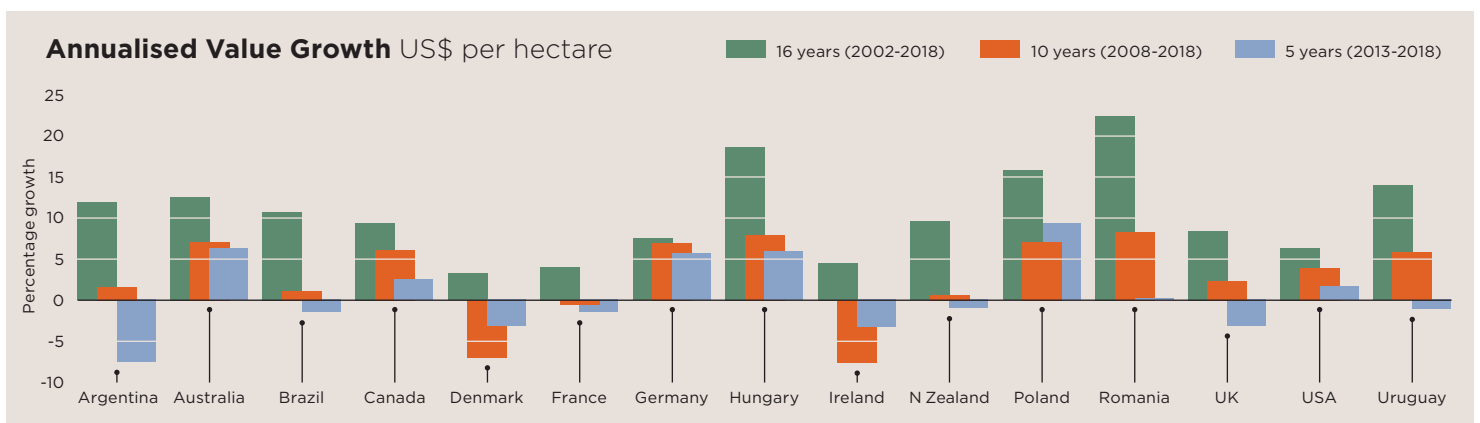
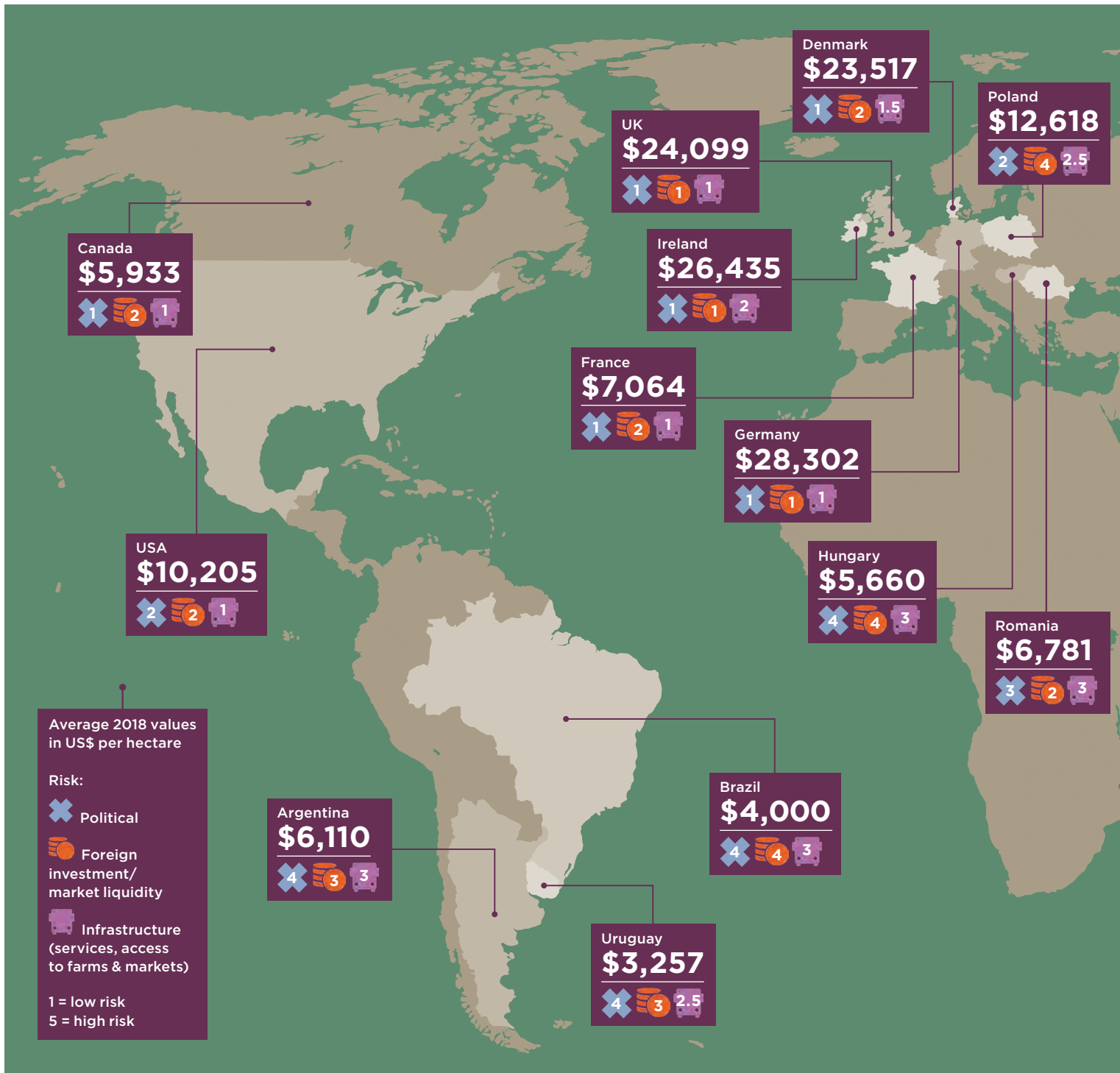
NORTH AMERICA

Farmland values in North America and Canada continue to rise, albeit at a slower rate in the past five years. Canada saw an average annualised rise of 9.2% in the last 16 years and 2.4% in the last five years. North America witnessed an annualised increase of 6.1% in the last 16 years and 1.6% in the last five years. North America and Canada both rank high for investment and offer good agronomic opportunities. There are some restrictions for overseas purchasers of farmland in Canada and some states of America have laws banning overseas ownership of farmland.

CENTRAL EUROPE

Hungary, Poland and Romania followed the global pattern of rising values through the 2000s but the rate of growth has subsided in recent years (5.6% annualised in last five years compared to 17.6% in last 16 years). The relative risk of investing in these countries is slightly higher. The rules on overseas investors buying farmland in Hungary is strict and a new law in Poland in 2016 limits farm sizes to 300 hectares. According to a study carried out by the European Parliament around 40% of Romania is now in non-domestic ownership. There are suggestions that the Romanian government is looking at restricting future investment in farmland.





Source Savills Research and USDA, Eurostat and various other data sources/estimates

28%

Annualised increase
between 2002-2007

“With a rising global population and a new urgency on climate change responses, the long-term importance of food and energy security means that we expect the demand for productive farmland to increase”

The rate of growth varies considerably across the globe and farmland values will be influenced by many local factors, including:

1

Location

2

Quality of soil

3

Terrain

4

Climate

5

Available Infrastructure including transport links

6

Water availability and security

7

Commodity prices

8

Political environment

9

Restrictions on foreign-ownership of farmland

10

Economic environment

11

Land ownership accountability

12

Trade deals

13

Currency volatility

Australia
\$2,304

1 2 2

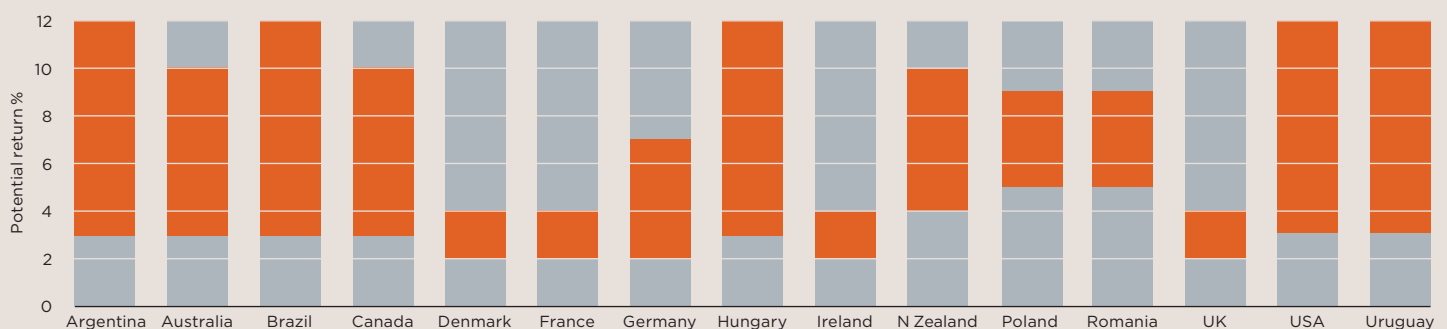
New Zealand
\$23,332

1 2 1.5

Source Savills Research and USDA, Eurostat and various other data sources/estimates

Potential income return depending on enterprise

Range of income return



Source Savills Research

“As global populations grow – to a predicted nine billion by 2050 – and diets evolve, sustainability becomes an increasingly significant issue”



A clear objective for investors

Sustainable agriculture has become a significant issue with the increasing need to balance economic productivity goals with environmental and social costs

Sustainable agriculture remains a challenging aspiration. Globally, accountability in land ownership remains relatively weak, with few requirements to preserve local social and environmental capital when seeking economic opportunity. But with resource pressures mounting and the increasing role citizen and shareholder activism is taking in tackling climate change inaction, real progress looks more likely.

Agriculture's thirst for water and resources, the changing patterns in diets, the amount of produce wasted in both developed and developing food systems, plus the urgent need for us to change our approach to environmental management, all point to urgent changes in the way we grow and consume food and energy.

As part of the supply chain, food producers cannot ignore these factors and need to address whether they are supplying what the consumer wants, at the right price, to the right location, and at a sustainable cost. It is balancing economic productivity goals with the environmental and social cost.

An important global concern

As global populations grow – to a predicted nine billion by 2050 – and diets evolve, sustainability becomes an increasingly significant issue. Meat consumption is firmly in the climate spotlight, with substantial data

pointing to its resource inefficiency.

Just take protein production as an example – our research shows that the environmental impact of lamb is less than half that of beef to produce the equivalent amount of protein, with poultry just 19 per cent and cereals 9 per cent. We accounted for greenhouse gas emissions, land and water use.

However, focusing on production efficiency ignores the ecosystem value of the protein source. Grazing ruminants convert inedible biomass into food that humans can eat, forming a key element of a truly sustainable diet. Most white protein is more “resource efficient” on a per kilo of protein produced basis, but monogastric animals also consume large quantities of grains and pulses that humans could consume directly. Tackling change in dietary patterns to achieve a more sustainable agriculture is complex. Further, one country cannot export its problems to another and claim a successful reduction of an issue such as carbon emissions or water use.

At a global level, the imperative is to reconcile the tensions between consumer demand and domestic productive capacity. The barriers to achieving this rebalancing seem insurmountable: a major realignment of national trade policies to meet global supply-and-demand requirements, alongside a substantial shift in global diets, would be necessary.

EMBRACING AGRITECH

Developments in remote sensing and data analysis have been the key to unlocking the value of technology in cultivation and livestock systems, with the principle driver being to improve the bottom line of farm businesses through better insights into systems operation.

A culmination of drawing together a range of innovations to increase productivity throughout the supply chain starting with the raw materials for farm inputs through production, processing, logistics and retailing to the consumer results in a smarter food system.

In a global market where resources are limited and demand (due to population growth) is increasing we should embrace all opportunities to use technology to our advantage. However, there is one caveat – its ultimate end use must make economic sense. As the tech market matures, the cost of many agritech solutions should decrease, with clear winners spotting the right problems to solve at the right cost/benefit point.

These winning technologies might include:

- Robotics to replace poor-quality jobs and enable precision application of inputs
- Sensors to improve accuracy and timeliness
- SMART (Sustainable, Managed, Accountable, Responsible and Trusted) irrigation systems to reduce water requirements
- Big Data analysis to optimise decision-making and system-wide evaluation
- Blockchain to reduce food fraud and improve accountability.

95%

Hydroponics can reduce water usage by up to 95% in some cases

85.9

Singapore tops GFSI*
2018, up 0.9 on 2017

85

UK ranks third in GFSI
2018, up 0.6 on 2017

26%

of countries fell in GFSI 2018,
including two in our Index* Economist's Intelligence Unit's
Global Food Security Index

International frameworks

Accountability for international investment in farmland includes the 2030 Agenda for Sustainable Development, adopted by all United Nations Member States in 2015, which provides a shared blueprint for peace and prosperity for people and the planet, now and into the future. More information can be accessed at <https://sustainabledevelopment.un.org/>. At its heart are the 17 Sustainable Development Goals (SDGs), which are an urgent call for action by all countries – developed and developing – in a global partnership. The SDGs enable impacts to be compared, but don't necessarily account for a reinvestment in natural resources. Globally, a shift to Natural Capital Accounting (NCA) may help to address this investment imbalance. NCA seeks to account for the cost of reinvestment in natural resources in land management, introducing a better accountability framework between food production and land management.

Tracking progress in delivering sustainable agriculture is being helped by projects such as the Economist's Intelligence Unit's Global Food Security Index (GFSI), which covers 67 of the world's major agricultural producers, representing over 90% of global GDP and

80% of global population. Each country is ranked by indicators across three primary categories: Food Loss and Food Waste, Sustainable Agriculture and Nutritional Challenges. The index can be accessed at <https://foodsecurityindex.eiu.com/>

Some of the key findings from the 2018 GFSI include:

■ Overall, the GFSI records a slight improvement in global food security – with the most substantial gains achieved by lower-middle- and low-income countries as they strengthen agricultural infrastructure

■ Higher-income countries are heavily exposed to the impact of climate and natural resource risks – a threat to be prepared for

■ Fertile land, fresh water and the oceans are all essential resources that provide the foundation for food security

■ Climate change will affect food production for all physical systems – marine and terrestrial – as basic environmental conditions shift

■ Financial risks threaten the affordability of food, especially for low-income households

■ Political stability is essential for agricultural production

■ Trade contributes to food security, but importing countries are vulnerable to rising protectionism.

Future outlook

The results of our Global Farmland Index for 2019 clearly show the increasing role that restrictions in foreign investment in farmland are having on global land prices. Demand remains high, but domestic environmental and social concerns are constraining investment propositions. Investors that have been active in the farmland market may now be switching their focus to alternative methods of addressing food security concerns including agritech.

As we face a future of climate insecurity with increasing demand

for energy and biomaterials from well-managed renewable resources, demand for land we think will remain high. Finding the right investment opportunities, and demonstrating the effectiveness of management protocols for long-term sustainable returns, will be key.

We believe the key areas to investigate include:

■ Understanding resources in more depth – growing the right crops in the right places (land quality, soil, climate, water availability) and the opportunities

offered by changing current practice and management

■ Investing in technology to drive down costs, increase productivity, optimise decision-making and add value within the supply chain.

■ New income streams that might include new crops and systems, ecosystems services and offsetting and adding value through processing/retailing and shortening supply chains

All this adds up to improved profitability and investment performance in both income and capital.

SUSTAINABLE AGRICULTURAL NEEDS:



Improving habitats/
biodiversity



Saving water



Cutting fertiliser/
pesticide use



Improving carbon pools
– planting more trees,
restoring peat bogs,
boosting soil carbon



Reducing GHG emissions
from livestock/manure
management



Improving the economic
wellbeing of workers/
communities



Reducing waste



Increasing data on
sustainable land
investments

NEW GENERATION GROWING SYSTEMS

Technology is enabling a new generation of growing systems to become commercially viable. Growing plants indoors is not exactly a novel concept, but technological innovation has achieved both dramatic and continuing incremental improvements in growing efficiency that make controlled growing systems increasingly attractive to both growers and investors.

Hydroponics can reduce water usage by up to 95% in some cases. Controlling ambient conditions and often operating in sterilised environments means yields are optimised and

processing costs reduced. This level of control means that climatic variation, and the effects of freak weather events, are minimised or even completely eliminated.

Increasing domestic production reduces the reliance on imports and hence exposure to trading risks. It also has the potential benefit for consumers of avoiding price fluctuations due to international events. Pricing in this risk of non-supply and the environmental damage in trading fresh produce creates a clear advantage in on-shoring production.





Savills International Rural Team

We provide strategic and objective advice on international farmland investment. We add value by providing our clients with research-backed advice and consultancy through our market-leading rural research team.

Ian Bailey

Rural Research
+44 (0) 20 7299 3099
ibailey@savills.com

Nicola Buckingham

Rural Research
+44 (0) 7807 999011
nbuckingham@savills.com

Richard Binning

International Land Markets
+44 (0) 1865 269 168
rbinning@savills.com

Philip Gready

International Land Markets
+44 (0) 20 3107 5470
pgready@savills.com