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Sean Rickard Independent Economic Analysis

A BRAVE NEW WORLD: FARMING'S MULTIPLE CHALLENGES

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→ The UK agricultural industry is now part of a global industry and is therefore subject to the vicissitudes of short term shocks to global markets and longer term global trends;

→ 21st century farming faces a trilemma: the increasing global demand for food, the depletion of the world's natural resources and climate change. In addition to these challenges UK farmers will also have to cope with Brexit;

→ Farm incomes having have been under pressure are now enjoying a (short-term?) recovery thanks largely to the pound's post referendum depreciation and rises for some global prices. **It is therefore timely to focus on the industry's challenges.**

Pertinent considerations ...

Global demand

Population growth and rising per capita incomes in developing countries are increasing food demand by **2.4% pa** but to benefit requires a **super efficient** and **internationally competitive** industry;

Super efficiency

This ultimately comes down to maximising **sustainable intensification** ie, minimising resources used per unit of output eg, energy but also pollution and environmental degradation;

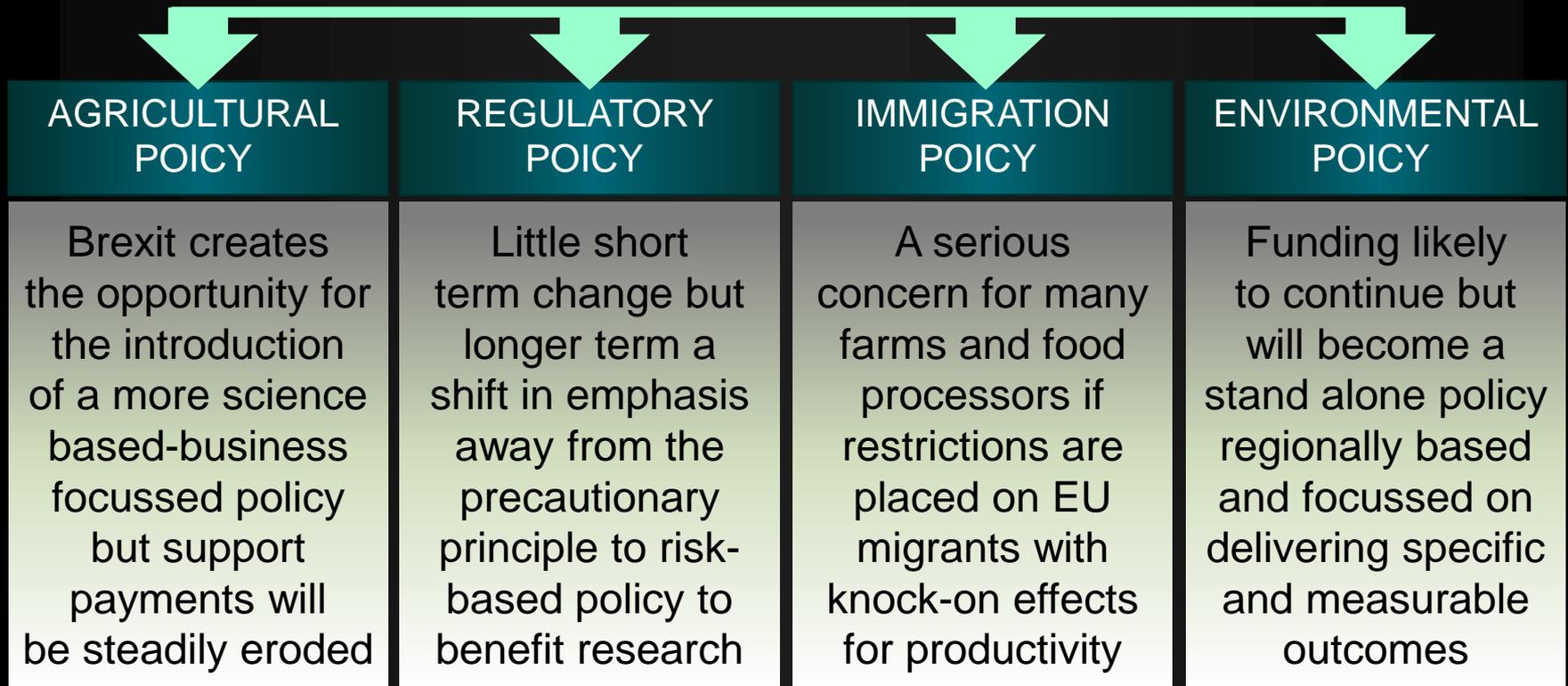
Internationally competitive

This is value chain rather than farm based: it needs efficient farm production but critically depends on the constant development by processors of **distinctive, value-added products**;

Brexit complication

We must now add this complication and despite the lack of a clear policy and the government's panglossian approach the food industry must start thinking about future.

Agri-food businesses face an extended period of unprecedented uncertainty



But for agriculture the greatest source of uncertainty is the lack of clarity regarding future trading relationship with the EU and other parts of the world

Post 2020 trading environment ...

EEA MEMBERSHIP OF SINGLE MARKET

Involves free flow of labour and ECJ dominance but would not affect trade with EU and allows negotiated preferential agreements - might be acceptable if transitional?

FACE WTO TARIFFS FOR ACCESS TO EU

Frees UK from ECJ dominance, the free flow of labour and allows negotiated preferential agreements but for agriculture it imposes large tariffs on trade with the EU;

EU PREFERENTIAL TRADE AGREEMENT

A priority but a final agreement likely to take several years to complete (2024?) and in some sectors eg, dairy the final outcome is likely to impose quotas on trade.

PERFERENTIAL AGREEMENTS WITH THIRD COUNTRIES

Trade barriers are in conflict with an internationally competitive strategy but these agreements can only follow an EU agreement and then may take several years. Such agreements eg, with the US, means cheaper commodity imports reinforcing the need for a food industry focus on distinctive, value added products rather than commodities.

Policy and cooperation...

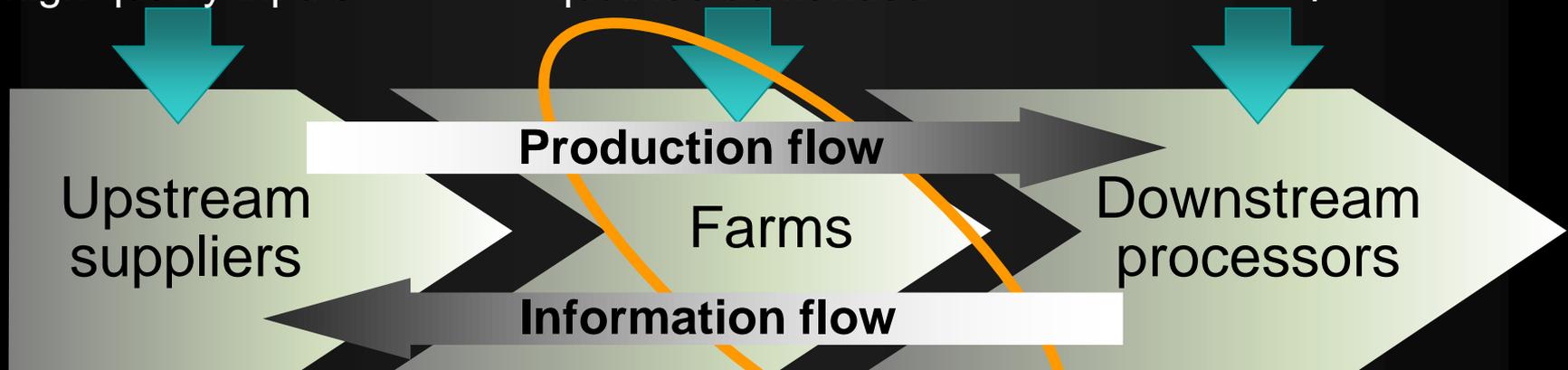
POLICY FOCUS

Must facilitate end-to-end value-chain development from promoting the right inputs to encouraging distinctive differentiated final products

Science based, productivity enhancing high quality inputs

Efficiently produced products in quantities & qualities demanded

Focus on delivering distinctive, value differentiated products



The farm sector is least able to cope with the risks associated with the vicissitudes of global commodity markets: achieving the right level of investment requires not only profits but also risk sharing via cooperation and partnerships

A farm level focus ...

Processor partnerships

For some farms high risk vertically integration to produce a distinctive processed product is feasible but most, in groups or individually, must seek to *partner one or more processors*;

Sustainable intensification

Value chain relationships are important but I want to focus on farming where profit – indeed survivability – ultimately depends on *sustainable intensification* ie, productivity;

More than competition

Sustainable intensification is not only critical for internationally competitiveness but also it is the only practical solution to the trilemma facing 21st century farming.

I believe it would be a big mistake for farming to adopt the backward, inward focused, less efficient policy agenda now being promoted by environmental groups. The cost of food would rise with no overall benefit to the environment.

Dealing with the trilemma ...

Fact	Problem		Solution
Global population & affluence rising	Attacking waste/ diets not sufficient	Emerging markets want western diets	Significant rise in output
Scope to increase arable area limited	Cultivated land per-capita declining	Growth of cereal yields has slowed	Big increase in arable yields.
Farming requires natural resources	Natural resources increasingly scarce	Energy-fertilizer prices will rise	Increase resource productivity
Food production needs water	Farming uses 70% of global freshwater	Many regions will become more arid	Water productivity and free trade
Climate change a growing threat	Extreme weather more common	Farming contributes to GHG emissions	Less emissions more resilience
Greater concern for environment	Alternative land use demands	More recreation and sequestration	Deliver public goods

These solutions can only be delivered by sustainable intensification

Two pillars of progress...

Sustainable intensification amounts to a dramatic increase in **natural resource productivity** achieved by

Technical efficiency = depends critically on the capabilities – education, experience and attitude – of decision makers and access to capital

Technological advance = application of scientific discoveries involving both incremental and drastic innovation

Agro-biotechnological progress bringing genetic improvements to crops and livestock

Scale neutral

Engineering advances involving the fusion of power and information technologies to deliver precision

Scale advantage

Critically dependent on investment

Bringing it all together...

BIOTECHNOLOGICAL REVOLUTION

Agriculture gets off the commodity 'treadmill' to an industry producing distinctive, value added plants and animals to meet the specific demands of food and non-food industries;

FARM STRUCTURE

But sustainable intensification (SI) can only properly be delivered by farms of sufficient scale to utilize advances in both agro-biotechnology and precision farming;

ENVIRONMENTAL PROTECTION

Care of the countryside depends on the attitude of the farmer not the farming system and SI will reduce the industry's natural resource demands and GHG emissions;

INDUSTRIALISATION IS GOOD

Intensification should be welcomed as not only does it lower the cost of food production but also it offers the scope to release land for non-farming activities;

A HIGH-TECH INDUSTRY

In the future farming will demand a very different skill set from both farmers and their advisors; namely, the ability to analyse and act upon very large amounts of data.

Concluding thoughts ...

→ Despite Brexit, UK agriculture is now embedded in a global industry and has no choice but to improve both its resilience to short term shocks and its international competitiveness;

→ Vertical integration is an option for a few but for most farmers strategy must build on efficient production within an internationally competitive value chain and this means making a reality of developing trusting, vertical relationships;

→ For most farms efficient production depends critically on sustainable intensification and this requires, through investment and cooperation, the development of superior capabilities on the part of farmers and their employees/advisers.