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Friends of
the Earth
Europe

Soy Alert

How to increase the EU's plant protein production in a sustainable and agroecological way?

The role of an EU-wide Protein Plan



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Friends of the Earth Europe campaigns for environmentally sustainable and socially just societies, unites more than 30 national organisations with thousands of local groups, and is part of the world's largest grassroots environmental network, Friends of the Earth International.



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Introduction

Soy makes up around 40% of all plant protein used for animal feed in the EU. 95% of it is imported from third countries¹ making it a key enabler of mass-produced meat and dairy products in an ever-expanding livestock sector.



Soy imports from the USA have recently increased, but the majority of soy imports to the EU over recent years have come from South America – Brazil, Paraguay, and Uruguay in particular.² Its production has led to well-documented evidence of de-forestation, rural conflict and environmental pollution.

There are now a number of initiatives aiming to boost plant protein production in Europe, including the European Soya Declaration³, signed by 14 EU Member States in July 2017. The European Commission is also convening a market analysis assessing the potential to increase protein production in the EU.

Member States involved in the drafting of the Declaration have highlighted the global environmental challenges posed by soy plantations, including the loss of primary forest, and the fact that the vast majority of imported soy is produced with genetically modified seeds.⁴ The Declaration and its annexes draw attention to the vulnerability caused by the EU's high dependency on imports, and recognise the increasing consumer interest in GMO-free food. The Declaration calls for measures to improve the use of protein from grassland, and pledges to encourage citizens to move to more plant-based-protein diets.

Friends of the Earth Europe welcomed the fact that the Declaration recognises the wide-reaching problems that have resulted from large-scale industrial soy plantations in exporter countries, and addresses the EU dependency on imported soy. Friends of the Earth Europe also welcomed the recommendation to promote local legumes for animal feed, as part of promoting the development of sustainable and resilient agriculture.⁵

However, several problematic issues arise from the Declaration, and these should be carefully looked at and assessed, including through the European Commission's Protein Plan, which points at the Common Agricultural Policy (CAP) as the main policy to address problems related to the EU's dependence on imported proteins.

The EU's growing appetite for soy-fed animals

EU meat production is expected to reach 47.5 million tonnes by 2030, driven by domestic and international demand, as global meat consumption is estimated to increase by an average of 1% per year between 2017 and 2030 to a global total of 365 million tonnes (34.7 kg per capita) in 2030.⁶



HUGE PROJECTED INCREASES IN MEAT PRODUCTION

The EU is one of the world's largest consumers of meat and animal products, with a per-capita consumption of 68.6 kilos of meat consumed in 2017 (1.8 kg of sheep and goat meat; 10.8 kg of beef and veal; 24.1 kg of poultry and 31.9 kg of pig meat).⁷

Farmed animals in the EU are fed a variety of feed crops, and soymeal is an important component of animal feed. Chicken broilers in particular are largely fed on soybean meal. The chart below shows the constitution of animal feed per animal type in the EU.

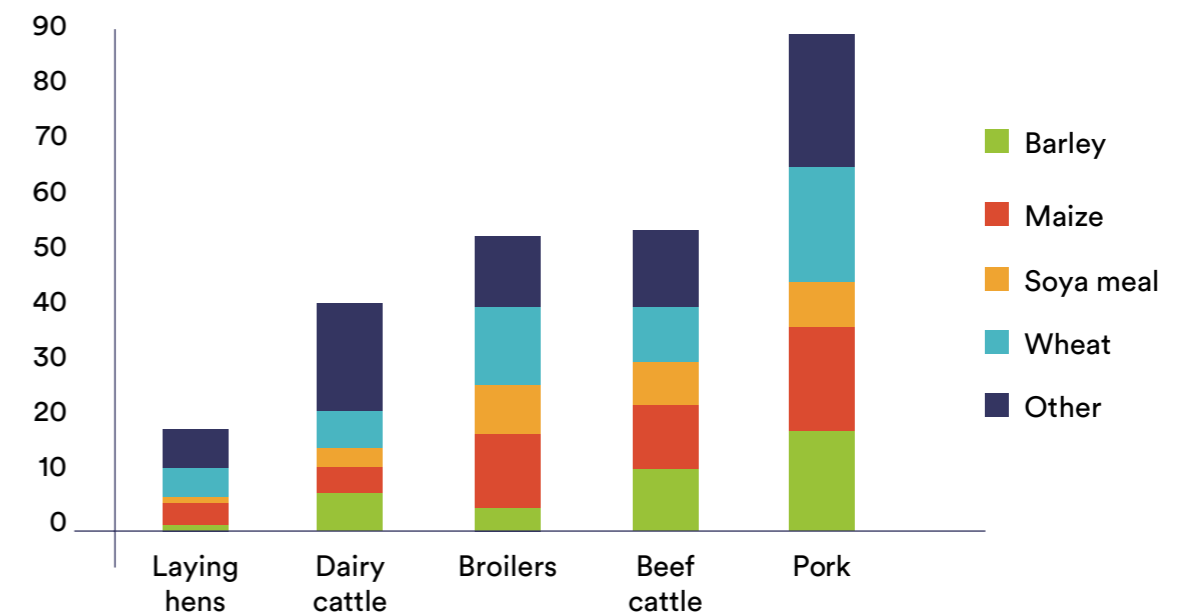
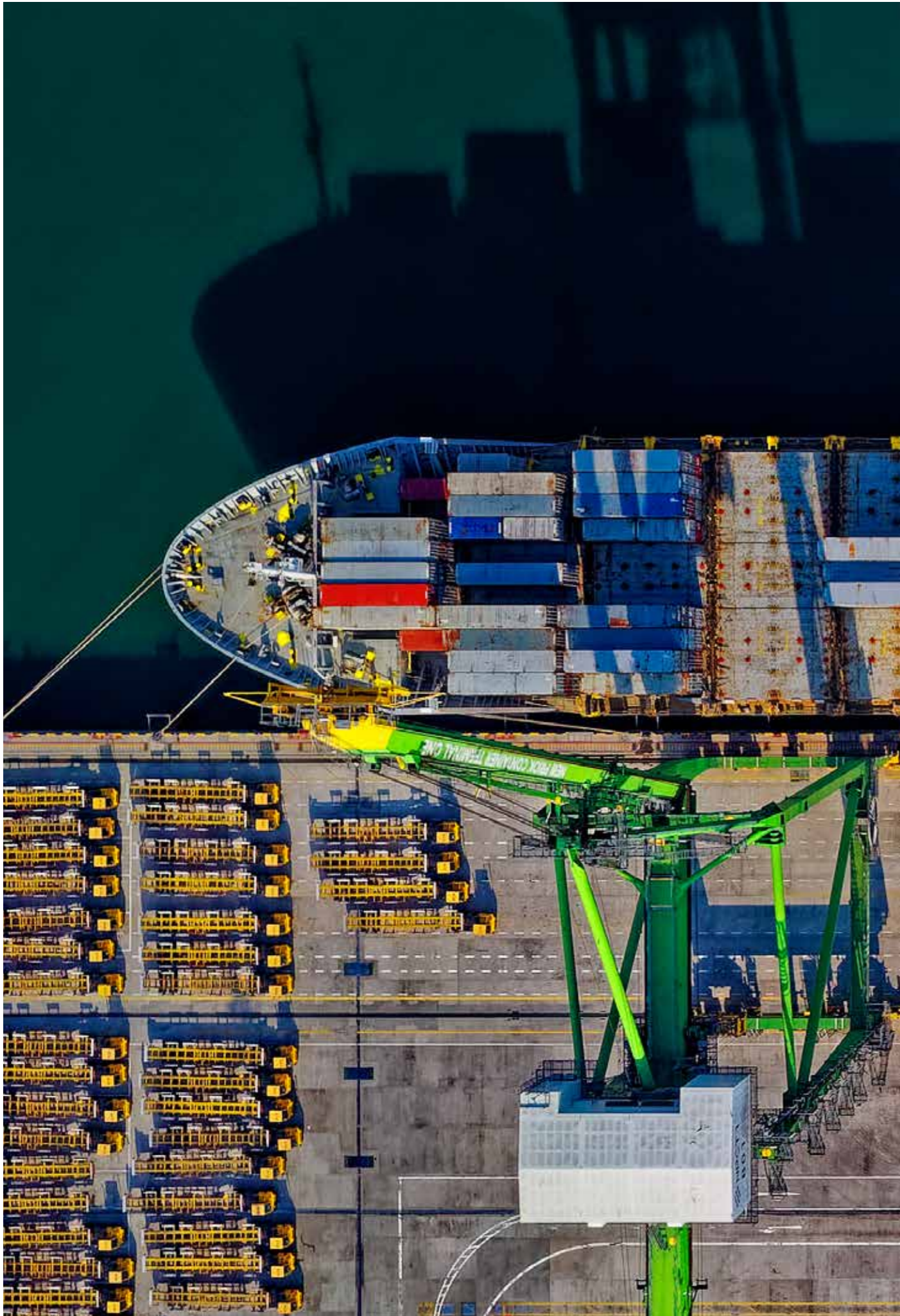


Figure 1: DG Agriculture and Rural Development, EU Agricultural Outlook 2017-2030 p. 36 — Graph 2.46 EU feed use per animal type in 2015/2016 (million tonnes)

The quantities of animal feed, and therefore soy, will increase in line with the increasing numbers of farmed animals. The production of poultry meat in the EU, for example, has been predicted to expand by around 5% between 2017 and 2030, driven by increasing domes-

tic consumption and world import demand.⁸ The global import demand for poultry meat is expected to increase by 3.2 million tonnes from 2017 levels, reaching 15.5 million tonnes by 2030, and EU poultry exports are expected to increase by 18% over this period.⁹



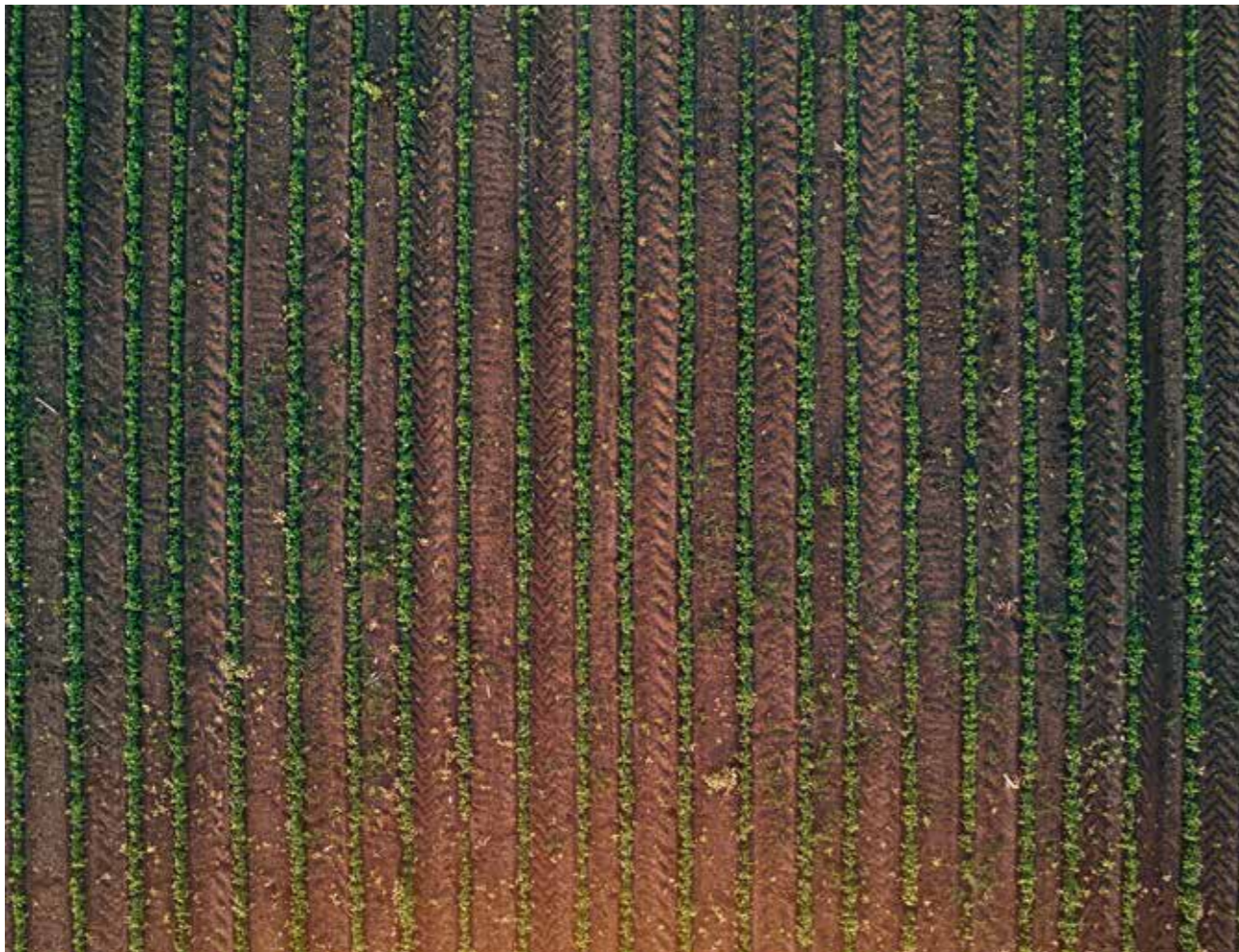
THE EU'S DEPENDENCE ON SOY IMPORTS

Despite being such a large consumer of soy, the EU is highly dependent on imported soy. Between 2013 and 2015, the EU imported an average of 36.1 million tonnes of soybean equivalent per year: 12.7 million tonnes of soybeans for crushing into soybean oil and meal, and 18.5 million tonnes of soybean meal (i.e. 23.4 million tonnes of soybean equivalent)¹⁰. In terms of the global soy trade, the EU imports around 9% of all soybeans traded and 31% of protein meals, which mainly consist of soybean meal.¹¹ Approximately 95% of soy imports are destined to feed animals for meat, eggs and dairy products¹², and are intended for industrial factory farms.

Global soybean production has increased over tenfold in the last fifty years, from 27 to 350¹³ million tonnes. World soybean production is expected to expand by 28% by 2030, reaching nearly 434 million tonnes, and projections by the FAO suggest an increase to 515 million tonnes by 2050.^{14,15} This expansion of soy production is expected to take place in Argentina, the US and Brazil – the latter being predicted to become the world's largest soy producer.

The dark side of soy expansion

The growth in the global area cultivated for soy has grown from under 30 million hectares in 1970 to over 100 million hectares in 2012, and is projected to reach 141 million hectares in 2050, if meat consumption continues increasing¹⁶.



SOY, LAND GRABBING, AND HUMAN RIGHTS ABUSE

This significant expansion of industrial soy agriculture has come with serious environmental and human rights impacts. These are mainly felt in Brazil, Argentina and Paraguay.¹⁷

Over 24 million hectares of land were dedicated to soybean harvesting in Brazil in 2012, 19 million in Argentina and three million in Paraguay.¹⁸ This has resulted in the loss of millions of hectares of forest, savannah and grassland, destroying communities, biodiversity and ecosystems and contributing significantly to climate change. Soy plantations continue to threaten primary forests and rainforests such as the Amazon, Atlantic Forest and Chiquitano Dry Forest, as well as the tropical savannah of the Cerrado, the hot and semi-arid Gran Chaco, the Argentine Pampas and Uruguayan Campos.¹⁹ Genetically modified soy requires large quantities of herbicides, which exhaust the soil and lead to freshwater and

groundwater contamination, and health problems for people and wildlife. Human rights abuses are widespread as small farmers are forcibly removed and sometimes assassinated during land grabs for soy plantations. In Paraguay alone 129 campesino leaders have been victims of extrajudicial executions, and thousands of farmers have been imprisoned, in the context of the struggle for land since the end of the dictatorship in 1989.²⁰ The soy trade and so called “predatory agribusiness” play a powerful role in the political discourse in the South American producer countries, often linked to political initiatives harmful to the environment, indigenous peoples, and rural workers.²¹

SOY AND THE EU’S COMMON AGRICULTURAL POLICY (CAP)

The CAP bears some responsibility for the global expansion of soy, and the associated problems in soy-producing countries. CAP subsidies and market mechanisms promote an agricultural system in the EU that inevitably leads to the intensification of animal farming. Since the CAP does not incentivise farmers well enough to practice extensive grassland-fed animal and crop-livestock mixed production, farmers are pushed to intensify and specialise their production. Due to the conditions in which they are kept, intensively farmed animals require feed with a high protein content. Soy is a high-protein legume that is perfectly adapted for feed in intensive animal farming, and the fact that there are no tariffs on imported feed soy ensures that the EU facilitates its trade. The demand from within the EU is kept high, and the environmental, social and human rights impacts of agro-industrial soy plantations remain unaddressed.²²

Protein plant production in Europe

Protein-rich crops grown in Europe are generally divided into oilseeds and leguminous crops. Most of the EU's own protein supply – around 65%²³ – comes from oilseeds. The oilseeds that are widely produced in Europe are rape, turnip rape and sunflower seed. After their oil is extracted, the protein-rich leftover meal is used to feed farmed animals.



EU PROTEIN CROPS

Leguminous crops (Fabaceae family) can be divided into grain legumes (or pulses) and fodder legumes. They supply around 3% of EU's protein needs.²⁴ Fodder legumes include alfalfa and clover.

The most common pulses are beans, lentils, chickpeas and peas. Peanuts and soybeans are also legumes but, due to their high fat content, are classified as oilseeds and accounted separately.

The main leguminous crops grown in the EU are field peas, broad and field beans, and lupines. Field peas are predominantly cultivated in France, Spain and Germany; broad and field beans are mainly grown in the UK and France; and lupines in Poland.²⁵ European leguminous crop production has decreased significantly over the last twenty years, due to low yields, low economic incentives, and the duty-free imports of

protein crops and oilseeds from abroad.²⁶

Although currently still small, soy production in the EU has risen rapidly in the last years. Between 2007 and 2015 its production increased by 183.2%²⁷, reaching 2.7 million tonnes between September 2017 and 2018²⁸. The main producer of soy is Italy, followed by France, Romania and Croatia. In recent years, soy production has emerged in Hungary and Austria. Serbia, currently in the process of EU accession, is also a significant producer of soybeans. Upon accession, Serbia would become the second largest producer in the EU.

WHO IS INVESTING IN EUROPEAN SOY

A recent study commissioned by the Romanian farmers' organisation Eco Ruralis²⁹ shows some of the actors involved currently in European soy production. Many of them are major corporations engaged for decades in soy production in Latin America. One of the most active actors in the European market, ADM, is investing in soy processing facilities; Cargill, a huge commodity trader, is present throughout the

European grain and oilseed sector, investing in recent years in acquisitions in Eastern Europe (Romania and Ukraine); Bunge, active in the oil processing and crushing is developing processing facilities in the Netherlands and France. Companies belonging to one of the largest pork producers in the world, Tonnies Group, already operate about 7000ha in north-eastern Romania. Next to this, financial capital is be-

coming a major source of funding for European soy, with investors being encouraged to specialise in farmland speculation, especially in Central and Eastern Europe. In addition, groups such as the FEAC (feed manufacturers), COCERAL (representing feedstuff traders) and FEDIOL (vegetable

oil and protein meal industry association) also support the expansion of soybean cultivation within Europe³⁰. They also want to make sure that European farmers are sufficiently funded to produce oilseeds, so they can get cheap inputs for their products.

THREAT TO SMALLHOLDER FARMS

The total number of farms in the EU has been following a downward trajectory for several decades. Between 2003-2013 a third of all EU farms have closed down.

This development is true everywhere in Europe, with half of the countries losing between one third (Belgium, Czech Republic, Germany, Italy, Poland, the UK, etc.) and two thirds (Bulgaria, Slovakia) of their farms³¹. The overall pattern of the EU's agricultural development has been towards a greater concentration of agriculture within the hands of relatively few farms, with 3% of the farms in 2013 owning more than half of the farm land.³²

According to Eurostat, over 80% of the agricultural area dedicated to specialist cereals, oilseed and protein crops is farmed by large and very large farms (≥ EUR 25,000)³³.

In Romania, a country accounting for 33.5% of the total number of farms in the EU-28

and one of the countries identified as having the greatest potential for increasing the EU's domestic soya production, the share of the total number of farm holdings in that belonging to smallholders is around 95% (< EUR 8,000), with over 65% being very small holdings (< EUR 2,000).

Small farms play a crucial part in society, supporting rural employment, making a considerable contribution to territorial development, providing specialist local produce and supporting social, cultural and environmental services. Any further expansion of industrial-scale soya production in Central and Eastern Europe in particular will therefore threaten the existence of small scale agroecological producers, as well as displace existing farm production elsewhere.

Figure 2: Eurostat (2017) Agriculture, forestry and fishery statistics 2016 edition p.53 — Graph 2.16: Share of utilised agricultural area, by type of farming and by economic size of farm, EU-28, 2013 (% of total)

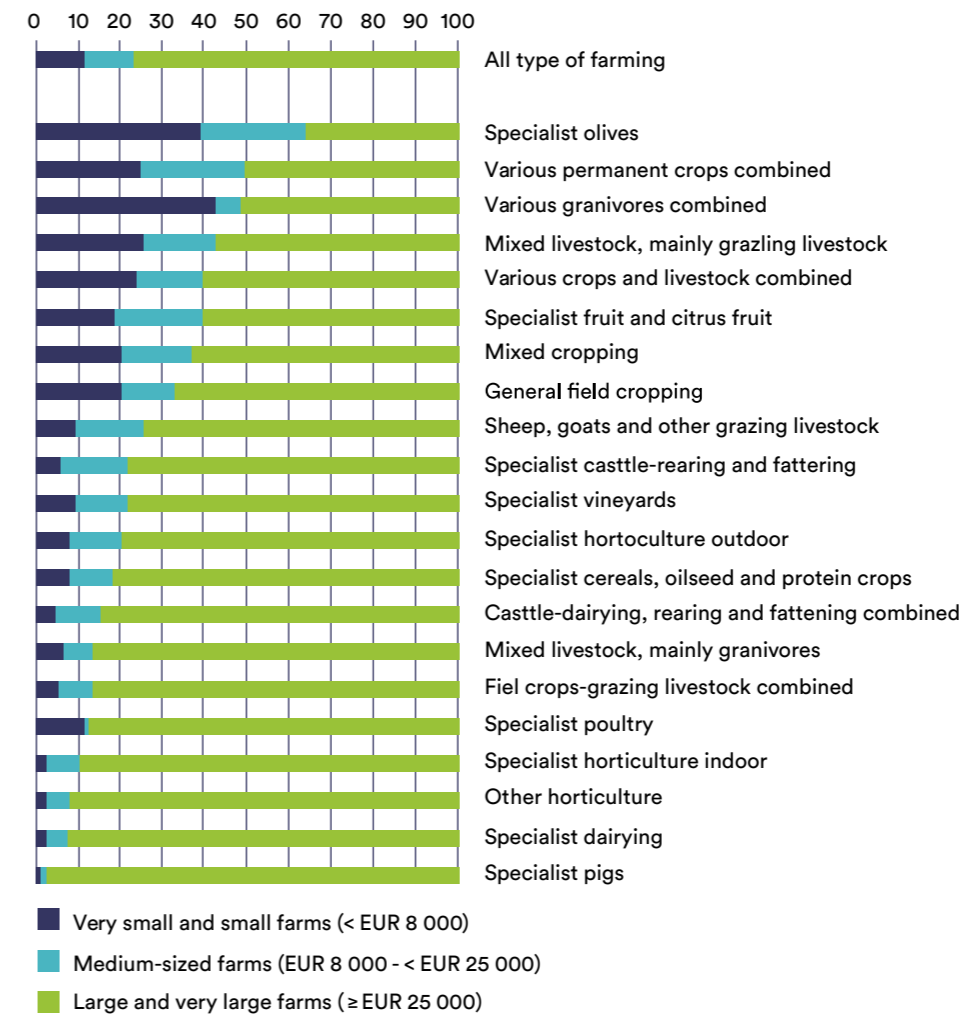
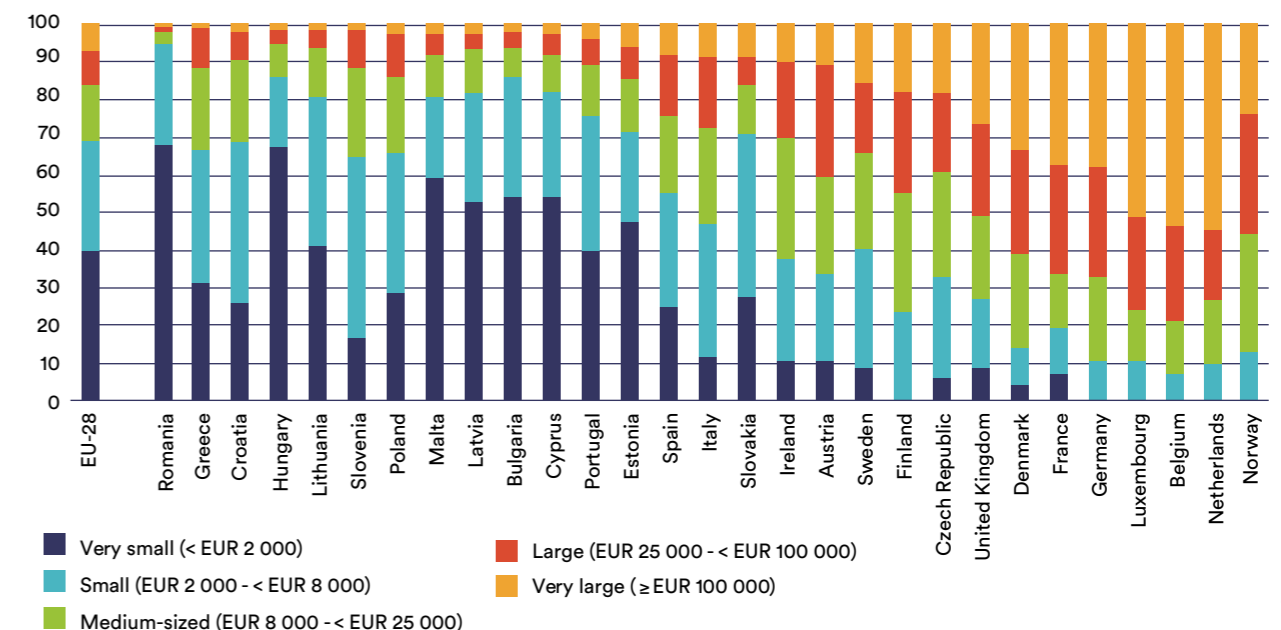
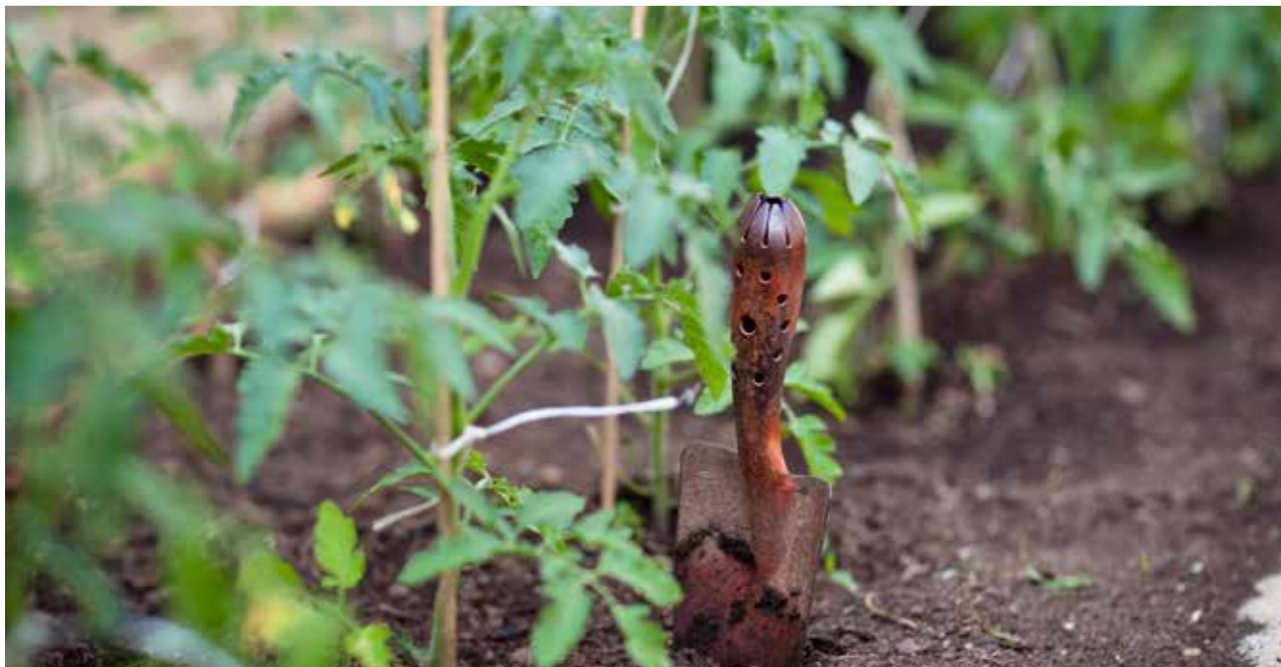


Figure 3: Eurostat (2017) Agriculture, forestry and fishery statistics 2016 edition p.32 — Graph 2.3: Share of total number of farm holdings, by economic size of farm, 2013 (% of total)



Production methods that work for the farmers and the environment

There is increasing international recognition that the globalised food system is unsustainable. The Sustainable Development Goals as well as the EU's Sustainable Development Strategy highlight the urgent need to develop more sustainable and resilient food systems in Europe. There is increasing recognition that a food system is needed that feeds a growing population while protecting natural resources, rural communities and nature.



SUSTAINABILITY, AGROECOLOGY AND FOOD SOVEREIGNTY

It is sometimes claimed that large-scale industrial agriculture is more efficient than ecological farming, and that it provides appropriate methods and technologies with which to feed the growing global population.

However, this argument fails to take into account the considerable environmental, social and health problems that result from industrial food production, processing, distribution, consumption and waste.³⁴ It is sometimes also claimed that food production must increase in order to address hunger and malnutrition. However, scientists estimate that sufficient quantities of food are already produced to feed many more people than currently inhabit the Earth: up to 10 billion people.³⁵ Research shows clearly that hunger is not caused by a lack of global food supply, but rather by poverty, a lack of democracy and unequal access to land, water and other infrastructure and resources.³⁶

In order to grow enough food for a global population in a sustainable way, it is neces-

sary to protect the ecological resources that are essential for present and future food production. Forty years of scientific research has shown that agroecological farming, coupled with diversified organic agriculture, is the most effective way of achieving sustainable food production while addressing environmental problems such as climate change, soil erosion, water scarcity and biodiversity loss.³⁷ Planting leguminous crops in this diversified system by using appropriate local varieties as part of well-planned crop rotations is a long-established way of reducing the use of artificial pesticides, preserving and increasing agro-biodiversity and contributing to sustainable agriculture. Important part of this is cutting animal production drastically to reduce food production's ecological footprint.

LESS SOY, MORE LEGUMES

Duty-free imports of oilseeds and protein crops together with the lack of support for home-grown leguminous crops have led to farmers both losing interest in production and losing the capacity to cultivate them in Europe.³⁸ By 2007, the number of plant breeding programmes for native European

protein crops had dwindled to five. As a result of the low demand for seeds and technical support, European research into this field has also declined. Increasing the quantity of non-soy legume production in Europe would have positive effects for European agriculture and the environment.

Due to their nitrogen-fixing qualities, using leguminous crops in crop rotations can reduce the use of fertilizer, thereby reducing the water contamination associated with high fertilizer use. When crop rotation is practised appropriately, it is possible to reduce the use of nitrogen fertilizer by up to 100 kg per hectare per month.³⁹ This in turn can substantially reduce greenhouse gas emissions, as the nitrous oxide formed from excess nitrogen in the soil has a 310-fold greater global warming potential than carbon dioxide. Annual crop rotations also reduce plant diseases, and therefore the need for pesticides. Having high percentages of leguminous crops in crop rotation also strengthens biodiversity and benefits pollinating insects. The reintroduction of more diverse varieties of legumes in European agriculture would also help maintain seed diversity, increasing overall resilience.

Farmers would also benefit significantly from diversifying crops and growing more legumes. Using less fertilizer and pesticides would save costs; crop rotation requires less tilling, due to the preservation of humus and soil moisture. A 2010 study by the French Government's Commission on Sustainable Development estimated the combined savings due to using less fertilizer in France could amount to up to €100 million per year⁴⁰. Case studies in Poland and France demonstrate that growing leguminous crops allows producers to save significantly on the transport costs associated with purchasing protein ingredients⁴¹. In order for this increase of

production to happen within an agroecological framework, and not following the current model of business as usual, it is key to integrate animals and crop systems, diversify species and focus on the ways in which crops and animals can mutually benefit. Productivity can improve over time, across both the farm and the food chain, taking the emphasis away from increasing yields through monoculture. From a social and political perspective, attention needs to be given to the ways in which individuals, communities and local authorities can contribute to this change. Helping small-scale peasant farmers develop local supply chains should be a priority, as opposed to developing global, or Europe-wide, specialised supply chains.

In order to stimulate the cultivation of diverse grain or fodder legumes in the EU, existing instruments supporting the cultivation of legumes must be maintained, and new instruments supporting the cultivation should be introduced – as part of enhanced conditionality (cross-compliance) in the CAP, the eco-schemes and rural development programmes. Good examples could be multi-annual programmes to revive the protein plant breeding sector complemented by education and training as well as decentralised facilities for the production of animal feed based on regional and local crop varieties.



Policy recommendations

Friends of the Earth Europe welcomes the initiative of the European Commission to present a Protein Plan for Europe, and the willingness shown by EU Member States to reduce the imports of soy from the Global South. Friends of the Earth Europe advises policymakers to examine the root cause of the problem: industrial animal production.

The majority of protein plants imported and produced is used as animal feed, not for human consumption. The problem of industrial animal production should be tackled with a policy focus on 'less but better meat'.

A genuine transition towards sustainable protein production needs to include a different type of agricultural strategy based on agroecology, including crop rotations for all farms, and targeted support for small-scale peasant and sustainable farms. Up-scaling in order to incorporate them into value chains controlled by commodity traders is to be avoided, and any action should ensure that they retain their diversity, autonomy and are able to actively participate in the market.⁴²

In order to increase the EU's protein sufficiency, the European Commission and EU Member States should:

Introduce concrete measures to reduce production and consumption of industrial meat and dairy farming and to raise plant protein crop demand for human consumption.

Incentivise the production of diverse and underused protein crops for human food over intensive animal production.

Promote the domestic production of leguminous crops for feed that contribute in parallel to the production of other goods like beekeeping or the provision for wild pollinators and nitrogen fixing in the soil;

Conduct a full assessment with result indicators on how the objectives of the Protein Plan can be addressed within the CAP, including:

- Including leguminous crops in the crop rotation definition in the enhanced conditionality for direct payments to farmers.
- Removing support for monocultures or short rotations, intensive animal farming and other practices that effectively lead to landholding concentration; and ensuring that these practices are not promoted outside the EU.
- Supporting diverse agroecological farming methods, support for crop rotation and diversification practices that involve the cultivation of legumes, creating short supply chains from farm to fork at fair prices for farmers and citizens, e.g. through eco-schemes.
- Increasing financial support for the Farm Advisory Service to increase farmers' awareness of the positive role of improving soil fertility over time, through the use of leguminous crops.
- Providing a grant fund under Pillar II to assist farmers in diversifying away from intensive animal farming to the production of grass-fed animals and protein crops for human food.
- Ensuring non-GM leguminous seed availability at fair prices, and recognising this as being an opportunity to induce the ecological breeding of pulses and legumes for human consumption and their marketing in the value chain.
- Providing a grant fund under Pillar II to support improved, decentralised facilities for seed selection and development, processing, storage and marketing of local and regional legume crop varieties.

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