



TEXTS ADOPTED

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European protein strategy

European Parliament resolution of 19 October 2023 European protein strategy (2023/2015(INI))

The European Parliament,

- having regard to its resolution of 17 April 2018 on a European strategy for the promotion of protein crops – encouraging the production of protein and leguminous plants in the European agriculture sector¹,
- having regard to its resolution of 24 March 2022 on the need for an urgent EU action plan to ensure food security inside and outside the EU in light of the Russian invasion of Ukraine²,
- having regard to its resolution of 20 October 2021 on a farm to fork strategy for a fair, healthy and environmentally friendly food system³,
- having regard to the UN Food and Agriculture Organization (FAO) report of 2022 entitled ‘Thinking about the future of food safety and food allergies with regard to certain types of novel foods and protein sources’,
- having regard to the Joint Research Centre (JRC) study of July 2020 entitled ‘Future of EU livestock: how to contribute to a sustainable agricultural sector?’,
- having regard to the Dublin Declaration of 2022 on the societal role of livestock,
- having regard to the latest scientific knowledge, including the 2022 Dublin Declaration and the related publications in the scientific journal *Animal Frontiers*,
- having regard to the UN FAO report of 2022 entitled ‘Thinking about the future of food safety – A foresight report’,
- having regard to the Commission communication of 15 November 2022 entitled ‘Towards a Strong and Sustainable EU Algae Sector’ (COM(2022)0592),
- having regard to the Organisation for Economic Co-operation and Development

¹ [OJ C 390, 18.11.2019, p. 2.](#)

² [OJ C 361, 20.9.2022, p. 2.](#)

³ [OJ C 184, 5.5.2022, p. 2.](#)

(OECD) and FAO Agricultural Outlook 2022-2031,

- having regard to the Commission report of December 2022 entitled ‘EU agricultural outlook – For markets, income and environment 2022-2032’,
- having regard to the FAO report of June 2023 entitled ‘Contribution of terrestrial animal source food to healthy diets for improved nutrition and health outcomes – An evidence and policy overview on the state of knowledge and gaps’,
- having regard to the report of the FAO and World Health Organization (WHO) of 2019 entitled ‘Sustainable healthy diets – guiding principles’,
- having regard to the FAO report of 2021 entitled ‘Integration of environment and nutrition in life cycle assessment of food items: opportunities and challenges’,
- having regard to the Commission report of 22 November 2018 on the development of plant proteins in the European Union (COM(2018)0757),
- having regard to the Commission staff working document of 4 January 2023 on drivers of food security (SWD(2023)0004),
- having regard to the Commission communication of 20 May 2020 entitled ‘A Farm to Fork Strategy – for a fair, healthy and environmentally friendly food system’ (COM(2020)0381),
- having regard to the agreement adopted at the 21st Conference of the Parties to the UN Framework Convention on Climate Change (COP21) in Paris on 12 December 2015 (‘the Paris Agreement’),
- having regard to Regulation (EU) 2021/1119 of the European Parliament and of the Council of 30 June 2021 establishing the framework for achieving climate neutrality and amending Regulations (EC) No 401/2009 and (EU) 2018/1999 (‘European Climate Law’)¹,
- having regard to the UN 2030 Agenda for Sustainable Development and to the Sustainable Development Goals (SDGs),
- having regard to the UN World Population Prospects 2022,
- having regard to the Agricultural Outlook 2021-2030 of the OECD and the UN FAO,
- having regard to the Science and Technology Options Assessment Panel’s study entitled “‘Got Protein?’ Alternative protein sources in sustainable animal and human nutrition: Potentials and prospects’,
- having regard to the Versailles declaration of 10 and 11 March 2022,
- having regard to Rule 54 of its Rules of Procedure,
- having regard to the opinion of the Committee on Fisheries,
- having regard to the report of the Committee on Agriculture and Rural Development

¹ [OJ L 243, 9.7.2021, p. 1.](#)

(A9-0281/2023),

- A. whereas protein is essential for both humans and animals and is, therefore, an indispensable component in food and feed consumed on a daily basis;
- B. whereas the COVID-19 pandemic and the Russian invasion of Ukraine have had significant effects on European and global trade, highlighting that the EU needs to diversify its food and feed supply chains in order to increase its open autonomy and reduce its dependence on inputs from just one or a few foreign suppliers in order to strengthen the production of plant protein and the overall resilience of the EU protein sector;
- C. whereas the EU produces 77 % of the feed protein it uses (rising to 96 % in the case of low-protein-content feed, and 89 % in that of medium-protein-content feed); whereas, however, only 29 % of the high-protein feedstock needed to balance animal feed originates in the EU; whereas, as a consequence, the EU is heavily dependent on imports of high-protein plant-based products from non-EU countries, making the EU reliant on imports of soya beans and meal from the United States and South America; whereas, particularly in South America, this dependency often drives land-use change and an increase in the EU's water footprint, along with environmental problems in the producing countries, such as contamination of groundwater, water shortages, nutrient loss, soil erosion and deforestation, resulting in a decline in biodiversity; whereas the cultivation of protein plants may have negative social and health consequences in producer countries, aggravated by weak land-tenure rights, land grabbing, forced expulsion and other human-rights abuses;
- D. whereas although protein-crop production in the EU has improved over the last 10 years, there continues to be a significant shortfall in domestic production as livestock production has also increased, consolidating the EU's heavy dependence on imports of protein-rich crops from non-EU countries;
- E. whereas increased circularity between plant-based and animal-based proteins, such as the use of waste streams of plant-based proteins for food as feed for the production of animal-sourced proteins, along with the more sustainable production of all available types of protein, are crucial for the transition towards more sustainable food systems with a reduced impact on the climate and biodiversity; whereas increased cultivation and consumption of plant-based proteins are also enabling factors in the transition; whereas the environmental footprint of animal products can be reduced by feed additives that help animals to digest protein and to reduce their methane and ammonia emissions;
- F. whereas leguminous crops and grasslands help maintain and improve soil quality and fertility, increase biodiversity, fix carbon and nitrogen and contribute to water retention; whereas legumes can be grown with less chemical fertiliser due to symbiosis with soil bacteria; whereas the growing of leguminous crops, despite its low economic profitability, makes a positive contribution to mitigating climate change and other environmental impacts as well as reducing weed pressure, therefore addressing environmental and climate challenges in line with the Green Deal objectives;
- G. whereas new breeding techniques could play a key role in enhancing profitability and in reaching the EU's Green Deal targets, such as by raising yields, boosting protein content and quality and enabling the EU to enhance the regional adaptation of crops and

make them more resilient to climate change and pathogens;

- H. whereas the common agricultural policy (CAP) allows the cultivation of protein crops and grasslands to be supported;
- I. whereas the processing of protein crops and grasslands generates by-products that can be used in a way that supports the circular economy, such as their use for human consumption, renewable energy, fertiliser, animal feed or the production of green chemicals; whereas, as a by-product, livestock produces valuable fertiliser that supports the EU's resilience in food production; whereas the nitrogen needed to grow crops is mainly provided by synthetic fertilisers, which are costly and energy-intensive to produce; whereas, as part of manure management systems as well as the safe usage of sewage sludge, RENURE (REcovered Nitrogen from manURE), increases resource efficiency and enables progress towards a more circular economy;
- J. whereas animal husbandry can generate highly bioavailable proteins for human nutrition;
- K. whereas crop production of all types of agricultural crops, including protein crops, produces biomass that is mostly inedible for humans (one kilo of plant-based protein generates around three to five kilos of biomass that is edible only by ruminants);
- L. whereas the consumption of locally and sustainably produced animal proteins contributes to the EU's food security and enhances the vitality of Europe's rural areas; whereas animal proteins are produced in the EU under some of the world's highest sustainability standards in terms of animal welfare, climate and the environment, and often constitute an important component of a balanced diet; whereas in the EU animal husbandry is heavily dependent on imports of crops with a high protein content, which have to be grown on arable land outside the EU;
- M. whereas enhancing European food resilience and security by consuming animal proteins produced in the EU contributes to more sustainable production globally;
- N. whereas animal-sourced proteins provide high-quality proteins and are the most bioavailable protein source for humans, which is particularly important for fertile women, children, adolescents, and elderly or frail persons;
- O. whereas extensive livestock production, particularly in remote and mountainous areas, is a highly sustainable activity and helps ensure that these areas remain populated;
- P. whereas sustainable aquatic and aquaculture protein can contribute to global food security, nutrition and healthy balanced diets; whereas intensive aquaculture may often be accompanied by diverse negative environmental impacts, such as the consequences of using chemicals or antibiotics; whereas algae can provide an opportunity to reduce the negative environmental impacts of aquaculture;
- Q. whereas alternative proteins such as fungi or fermentation products require carbohydrate-rich inputs; whereas this production could utilise residues and waste streams from conventional food production, contributing to a more circular economy; whereas EU waste legislation imposes a heavy regulatory burden on producers that process food waste;
- R. whereas the potential of insect-based protein for human and particularly animal

nutrition is growing and could potentially reduce the EU's protein import dependence; whereas more knowledge about the sustainability of insect farming is needed and consumers should be given the clear information they want and are entitled to about the presence of insect-based ingredients in various end products;

- S. whereas the market for all types of sustainably produced protein, especially plant- and animal-based protein, has developed in recent years; whereas the production of these proteins creates many opportunities for European farmers and food producers; whereas plant-based proteins already enjoy high and rising consumer demand, acceptance, and technological maturity;
- T. whereas consumers are calling for more transparency and information about food sustainability; whereas there are no voluntary standardised labels or product declarations to ensure the environmental sustainability of proteins either for human consumption or for animal feed and feed additives;
- U. whereas it is important to adopt a value chain approach in order to create added value for sustainably produced proteins, especially plant-based proteins, since the production of locally sourced, high added value products, enhances the value chain and encourages farmers to invest;
- V. whereas research and innovation in the sustainable production of all sources of protein needs to include farmers, and should increase its focus on plant- and animal-based protein as both private and public EU research and innovation has mainly concentrated on cereals and oilseeds in recent decades;
- W. whereas general training and knowledge transfer only reaches about 10 % of EU farm holdings; whereas there is a critical need to further invest in training and advisory services for farmers, to spread know-how on protein crops, best practices, behavioural changes, cultivation of grasslands and extraction of protein from alternative sources;

A clear need for a comprehensive EU protein strategy to enhance protein potential

1. Calls on the Commission to urgently present a comprehensive and ambitious EU protein strategy covering the sustainable production and consumption of all types of protein in the EU, especially plant- and animal-based protein, and introducing effective measures to boost open European protein autonomy in the short, medium and long term; underlines that the production of protein crops and plant-based protein should be prioritised;
2. Considers that the EU protein strategy should be based on:
 - (a) A vision for strategic and sustainable EU protein production and trade flows that fits our needs and demands;
 - (b) An action plan for increased EU plant-based protein production and consumption;
 - (c) Better conditions for more sustainable production of both plant- and animal-based protein in the EU;
 - (d) The development of sustainable protein systems for food and feed;
 - (e) A holistic approach that necessarily includes farmers along with the whole food

value chain, taking into account the principles of the circular economy;

- (f) Concrete science-based policy actions for development, innovation and research on sustainably produced proteins;

A vision for increased EU protein production

3. Underlines that, from a geopolitical and strategic perspective, as well as to ensure food security, European resilience levels need to be significantly strengthened in crucial sectors such as food and feed supply by reducing, as far as possible, dependencies on agricultural products and resources from just one or a few suppliers through stronger domestic production, while encouraging the EU's competitiveness to avoid the concentration of markets in the hands of just a few key players; stresses, therefore, that the EU needs to step up the production of plant protein and that this can only be done in stages so farmers and markets are able to adapt accordingly;
4. Highlights that sustainable, diversified and domestic protein production must be recognised as a crucial aspect of the EU food and feed system in order to ensure sufficient availability of safe and quality food and feed and to maintain functioning and resilient food supply chains and trade flows; emphasises the goal of achieving a more sustainable and diversified supply of protein in the EU food system;
5. Considers that the growing of protein plants and grasslands can have significant benefits for soil quality, climate and biodiversity, and under certain conditions has the potential to reduce inputs such as fertilisers and plant protection products; points out that extensive grassland-based animal farming also answers animals' natural dietary needs and can have positive effects on the environment and against climate change, while contributing to a circular economy; emphasises the importance of cereals and grassland, especially grass and clover pastures, as a feed source for livestock and believes that Member States should consider introducing eco-schemes for legumes and grasslands and create dedicated protein-plant funds, as some Member States have; stresses that extensive livestock production, particularly in remote and mountainous areas, is a sustainable activity and provides local populations further incentives to live in these areas;
6. Points out that the protein strategy should support the environmental transition through the development of sustainable protein sources and contribute to both open European protein autonomy and the resilience of the EU's farmers and rural areas; acknowledges the role of protein sources in the circular economy and considers that developing a circular economy and ensuring the production of all available protein types, especially plant- and animal-based proteins, can contribute both to maintaining high levels of human health and enabling the transition to truly sustainable food systems; recalls the importance of circularity between sustainable livestock rearing and crop cultivation;
7. Considers that developing sustainable production of plant proteins in the EU, as well as making livestock production more sustainable by measures such as increasing the circularity of the food and feed value chains, are effective ways of addressing many of the environmental, societal and climate challenges that the EU faces, as well as preventing deforestation, relocation of production and overfishing outside the EU; believes that farmers could play a pivotal role in building a resilient protein system if properly supported and acknowledges that protein production requires a holistic approach for sustainable and resilient food systems;

8. Highlights that relocating production outside the EU and importing beef or protein crops such as soya beans is sometimes associated with deforestation, unsustainable land use change and negative environmental impacts such as soil erosion and contamination of groundwater, as non-EU producers may be held to lower sustainability, regulatory and ethical standards than producers in the EU; considers that imported products should meet comparable sustainability standards in order to provide greater competitiveness for EU producers and prevent the relocation of EU production abroad;
9. Draws attention to the continually increasing global demand for proteins, including for proteins of animal origin;
10. Recalls the EU's commitments to the UN SDGs and the significant contribution that EU agriculture and aquaculture make to the provision of sustainable proteins, taking account of the contribution made by EU protein production to the SDGs;
11. Considers that increasing the EU's food self-sufficiency is a key objective that requires a level playing field and strong support for the European agricultural sector;

Better conditions for protein production in the EU

12. Emphasises that protein production starts with farmers, with the support of fishers and aquaculture farmers, so they must therefore be at the centre of the strategy, as they are the key to building a resilient protein system; stresses that a profitable agriculture, food and feed sector is a prerequisite for a strong protein sector in the EU; calls therefore on the Commission to explore opportunities to enable a profitable business model for farmers to help them convert their crops to attractive food and feed products by increasing crop resilience, protein yields and protein quality;
13. Underlines that according to the EU feed protein balance sheet, all plant-based protein types can contribute to increased production of proteins in the EU: proteins with less than 15 % protein content (feeds, cereals), proteins with medium protein content of 15-30 % (dry feeds, wheat bran), proteins with high protein content of 30-50 % (oilseed meal), proteins with very high protein content of over 50 % (by-products of the starch industry, potato proteins, processed animal proteins, insect proteins); also underlines that research into animal proteins can contribute to an increase in this production;
14. Stresses that European agriculture and businesses must become more competitive in the area of proteins for food and feed and that the agriculture sector is dependent on sustainable and affordable inputs such as energy, feed, feed additives, good plant material, fertilisers and soils of good quality; takes the view that in order to increase the competitiveness of European protein producers, incentives must be scaled up and that unnecessary regulatory burdens for protein production must be eased;
15. Recognises the importance of feed additives in reducing emissions, in improving protein digestion and in ensuring correct feeding strategies and feed reformulation; stresses that the authorisation period for feed additives must be shortened and more flexibility allowed; underlines that the renewal process of authorisations must be created in a way that does not risk phasing out effective additives;
16. Recalls that it will be impossible to increase the production of plant-based protein without good-quality plant materials; recalls that new breeding techniques will provide great opportunities to develop regionally adapted plants and species optimised for

- European conditions; considers that more research and development on cereals, protein plants and grass are needed in order to increase their nutritional value, local adaptation and resistance to natural threats;
17. Calls for swift adoption of a framework tailored to new breeding techniques to allow for faster development of new and robust plant varieties, including protein crops;
 18. Considers that pest and pathogen control plays a vital role in successful protein crop harvests, and therefore monitoring and scientific research on the occurrence, development and spread of these pests and pathogens is crucial; recognises that the development of efficient measures to reduce the economic damage caused by these pests and pathogens and the development of alternative measures in terms of technical innovations such as precision farming or robotics, beneficial insects or low-hazard pesticides are important in order to boost total European protein production;
 19. Believes that grassland fertilisation with manure contributes to farmers' self-sufficiency in terms of proteins; considers that properly fertilised grass remains by far the cheapest, most efficient and most sustainable source of protein for ruminants; calls on the Commission, taking into account the environmental assessments made, to propose without delay, medium- and long-term policy measures to close the nutrient loop, such as enabling the use of alternative organic products such as recovered nitrogen from digestate, from biowaste, other manure (RENURE) products and food-industry waste, by classifying them as a substitute for chemical fertilisers based on scientific criteria, as an opportunity for farmers to reduce their dependence on chemical fertilisers and increase on-farm circularity and sustainable livestock production through the recovery and reuse of residues such as manure;
 20. Recalls that the production of biomethane, biogas, biofuels or other bio-based chemicals that use biowaste streams is one of the factors contributing to more sustainable production and is a significant revenue source that enhances the value of protein-rich crops and strengthens the business case for farmers to adopt them, while at the same time offering sustainable alternatives to fossil fuels and contributing to a significant reduction in greenhouse-gas (GHG) emissions; underlines that growth in the production of plant protein for food and feed could lead to by-products being used in more ways for bioenergy and hence higher economic value from protein-crop production; considers, in this respect, that consistency between different EU policies must be ensured;
 21. Recognises that the production of renewable energy at farm level is often linked to the production of protein and should be further facilitated, and that consequently an increase in protein production can help the EU to enhance the production of bioenergy products;
 22. Recognises that the development, cultivation and utilisation of protein-rich crops often requires new management practices and cooperation between farmers and considers that the possibility of new organisational structures being recognised within the CAP should be analysed;
 23. Stresses that, in order to boost investments in healthier soils and new crop rotation practices, long-term goals need to be accompanied by an evaluation of the services provided to society;

Ensuring a proper and functional circular economy by recognising the complementary role

of both plant-based and animal proteins in the system

24. Highlights the significant potential and added value of sustainably produced plant- and animal-based proteins and the fact that the sustainable development of the sector will benefit European farmers, soil quality, nutrient cycles, biodiversity, the climate, the circular economy and human health and is strategically important for European food security;
25. Underlines that policies must create a level playing field between all stakeholders and products and that protein consumption must be more sustainable; supports policy measures that allow consumers to compare performance between products, as indicated in the upcoming legislative framework for a sustainable food system;
26. Stresses the importance of roughage, such as grasslands or grass-clover, in particular in combination with livestock production, as a protein source and the positive co-benefits grasslands have on biodiversity; calls on the Commission and the Member States to make use of CAP tools, such as eco-schemes, to incentivise those protein sources under these schemes; underlines that ruminant husbandry is an efficient way to convert permanent grassland into food available for human consumption; highlights the relevance of projects that extract high-quality protein for food and feed from grasslands through bio-refining, and at the same time are able to produce bioenergy products as a by-product; considers that more funding needs to be directed toward research into bio-refining and its commercial deployment;
27. Recalls that the production of animal proteins based on inedible resources used as feed such as forage and by-products from the processing of protein plants, contributes greatly to circularity in minimising food waste and provides significant added value to protein plant production and is also key to ensuring dynamic rural areas, landscape management, and environmental preservation;
28. Encourages the production of soya beans in the European Union as a source of plant-based protein by incentivising investment in research and development to improve crop quality and yield; draws attention to the need to ensure access to funding and the need for additional support for agricultural producers, including small producers, to step up soya bean production in the EU; considers it necessary to identify and promote agricultural best practices for soya bean cultivation in the EU, including the use of sustainable production technologies and compliance with environmental protection rules; draws attention to the need to reduce dependence on soya in animal feeds from non-EU countries;
29. Stresses that research programmes should focus on plant protein crops that are suitable for Europe's climate and growing conditions and that can be integrated into existing farming systems; believes that it is important to support farmers in this transition, remove this market's barriers to entry and help farmers benefit from these new value chains;
30. Calls for more research and development of crop varieties that provide additional sources of protein with short production cycles suitable for intermediate cropping within existing crop rotations;
31. Encourages the Member States to use all available CAP incentives to increase leguminous crops, including coupled support, agri-environmental measures, advisory

services and new sectoral programmes; considers that, in addition, promotion campaigns to boost demand for legumes for food could go a long way toward stimulating EU production;

32. Recognises the strong potential of hemp as a sustainable protein crop and stresses the need to harmonise its regulation at EU level to facilitate its cultivation and processing into food and feed;
33. Stresses the importance of applying sustainability standards to imported products, protecting the competitiveness of European producers and ensuring transparent information for consumers;
34. Recognises that the 1992 Blair House agreement still represents a significant brake on the development of oilseed crops in the EU and it therefore considers it necessary to explore the possibility of revising this agreement;
35. Stresses that the European fisheries sector provides an important source of sustainable high quality protein for human use in the form of fresh fish, and the viability of the fisheries sector must be maintained;
36. Highlights the role of sustainable fishery and aquaculture sectors in ensuring food security and in diets based on healthy and high-quality protein; stresses that sustainable fishery and aquaculture products can play an important role in building a sustainable food system; calls on the Commission to ensure that the upcoming European protein strategy recognises the role of the fisheries and aquaculture sectors and the need to continue the transition towards a more sustainable fishery and aquaculture sector, including increased animal welfare in the aquaculture sector, which can lead to fewer diseases, less use of antibiotics and healthier ecosystems, while acknowledging the high sustainability standards in the EU; stresses the importance of involving the sector in the development of its protein strategy;
37. Highlights that the EU is a net importer of fishery and aquaculture products, as almost 60 % of the total consumption in the EU is imported; considers it necessary, therefore, to strengthen the economic viability and overall sustainability of the European fisheries and aquaculture sectors, taking into account their three dimensions (economic, environmental and social) in order to reduce the EU's growing dependence on imports; stresses the importance of sustainable fisheries and aquaculture sectors for the EU's protein supply and, in particular, the important role of small-scale and artisanal fishers as well as shellfish gatherers, both in the EU and elsewhere;
38. Emphasises that regular consumption of fishery and aquaculture products is an essential component of a healthy diet and that, thanks to its heart-healthy properties, fish consumption has considerable potential to address diet-related ailments such as cardiovascular disease; expresses its concern, therefore, over the decline in fish consumption in the EU; calls on the Commission and the Member States to increase the role of fishery and aquaculture products, in particular from local producers, in their nutritional policies and programmes, taking into account the advice from the WHO regarding the consumption of aquatic food, in particular by promoting their consumption among specific groups, such as young people, and even by introducing or improving their consumption in schools and in programmes aimed at tackling specific

nutritional deficiencies; recalls furthermore, that Directive 2006/112/EC¹ allows Member States to apply reduced VAT rates to supplies of foodstuffs and related services, and calls on Member States to make use of this possibility in relation to fish products, given the benefits of fish consumption;

39. Is of the opinion that sustainable aquaculture is an important protein producer and that the use of algae as a food or a feed additive offers the potential to partially reduce emissions from livestock as well as being a good source of protein for feed; points out that algae and microalgae can be an important complementary source of protein as part of a sustainable food-production system and calls on the Commission to include this in the European protein strategy; points out the potential of innovation and new businesses in creating new fish feeds with a lower carbon footprint and minimised impact on biodiversity and that there is a need to further reduce the pollution of water by aquaculture; stresses that further development and sustainable innovation in the field of plant protein production and complementary sources of protein is a way of effectively addressing many of the environmental and climate challenges that the EU's fishery and aquaculture sector is facing;
40. Stresses that EU aquaculture and mariculture can contribute much more than they currently do to sustainable food production and provide healthier, fairer and more sustainable protein that is less dependent on fish-based feed and that does not use feed derived from fishmeal and fish oil production using catches from illegal, unregulated and unreported (IUU) fishing; highlights the need to improve aquatic animal welfare as higher welfare implies fewer diseases, less use of antibiotics and healthier ecosystems; welcomes the strategic guidelines for a more sustainable and competitive EU aquaculture for the period 2021 to 2030 and points out the need to monitor and promote the implementation of the reforms set out in the multiannual strategic plans for the development of aquaculture, in order to boost sustainable production; reiterates its demands in relation to providing a robust, reliable, predictable, streamlined and business-friendly legal framework that supports the development of sustainable aquaculture;
41. Stresses that insects, provided they meet high safety standards, could be regarded a useful circular alternative source of protein, particularly for organic and conventional animal nutrition, contributing to reducing the EU protein deficit and increasing the circularity of agriculture; recognises that undue regulatory burdens hinder the development of circular and sustainable agriculture, such as the ban on using biodegradable waste as feed for insects or for protein fermentation; highlights that interest in this production is growing and, once economies of scale are achieved, production costs will be reduced; is concerned by the high energy requirements of the large-scale breeding of insects and stresses that environmental, health, animal welfare, social and economic effects need to be analysed;
42. Is of the opinion that authorisations made through the novel food legislation should be based on the highest food safety assurances of the product and that their impact on human health and the environment should be considered, in line with the precautionary principle; stresses that the authorisation process needs to be more transparent and more efficient, without lowering high food safety standards; highlights that a One Health approach must be followed with regard to the development of novel protein production

¹ Council Directive 2006/112/EC of 28 November 2006 on the common system of value added tax (OJ L 347, 11.12.2006, p. 1).

and that relevant legislation on animal welfare and environment needs to be followed;

43. Calls on the Commission to present a comprehensive impact assessment of novel food for human consumption in line with the European agricultural model, society, human health, environment and economy; stresses that the precautionary principle should be considered;
44. Notes that cell-based food, which is produced by culturing cells isolated from plants and animals, presents ethical, social, environmental and economic challenges, and the Novel Food regulation¹ is not fit for purpose; highlights that consumer interests and expectations must be better reflected;
45. Calls on the Commission to ensure that food in the EU originates from sustainable farming systems; recalls the link between sustainable food production, nature, farmers and rural development and underlines the added value and ecosystem services provided by farmers;
46. Calls for more research and development into the safety and sustainable production of proteins in the EU and their impact based on a One Health approach; underlines the urgent need for public and private research, research infrastructure and demo facilities to scale up a resilient EU protein system; highlights the important role of research institutes in the European Union to make the EU's food system even more efficient and sustainable;

A holistic approach that includes the entire food value chain

47. Underlines that improved coordination and collaboration between the supply chain's stakeholders, along the entire value chain, is needed to bridge the current gaps between farmers, processors and retailers; stresses that stronger collective collaborations between the actors, notably through farmers' organisations and agricultural cooperatives, should be actively promoted with a view to shaping higher added value chains;
48. Calls, in this regard, on Member States and stakeholders to use all the available rules envisaged in the CMO regulation² for the benefit of efficient and innovative chains; invites stakeholders to develop contracting in order to plan production in the long term; believes that producer organisations, particularly cooperatives, as well as inter-branch organisations, have a key role to play in structuring and strengthening the protein value chains;
49. Emphasises the importance of consumer acceptance and consumer information; stresses that the production of plant-based and alternative proteins needs to meet consumer expectations, which entails further improvement in the functionalities of these proteins

¹ Regulation (EU) 2015/2283 of the European Parliament and of the Council of 25 November 2015 on novel foods, amending Regulation (EU) No 1169/2011 of the European Parliament and of the Council and repealing Regulation (EC) No 258/97 of the European Parliament and of the Council and Commission Regulation (EC) No 1852/2001 ([OJ L 327 11.12.2015, p. 1](#)).

² Regulation (EU) No 1308/2013 of the European Parliament and of the Council of 17 December 2013 establishing a common organisation of the markets in agricultural products and repealing Council Regulations (EEC) No 922/72, (EEC) No 234/79, (EC) No 1037/2001 and (EC) No 1234/2007 ([OJ L 347 20.12.2013, p. 671](#)).

in terms of taste, texture, nutritional value and price;

50. Considers that consumers are becoming more aware of the food that they consume and how it has been produced; reiterates its call for more information to be made available to consumers on the environmental impact of different food products, including proteins, as well as information on their production, in order to contribute to a fair, healthy and environmentally friendly food system; welcomes the Commission's intention, expressed in the farm to fork strategy, to extend the requirement for mandatory origin or provenance indications to additional products;
51. Highlights that the amount of plant protein produced sustainably in the EU will not increase in the absence of market demand or adequate profits for farmers; thinks that targeted public support, such as eco-schemes, could boost the profitability of crop cultivation; urges market actors to develop techniques for determining protein content and quality in cereals, protein plants and feed in order to better reflect the value of the protein; stresses that increased market transparency can improve the functioning of the market, reduce waste and bring about a more circular food sector; believes that policy strategies and legislative frameworks should incentivise these markets; stresses that the production of plant proteins with a lower protein content remains essential, alongside the production of high-protein crops, and that the development of those sources should be guided by the principle of a positive mass balance with regard to dry matter and proteins;
52. Considers that the food-processing industry is an integral part of the circular protein value chain as it enables more value to be obtained from protein crops; emphasises the need to increase the capacity to process plant-based proteins; considers it important that the processing industry map its waste streams so that they can be quantified and their circularity enhanced;
53. Reiterates the farm to fork strategy's target of reducing food waste by 50 %, which could be partly reached by means of a shorter and more efficient food supply chain and a more circular agriculture and food production sector, in which biodegradable waste is viewed as a resource rather than as waste; reiterates that ensuring a sustainable livelihood for primary producers is crucial in order to achieve the farm to fork strategy's targets;
54. Stresses the importance of reducing discards as a means of avoiding food waste; reiterates, in this regard, the call from its resolution of 18 May 2021¹ for commercial and/or charitable opportunities to be identified to make the best possible use of those unavoidable or unwanted catches below the minimum conservation reference size, while favouring fishing techniques that avoid and reduce such catches, as far as possible; underlines, in this context, the need to prevent the creation or expansion of a secondary seafood market;
55. Underlines that many farmers lack the necessary knowledge to grow leguminous crops effectively; recalls the need to promote agricultural knowledge and innovation systems, as well as knowledge sharing and training, enabling all food chain actors to become sustainable by, inter alia, speeding up innovation and accelerating knowledge transfer; calls on the European Commission to create an easily accessible online platform for the

¹ Resolution of 18 May 2021 on securing the objectives of the landing obligation under Article 15 of the Common Fisheries Policy ([OJ C 15, 12.1.2022, p. 9](#)).

exchange of best practice examples and information on the production of plant- and animal-based protein;

56. Stresses that action at all levels is needed in order to increase sustainable protein production, particularly domestic production of plant-based protein, by supporting farmers, especially small and medium-sized farms and family farms; calls therefore on Member States to introduce and increase investment and research support on system, business and production levels, such as by providing investment support to the processing chain;
57. Believes that public procurement should incentivise more sustainable protein production and consumption;

Concrete policy actions

58. Calls on the Commission to put forward the following policy actions:
 - i. A feed additive regulation that promotes stability and innovation in the production of feed additives;
 - ii. A scientific and technical guidance document that complements the administrative guidance document on the preparation and submission of novel food applications in order to clarify the authorisation process, while ensuring the highest food safety assurances and standards and proper evaluation of potential risks for human consumption, in line with the precautionary principle;
 - iii. A directive on by-products that allows more types of biodegradable by-products to be considered as feed and that allows food production residues to be used and transported;
 - iv. A renewable energy framework that provides long-term, sustainable and stable regulation for utilisation of side streams from plant protein extraction, agricultural residues and food production waste streams for the production of bioenergy while prioritising food and feed production on fertile agricultural land;
 - v. An energy taxation directive that provides clear and long-term taxation rules and that incentivises the production of all bio-based fuels;
 - vi. A regulation on new genomic techniques that allows new breeding techniques to be adopted, without increasing dominant market positions and taking into account the specific need for innovation by European SMEs;
 - vii. A carbon removal certification framework that enables carbon farming practices related to the cultivation of protein-rich crops, while ensuring additional income for farmers;
 - viii. A combination of CAP rules that provide a stable framework, flexible management practices and incentives for the production of protein-rich crops and a more protein-rich harvest of crops grassland and legumes overall; the production of protein-rich crops should be incentivised inside the current CAP and through eco-schemes; the Commission should consider the possibility of allowing protein-rich food crops to be grown on set-aside land, while respecting strict environmental rules; the Commission should put forward a guidance document

with best practices in CAP implementation in order to enhance the cultivation of sustainable protein-rich crops, such as protein plants and leguminous plants, together with a roadmap on strategies for stronger links between livestock farming and regional feed potential;

- ix. A regulatory framework for the sustainable use of plant protection products that also allows for monitoring and scientific research on occurrence, development and spread of pests and pathogens that jeopardise successful protein crop harvests;
- x. A clear research and development funding strategy to promote and stimulate the development of alternative measures for plant protection in terms of technical innovations such as precision farming or the use of robotics, beneficial insects and low-hazard pesticides;
- xi. A science-based and voluntary label in the legislative framework for sustainable food systems that allows for comparison of the environmental footprint of food and similar requirements for feed, scientifically based on actual product data;
- xii. A food protein balance sheet;
- xiii. A regulation on animal by-products that, while continuing to apply high safety levels to processed agricultural products, opens up the possibility of using more former foodstuffs and fish-origin ingredients as feed;
- xiv. A combination of public procurement rules that makes it easier to set out minimum sustainability requirements;
- xv. A clear long-term funding strategy for research and development, including financial incentives to promote and stimulate sustainably produced proteins, especially plant-based and animal-based proteins, for food and feed in the EU, utilising and unlocking the potential of Horizon Europe, the Innovation Fund, the LIFE Programme, EIT Food and other relevant EU funding for food technology and agricultural development;
- xvi. In the short term, a temporary derogation with sufficient legal certainty to ensure that RENURE can be used and, in the long term, the legal application of the criteria on RENURE developed by the JRC based on scientific criteria, classifying them as chemical fertiliser under the Nitrates Directive¹;
- xvii. Research into improving the sustainability of livestock farming systems, especially with regard to the use of inedible ingredients and by-products in feed, should continue to be supported;
- xviii. Amendment of annex III to the Nitrates Directive to facilitate the use of digestate from organic waste obtained from anaerobic digestion of livestock manure;
- xix. A framework to connect the production of plant-based proteins to the Fund for European Aid to the Most Deprived (FEAD);

¹ Council Directive 91/676/EEC of 12 December 1991 concerning the protection of waters against pollution caused by nitrates from agricultural sources ([OJ L 375, 31.12.1991, p. 1](#)).

- xx. Policies ensuring that protein imports meet comparable production and quality standards in terms of their health and environmental impacts in order to avoid carbon leakages, enhance the competitiveness for EU producers relative to producers outside the EU, and to ensure globally increased standards;
- xxi. A grazing strategy for Europe with the aim of promoting extensive grazing where it fits the regional conditions and context, a study on the EU-wide potential and land requirements of protein and oleaginous crops that can be grown within the EU and a study of the impact of introducing a protein futures market to allow farmers to manage their risks;
- xxii. An analytical study on the space available on the market for proteins to be presented by the Commission;
- xxiii. More research into nutritional life cycle assessments (n-LCA) of foods;

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59. Instructs its President to forward this resolution to the Council and the Commission.