



Bulgaria's reforms and investments in the digitalization and innovation of agriculture within country's National Recovery Resilience Plan

The Bulgarian National Recovery Resilience Plan was approved in April 2022.

It consists of four thematic pillars, the larger of which is the "Green Bulgaria" one (42% of the overall financing within country's Recovery Resilience Plan).

This pillar includes investments and reforms in the sector of agriculture.

The leading investment, totalling EUR 492mln, will promote the technological and ecological transition in the field of agriculture.

A minimum of 636 registered farmers will be supported in preparation of centres for marketing and storage of fruit and vegetables; construction/reconstruction and equipment of establishments for the rearing and evaluation of male breeding animals; efficient water management, etc.

After five drafts and a process of preparation exceeding 18 months, the European Commission approved the final version of the Bulgarian National Recovery Resilience Plan (RRP) in April 2022. Bulgaria's RRP has 12 components grouped in four pillars – 'Green Bulgaria', 'Innovative Bulgaria', 'Connected Bulgaria' and 'Fair Bulgaria'. 'Green Bulgaria' and 'Innovative Bulgaria' take up largest share of country's RRP – 41.8% and 25.3%, respectively.

The estimated total cost of country's Recovery and Resilience Plan was initially set at EUR 6.3bln non-repayable support (grants). As per a note by the European Commission to the Council and European Parliament on 30 June 2022, the maximum financial contribution was updated to EUR 5,7bln due to a better-than-forecasted performance of Bulgaria's economy in 2020-2021.





Component: 'Sustainable agriculture' of 'Green Bulgaria' Pillar

Reforms and investments play fundamental role in the sixth component of the Bulgarian RRP entitled 'Sustainable agriculture'. The component aims at enhancing the sustainable management and competitiveness of the Bulgarian agricultural sector in the context of the green transition. It fits within the 'Green Bulgaria' pillar and includes three major measures – a reform and two investments:

Indicative estimates of the costs necessary to realize the objectives of this component amount to a total of EUR 504mln (BGN 986.1 million) – EUR 234mln at the expense of the Recovery and Resilience Facility (RRF) and EUR 270mln national co-financing, including EUR 224mln private co-financing to be attracted.

- Reform 1: Updating the strategic framework of the agricultural sector
- Investment 1: Fund to promote the technological and ecological transition of agriculture
- Investment 2: Digitalisation of processes from farm to fork

Reform 1: Updating the strategic framework of the agricultural sector

The objective of the first measure is to adapt the strategic framework of the Bulgarian agricultural sector to make it compatible with the country's commitments stemming from the UN Sustainable Development Goals and the European Green Deal.

This measure consists of a milestone and a target – adopting the National Action Programme contributing to the objectives of the Farm to Fork Strategy 2030 and increasing of the share of organic farming (See Table 1).



Table 1. Reform 1: Updating the strategic framework of the agricultural sector

Measure	Milestone or Target	Name	Indicative timeline for completion	Description
Updating the strategic framework of the agricultural sector	Milestone	Adoption by the Council of Ministers of the National Action Programme contributing to the objectives of the Farm to Fork Strategy 2030	Q4 2023	The Programme is to set out a framework for management and protection of the environment and natural resources in the field of agriculture. It is to promote: <ul style="list-style-type: none"> 1) green investment; 2) sustainable management of water, soil, air; 3) adaptation to and mitigation of climate change.
Updating the strategic framework of the agricultural sector	Target	Increase in the share of organic farming which embraces the green and digital transition	Q2 2026	The Programme is to achieve an increase of the share of organic farming area from 2.3% in 2019 to 5% in 2025.

Investment 1: Fund to promote the technological and ecological transition of agriculture

The objective of the second measure with an estimated amount of is to contribute to addressing the issues that hamper the competitiveness and sustainability of the Bulgarian agricultural sector and to accelerate the sector's adaptation to climate change, the greening of its production and its digital transformation (See Annex I).

Investment support is targeted at all registered agricultural holdings. The total planned resource is EUR 492mIn (EUR 224mIn at the expense of the RRF and EUR 268mIn in national co-financing, including EUR 224bIn in private co-financing) with an implementation period in 2022-2025.

The measure consists of a milestone and a target - setting up a Fund for promoting the technological and ecological transition of agriculture and 636 supported project beneficiaries through the Fund. The Fund is to provide support to farmers for the implementation of activities ensuring the protection of the environment and climate change mitigation, introducing innovative production and digital technologies, agricultural production and organisation technologies, the automation of work processes, the shortening of supply chains and the conservation of genetic resources (See Table 2).

Table 2. Investment 1: Fund to promote the technological and ecological transition of agriculture

Measure	Milestone or Target	Name	Indicative timeline for completion	Description
Fund to promote the technological and ecological transition of agriculture	Milestone	Award of grant agreements by the Ministry of Agriculture for support under the Fund to promote the technological and ecological transition of agriculture	Q3 2023	Communication of the awards of grant agreements under the four strands of the Fund: - technological and environmental modernisation - preparation centres for marketing and storage of fruit and vegetables - construction/reconstruction and equipment of establishments for the rearing and evaluation of male breeding animals, including the harvesting of biological material from them; - efficient water management on agricultural holdings.
Fund to promote the technological and ecological transition of agriculture	Target	Number of supported project beneficiaries through the Fund	Q4 2025	The fund shall aim to support a minimum number of 636 project beneficiaries.

Investment 2: Digitalisation of processes from farm to fork

The objective of the third measure is to facilitate the automated data exchange between the administration and farmers with a view to ensuring a more efficient and uniform flow of data and avoiding the need for maintaining redundant document formats.

The total planned resource is EUR 12.2mIn (EUR 10.2 million at the expense of the RRF and EUR 1.9mIn national co-financing) with an implementation period in 2022-2025.

The measure consists of two milestones that include setting up a centralised electronic agricultural information system as well as a communication network of field and rain sensors to provide information on soil moisture, air and soil temperature and rainfall (See Table 3). The centralised electronic agricultural information system will provide several modules enabling:

- 1) the use of plant protection products and fertilisers by digitising logbooks for their use;
- 2) control of the use of antimicrobial veterinary medicinal products;

- 3) traceability from primary production to final consumption on the basis of a unique identifier to inform consumers and stimulate the production of quality and affordable food;
- 4) online training, including content of training modules and advice to farmers.

Table 3. Investment 2: Digitalisation of processes from farm to fork

Measure	Milestone or Target	Name	Indicative timeline for completion	Description
Digitalisation of processes from farm to fork	Milestone	Award by the Ministry of Agriculture of the contracts for 1) software solutions for the electronic information system for the agriculture sector; 2) communication network of field and rain sensors.	Q4 2023	The two contracts shall result in the establishment of: 1) a single platform for automated data exchange between administration and farmers; 2) a communication network of field and rain sensors to provide information on soil moisture, air and soil temperature and rainfall.
Digitalisation of processes from farm to fork	Target	1) completion and delivery of fully operational electronic agricultural information system; 2) communication network of field and rain sensors	Q4 2025	The electronic agricultural information system and the communication network is to include modules and functionalities based on the usage of field and rain sensors.



Annex I

Investment 1: Fund to promote the technological and ecological transition of agriculture

1. Strands within investment 1: Fund to promote the technological and ecological transition of agriculture:

1st strand: 'Investments in technological and environmental modernisation', whereas a non-repayable support will be provided to registered farmers. An indicative list of possible investments include:

- Equipment/facilities for storage of animal manure and vegetable waste;
- Equipment/facilities for storage of mineral fertilizers, necessary for the production activity of the farm;
- Equipment/facilities for the production of energy from RES for own consumption, including those using biomass;
- Equipment/facilities for processing waste raw materials from agricultural products used for own consumption;
- Equipment for the application of precision agriculture for the protection of natural resources (optimization of soil treatments, the use of fertilizers and preparations for plant protection, etc.);
- Investments in mobile slaughterhouses;
- Equipment/facilities for prevention of extreme weather events, such as hail, frost, drought;
- Systems and equipment /including software and/or hardware/ for collecting, processing and analyzing data and information from the various phases of cultivation, production, storage and sale of agricultural products (in the field of crop production - for collection, processing and analysis, remote control, management and monitoring of data on irrigation rates, fertilizer rates, condition of the soil and crops, yields, etc.; in the field of animal husbandry - to track health status of animals, feeding rates, productivity, etc.)
- Digital solutions that improve the process of growing agricultural crops and animals and contribute to optimizing the volume of investments made;
- Automation and robotics within the individual phases of the production processes (in the field of crop production - during fertilization, plant protection, climate management, prevention of adverse climatic events, etc.; in the field of animal husbandry - introduction of systems for mechanized feeding, milking, watering and cleaning, systems for management and monitoring of livestock farms, including beekeeping, fertilizer management systems, electric herders, GPS systems for identifying permanent grass areas, drones, etc.)
- Other assets related to the protection of the environment, climate and natural resources

2nd strand 'Investments in fruit and vegetable marketing and storage centres', whereas the support under seeks to stimulate the creation of short supply chains, modernization and automation of the processes of collection, market preparation and





storage of fresh fruits and vegetables. Eligible beneficiaries of non-repayable support are farmers, producers' organizations, cooperatives, associations of farmers.

An indicative list of possible investments include:

- Construction/reconstruction of a center and infrastructure for collection, preparation for marketing (cleaning, sorting, packaging, labeling, etc.) and storage of fruits and vegetables
- Equipment/facilities for the individual phases of production preparation for sale (reception, sorting, calibration, cleaning, packaging, labeling, etc.)
- Equipment/facilities for warehousing and storage of production (including cooling, freezing, drying, storage equipment, box pallets, reusable crates/crates, etc.)
- Equipment for transportation of the production, etc.

3rd strand 'Investments for the construction/reconstruction and equipment of livestock facilities for breeding and evaluation of male breeding animals, including extraction of biological material from them', whereas eligible beneficiaries can be breeding organizations that have received permission to carry out breeding activities according to the Animal Husbandry Act.

An indicative list of possible investments include:

- Construction/reconstruction of a livestock facility for male breeding animals with stations for extraction, assessment, storage and distribution of seminal fluid (stable for breeding animals, feed storage facilities, liquid and solid manure storage facilities, premises for temporary quarantine of animals, etc.)
- Equipment related to animal husbandry activities
 - Laboratory equipment for quality, cooling, freezing and storage of seminal fluid
 - Transportation means for distribution, for the purpose of using the harvested reproductive material, etc.

4th strand 'Investments related to efficient water management in agricultural holdings', whereas a non-repayable support will be provided to registered farmers. The support seeks to achieve a more efficient use of water resources in agricultural holdings, based on the implementation of water-saving technologies, use of purified wastewater, automation of water management processes, reduction of water losses, etc. In this regard, an indicative list of possible investments include:

- Irrigation systems, including sprinkler installations, drip irrigation systems and other systems for efficient use of water resources in the irrigation process;
- Installations for purification and recycling of waste and incoming water, and for reuse of water;
- Equipment/facilities for applying innovative water saving technologies;
- Facilities for water storage - tanks, cisterns, etc.;
- Automated irrigation systems, including digital and robotic solutions;
- Other investments related to the efficient use of water in agricultural activities



2. Timeline within investment 1: Fund to promote the technological and ecological transition of agriculture has the following four strands:

	2022				2023				2024				2025				2026	
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
Phase I Preparation of the respective call for applications	■	■	■															
Phase II Application, assessment and contracting				■	■	■	■											
Phase III Project implementation							■	■	■	■	■	■	■	■				
Phase IV Reporting and payment											■	■	■	■	■	■		

3. Indicative funding within investment 1: Fund to promote the technological and ecological transition of agriculture has the following four strands:

The total value of the investment is EUR 447.3mln, whereas EU 223.6 mln (VAT excluded) will be public funds by the RRF, another EU 223.6 mln (VAT excluded) will be in the form of private co-financing. The charged VAT funds, amounting to EUR 44.7 will be provided by the national budget.

Strand	Financial resources (VAT excluded)			VAT (national co-financing)*
	Total	Out of which:		
		EU	Private co-financing	
Investments in technological and environmental modernisation'	325 235 913	162 617 957	162 617 957	32 523 591
Investments in fruit and vegetable marketing and storage centres'	15 338 756	7 669 378	7 669 378	1 533 876
Investments for the construction/reconstruction and equipment of livestock facilities for breeding and evaluation of male breeding animals	4 695 695	2 347 848	2 347 848	469 570
Investments related to efficient water management in agricultural holdings'	101 990 303	50 995 151	50 995 151	10 199 030
Total	447 260 668	223 630 334	223 630 334	44 726 067



Useful links

[National Recovery and Resilience Plan](#) – Government of the Republic of Bulgaria (Available in Bulgarian)

[Recovery and resilience plan for Bulgaria](#) – Overview by the European Commission (Available in English)

[Implementation of the National Recovery and Resilience Plan](#) – Information on the current state of implementation in a form of a breakdown of milestones and targets and the respective institutions in charge (Available in Bulgarian)

[Analysis of the recovery and resilience plan of Bulgaria](#) – European Commission Staff Working Document (Available in English)

[Proposition for a Council Implementing Decision on the approval of the assessment of the recovery and resilience plan of Bulgaria-Annex](#) – Detailed information by the European Commission providing a detailed overview of the final version of the plan (Available in English)

[State Fund Agriculture](#) – Beneficiary under Investment 1: Fund to promote the technological and ecological transition of agriculture

[Ministry of Agriculture](#) – Beneficiary under Investment 2: Digitalisation of processes from farm to fork

List of abbreviations

EC – European Commission

EU – European Union

MS – Member State

RFF – Recovery and Resilience Facility

RRP – Recovery and Resilience Plan

RES – Renewable Energy Sources

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