# BULGARIAN HORTICULTURE

## MARKET SCAN

Kingdom of the Netherlands

**INTELIAGRO LLC**
Author: Nikolay Valkanov
April, 2021
Sofia, Bulgaria

# Preface

Bulgarian horticultural sector faces increasing expectations. Whether it would be the pressure to meet growing domestic demand, to increase competitiveness and to answer the sustainability goals, Bulgarian farmers search to modernize and innovate more than ever. Faster, than ever…

This trend opens up lucrative opportunities for Dutch suppliers of knowledge and technology transfer, inputs supply. Automated frost protection, hail protection, pest monitoring systems, automated irrigation and fertigation, precision post harvesting and IT can top on the already established image of the Netherlands as a source of quality seed and propagation material.

***"Bulgaria has almost all ingredients for a successful horticultural sector – traditions, land, climate and hardworking people. The Netherlands can bring the few missing elements – innovative solutions and marketing experience "***
*Arie Veldhuizen,*
*Agricultural Counselor of The Netherlands in Bulgaria*

The Bulgarian Horticulture Report will provide you with everything you need to establish a profitable business in Bulgaria – opportunities, business partners, funding, tips, and tricks. It is all there. Use it and find your profitable business niche here!

# Contents

# General overview

Bulgaria is the 12th largest EU country in terms of farmland area. With its 5 million ha it ranks ahead of countries like Czechia, Greece, or Denmark. Bulgaria is renowned for oilseeds, cereals, and medicinal and aromatic plants. However, when it comes to fruit and vegetables it is a net importer. The country's trade balance is negative (€ 160 m), and has been considerably growing during the past 10 years. Fruit imports have grown by 134% since 2010 reaching € 210 m with vegetables reaching € 185 m (up by 129%).

Bulgaria's temperate climate and rich soils provide favorable conditions for fruit and vegetable production. The country used to be net exporter of fruit and vegetables under Comecon. Production declined gradually after 1990 and reached bottom around the years of EU accession (in some categories, like apples for example, to a one-tenth of the pick volumes). Change of land ownership, technological backwardness, strong competition on shifting markets and uneven direct support (both on EU and intersectoral level within the country) were some of the reasons for the decline in the sector.

At the time prior to EU entry access to finance for agriculture was scarce. Financial institutions did not have the know-how to assess the risk, associated with farming, while public finance was totally insufficient to fulfill the huge capital requirements of the sector. This changed with the implementation of CAP direct payments, which became a collateral for working capital loans. The implementation of direct payments per hectare, however, benefited mainly grain and oilseed production (covering about 30% of inputs costs), while fruit and vegetable growing continued to be underfinanced (~3-5% of input costs), and as a result continued to deteriorate.

This led to a policy change after the first EU programming period (2007-2013). Fruit and vegetable growing became a priority sector, meaning that it started to benefit from additional coupled support and channeled RDP financing.

Currently there is a wide public consensus, that the sector must continue to be a priority during the next programming period till 2030.

# Policy Framework

National Strategy for Sustainable Agricultural Development has been adopted by Parliament in 2015. According to it F&V growing is supposed to recover production to the pre-1990 levels. This must be achieved by development of the following measures:

- Increased financial support both from CAP and national budget sources.
- Change of tax regime, including lower VAT rate (from 20 to 7%).
- Support for producer organization and consolidation of production.
- Regionalization of production.
- Improved access to irrigation and investment in the public irrigation infrastructure.
- Improved motivation for workers
- Strengthening the link “science – business”.
- Improved market access, etc.

Bulgarian government has announced fruit and vegetable growing an official policy priority since 2014. This came as a result of prolonged lobbying for more fair direct support distribution between the agricultural sectors. The policy change was based on the following measures:

- Additional coupled support (under CAP Pillar I) for fruit and vegetable growing based on each hectare of eligible land, which is used for growing major fruit and vegetable crops (for more details, please, go to section Funding Opportunities).
- Fruit and vegetable growing were prioritized in the Rural Development Program (RDP, CAP Pillar II), meaning that relevant producers received advantage when applying for M04 (Investment in Physical Assets), M06 (Development and Business Holdings), and M09 (Producer Organizations).
- The national support for winter pest control management in fruit growing was extended till 2020.

No change in tax regime regarding VAT has been made due to strong opposition from the Ministry of Finance.

Producer organization is still not well developed (please, see Market Organization). Production remains fragmented.

No further steps were made in regard to regionalization of F&V production (targeting support to investments in areas with favorable conditions for the respective crop/variety).

Access to irrigation – a very important aspect in F&V growing, remained quiet problematic just until recently. Irrigation was 'de facto' excluded from support under RDP during the 2014-2020 period, because the adoption of The National Strategy for Management and Development of the Water Sector was not prepared on time. Barely in 2020 a legislation was passed, which liberalized the access of farmers to use up to 50 cub. m. of water/24 hours for agricultural purposes when the water comes from own sources (e.g. underground).

Seasonal workers received a stimulus for employment – social benefits are no longer suspended at the start of seasonal job.

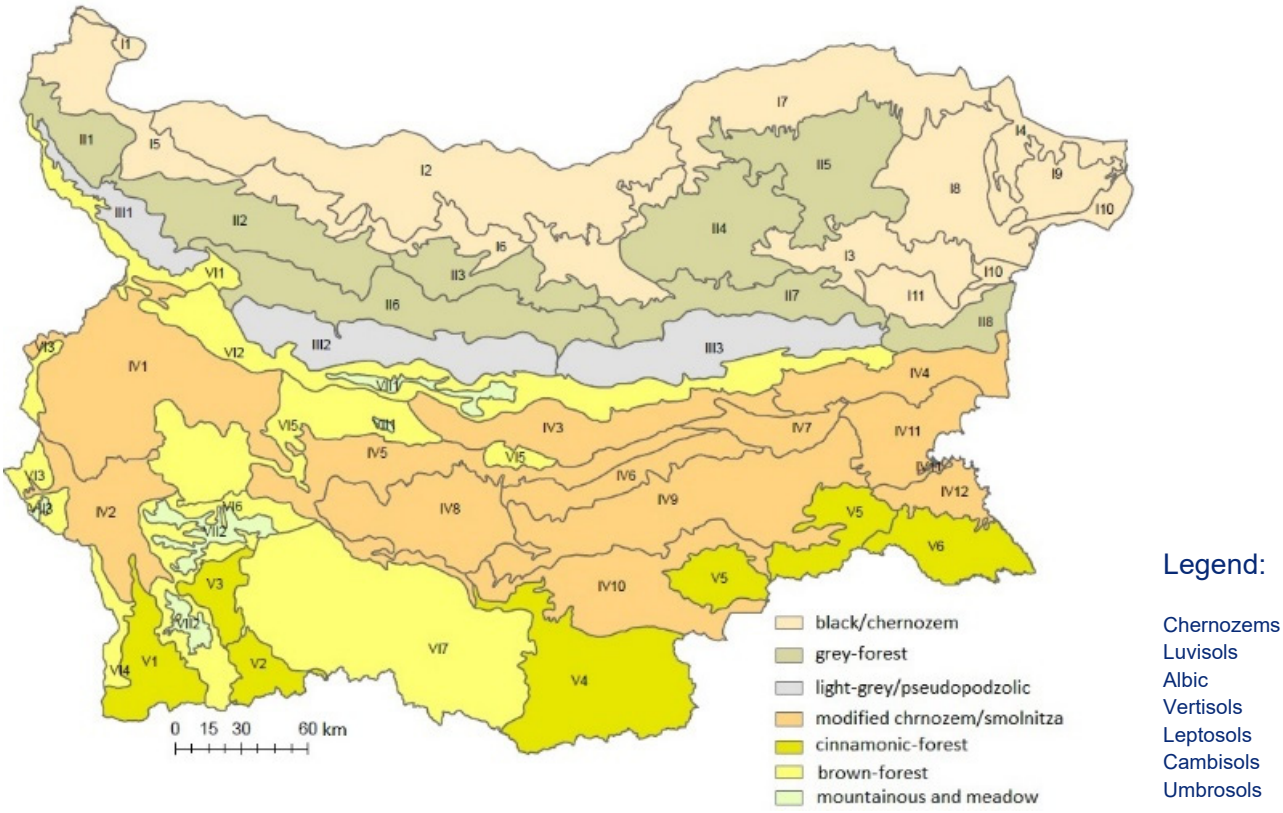
Regarding knowledge transfer it should be noted that the public network of research institutes and experimental stations has remained relatively distant to market needs. The network is still centralized under the Agricultural Academy umbrella and did not have opportunity for public-private partnerships or accumulation of own funding up until 2018 when some law amendments were passed.

## Soil & Climate

Due to the varied terrain and climate, Bulgarian soil map is also quite diversed. More than forty soil subtypes and seven soil groups could be distinguished. Two of them have the largest agricultural significance – Chernozems (black soils) and Vertisols.

Chernozem soils cover large part of North Bulgaria – the Danubian Plain. They are fertile and very fertile soils – having a humus content of between 1.6-4% and high content of phosphoric acids, and ammonia. Chernozems are heavy soils, but at the same time, their large moisture storage capacity is a valuable yield factor. They are favorable for cultivation of many different crop types.

Figure 1: Bulgaria Soil Map




Source: Institute of Soil Science "Nikola Pushkarov", Agricultural Academy

Vertisols cover the plain area of South Bulgaria – the Upper Thracian Plain, Burgas lowlands and the plains of the Southwest. They are also fertile soils, despite ranking behind the chernozems – 60-80 cm of humus horizon and 3-4% humus content in the upper layer. Vertisols are very heavy soils – their volume could differ drastically in case of extreme moisture or drought.

As a rule, orchards are established in areas with poorer soils, while fertile soils are preferred for grain and oilseed production. Main fruit production areas include the areas to the South of the Balkan Mountain range (regions numbered “IV” in the map above, or Vertisols). New large plantations have been developed in North-Eastern Bulgaria (mainly in regions “II”, or Luvisols) in the past 10 years.

Table 1: Main Soil Characteristics

| Soil groups | Texture | | | | pH /KCL/ | | | Humus % | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | <10 | 10-30 | 30-60 | >60 | <4 | 4-4.5 | >5.6 | <1 | 1-2.5 | 2.5-3.5 | 3.5-5 | >5 |
| Vertisols | 0.0 | 1.8 | 44 | 55 | 0 | 34 | 66 | 2 | 54 | 39 | 4.6 | 0 |
| Chernosems | 0.0 | 7.5 | 89 | 3.4 | 3 | 69 | 28 | 1 | 64 | 30 | 4.5 | 0 |
| Rendzina | 0.0 | 12.0 | 74 | 14 | 0 | 13 | 88 | 2 | 45 | 38 | 14.7 | 1 |
| Fluvisols | 0.0 | 37.2 | 47 | 12 | 6 | 33 | 61 | 9 | 62 | 22 | 6.3 | 1 |
| Haplic Luvisols | 0.0 | 17.6 | 76 | 6.2 | 8 | 71 | 20 | 2 | 80 | 16 | 11.5 | 0 |
| Chromic Luvisols | 1.7 | 24.3 | 66 | 8 | 12 | 55 | 33 | 13 | 73 | 14 | 0.8 | 0 |
| Distric Cambisols | 29.7 | 58.8 | 12 | 0 | 40 | 47 | 14 | 40 | 41 | 13 | 6.1 | 0 |
| means | 1 | 17.8 | 71 | 10 | 4 | 41 | 56 | 3 | 53 | 37 | 6.2 | 0 |

Source: Executive Environment Agency, T. Boyadzhiev

Despite the relatively small area, Bulgaria has quite divers and complex climate. The country belongs to the temperate climate zone with the largest part of its territory been under continental influence. The winter is usually characterized by abundant snowfall, while a Mediterranean influence brings hot and dry weather in summer. The Black sea softens both effects in the territory nearby the coastline. Mountains and plains, acting like barriers and corridors, could make sharp weather contrasts in relatively small regions. The two geomorphological formations with the most significant climate impact are the Balkan mountain – being a barrier between the North and South part of the country, and Danubian Plain – providing access to continental climate influence.

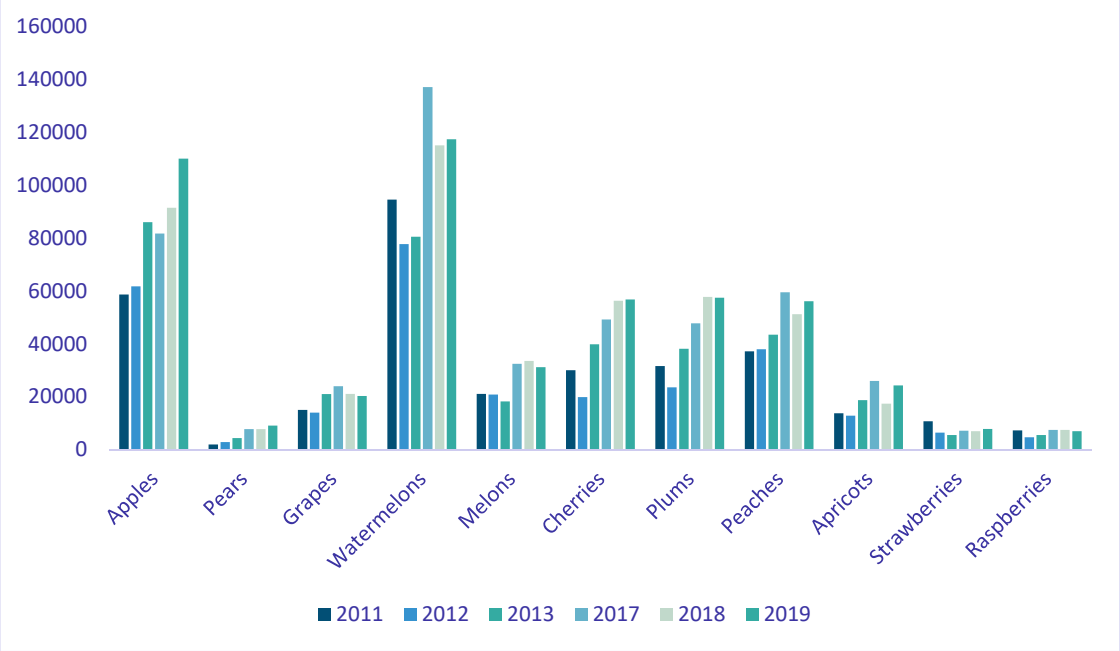
The average precipitation in Bulgaria is approx. 620-640 mm per year. Some of the most important agricultural regions receive less than 500 mm – Northeastern Bulgaria (Dobrudzha), parts of the Thracian Plain and coastal zones. The territories around north mountain slopes usually receive above average precipitation. Precipitations in most parts of the country have strong seasonality. For North Bulgaria – minimum in February and maximum in May/June. For the Thracian Plain – minimum in February and August/September and maximum in winter and May/June.

Thus, crops can suffer both from over-precipitation in spring and severe drought in summer. Late spring frosts and hails are also widespread and often do damage to the harvest.

# Market Development & Trends

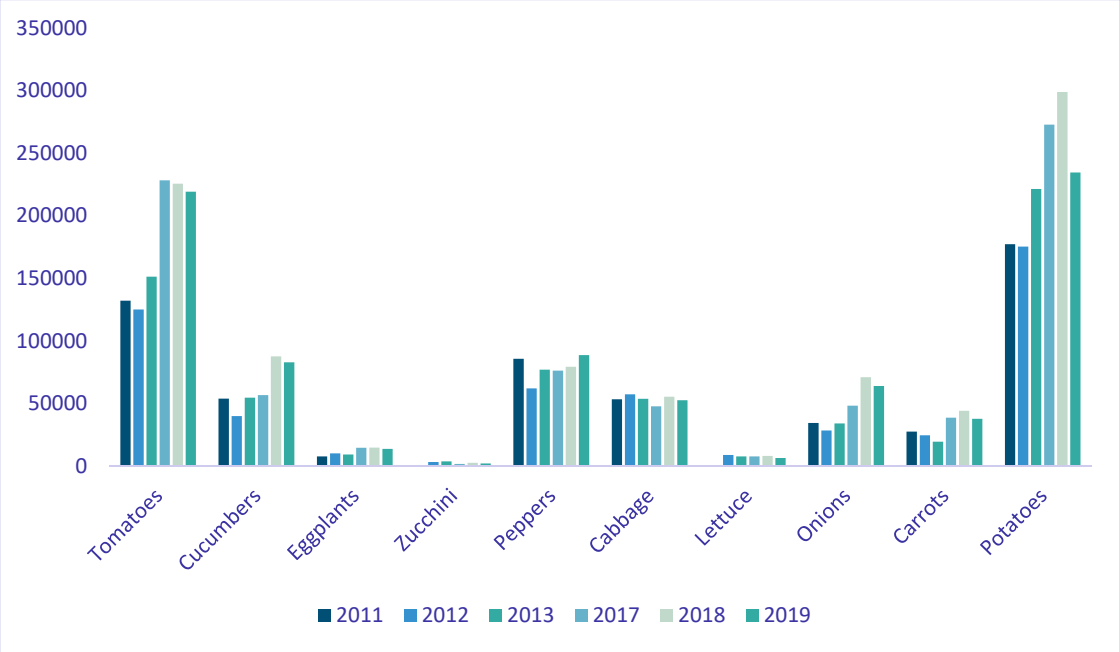
- Internal demand for major F&V categories has increased twofold during the last ten years with very few exceptions.
- Household consumption has been the main driver behind pears, berries, and grapes market growth.
- Larger processing capabilities led to an increase in apple, cherry, peach, and tomato demand.
- Bulgaria witnessed a 44% increase of tourist visits during the past decade which also led to a growth in demand in some categories.

Figure 2: Bulgarian Market for Fruits (MT)




Source: own calculations based on Ministry of Agriculture, Food & Forestry (MAFF) data

Figure 3: Bulgarian Market for Vegetables (MT)




Source: own calculations based on MAFF data

Supply growth during the period lagged behind demand. As a result, production still cannot meet demand in 16 out of 19 seasonal products (medium figures for the 2018-2020 period):

Table 2: Bulgaria Self-sufficiency rate in major F&V categories:

| Fruits | Self-sufficiency % | Vegetables | Self-sufficiency % |
|---|---|---|---|
| Raspberries | 101% | Cabbage | 87% |
| Plums | 99% | Potatoes | 85% |
| Cherries | 98% | Cucumbers | 78% |
| Apricots | 83% | Eggplants | 78% |
| Watermelons | 81% | Peppers | 70% |
| Melons | 79% | Tomatoes | 67% |
| Strawberries | 68% | Lettuce | 62% |
| Peaches | 58% | Carrots | 57% |
| Apples | 50% | Onions | 52% |
| Pears | 47% | | |

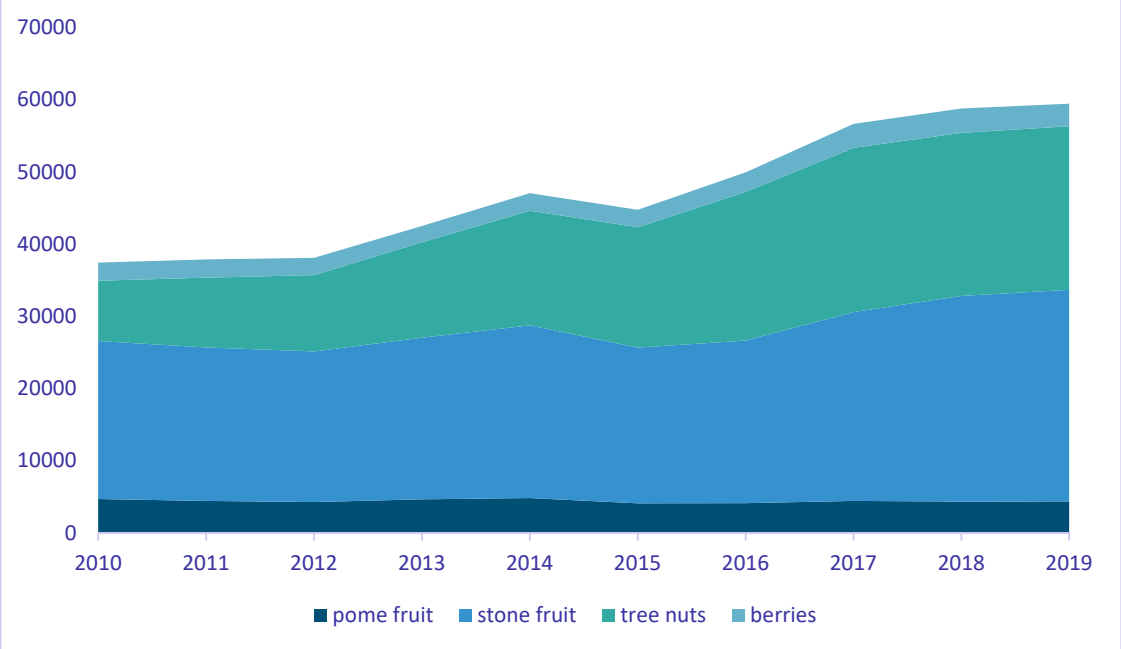
Source: own calculations based on MAFF and ITC data

# Fruit Production

- Fruit growing is rapidly expanding in area, but production needs intensification and variety renewal, as well as investments in post-harvesting handling and marketing.

Tree fruit growing area has been expanding over the past ten years by a 5% cagr. Tree nuts witnessed the most rapid expansion, followed by stone fruits (especially plums and cherries). The produce from the latter is going mainly for processing. Bulgaria is the **second largest global supplier** of **provisionally preserved cherries** and ranks **number twelfth in dried prunes**. The country is 13th largest global supplier of frozen raspberries.

Figure 4: Orchards Area (ha)

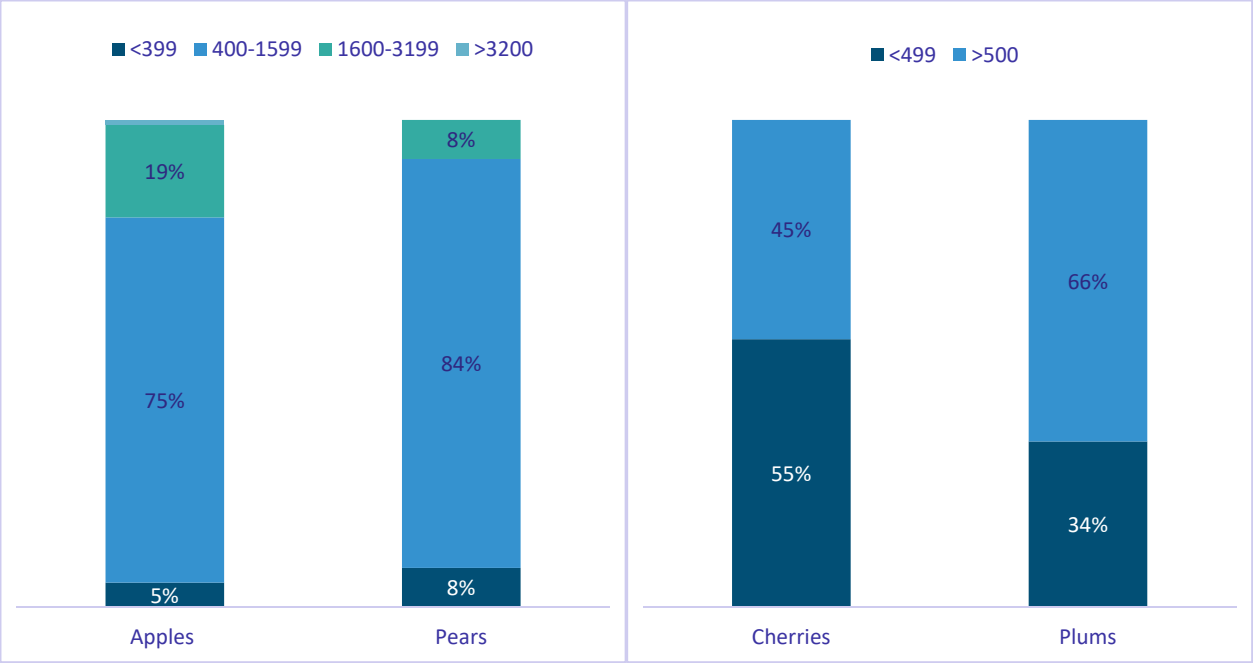



Source: SFA

The average area of a tree fruit farm is 11 ha. Orchards are mainly extensive and varietal structure – relatively outdated and quite inconsistent. Smaller holdings have poor post-harvesting handling and lack marketing organization. Produce is picked by hand and harvesting costs are climbing every year.

All these factors make it difficult to supply enough produce for fresh market, meaning that most of the produce goes for processing. Producers fall into the trap of increasing harvesting costs at relatively low farm-gate prices.

Figure 5: Orchard density (trees per hectare)




Source: MAFF

Table 3: Main Fruit Varieties in Bulgaria

| Apples | share | Pears | share | Cherries | share | Plums |
|---|---|---|---|---|---|---|
| Florina | 20% | Local butter | 23% | Van | 33% | Stenley – 75% |
| Golden delicious | 18% | Abate Fetel | 20% | Bing | 16% | Others – 25% |
| Granny Smith | 12% | Williams | 18% | Bigaro Burlat | 9% | |
| Red delicious | 6% | Santa Maria | 5% | Kozerska *loc.* | 5% | |
| Others | 44% | Others | 34% | Others | 37% | |

Source: MAFF

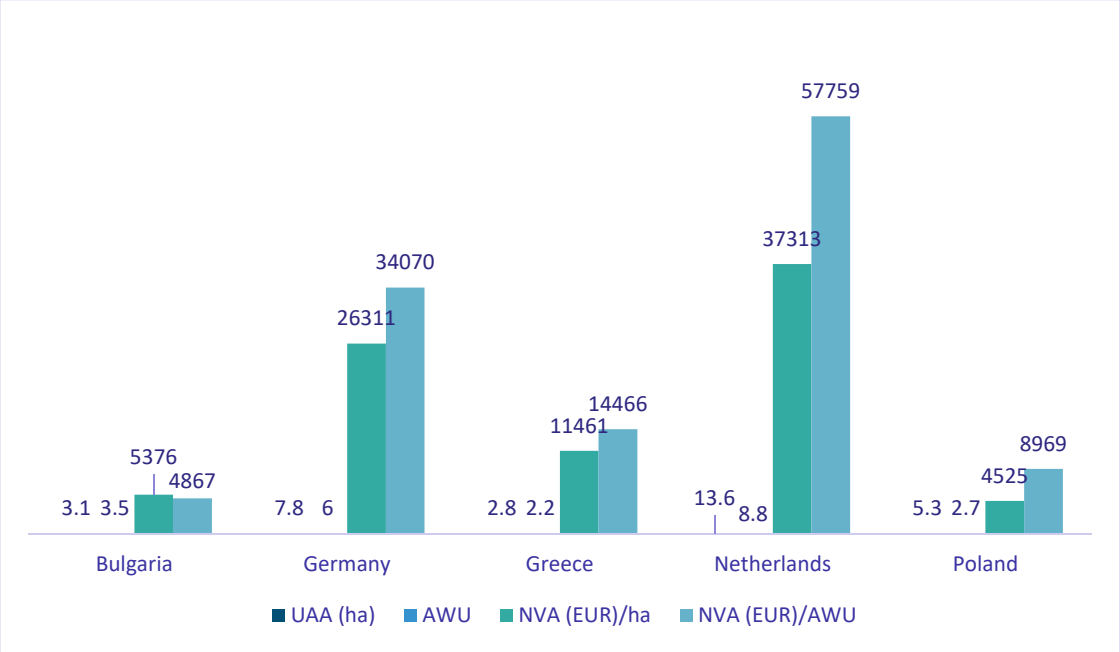
Poor understanding of fresh market requirements and good production practices results in very low level of adoption of Global Gap certification. Certified apple producers are 9, cherries and plums – 8 each, peaches – 7, apricots – 5.
Organic production is well developed. In tree nuts it reaches 50% of area, in cherry and plum growing – 1400 ha each (~12%), and in pome fruits ~12%.

## Vegetable Production

- Vegetable production needs consolidation and significant investment in technology and know-how in order to boost productivity growth and competitiveness.

Vegetable production has suffered most after EU accession. Production value bottomed at € 115 m in 2012 from € 525 m in 2008. Since then, it has been constantly growing by about 10% cagr and stands at € 215 m at current prices as of 2020.
Vegetable growing has much room for improvement. Comparison with some major EU producers and exporters show that Bulgaria production is quite uncompetitive. Average utilized agricultural area by farm is lower than in Poland, Germany, or the Netherlands (by 45% to 338%). The sector is more labor intensive compared to the abovementioned countries. Poor comparative Net Value Added per UAA and AWU indicate need for capital investments.
Organic production is underdeveloped with only 2100 ha fully converted or 0.5% of UAA.

Figure 6: BG, DE, EL, NL and PL Vegetable Farming KPI comparison




Source: FADN

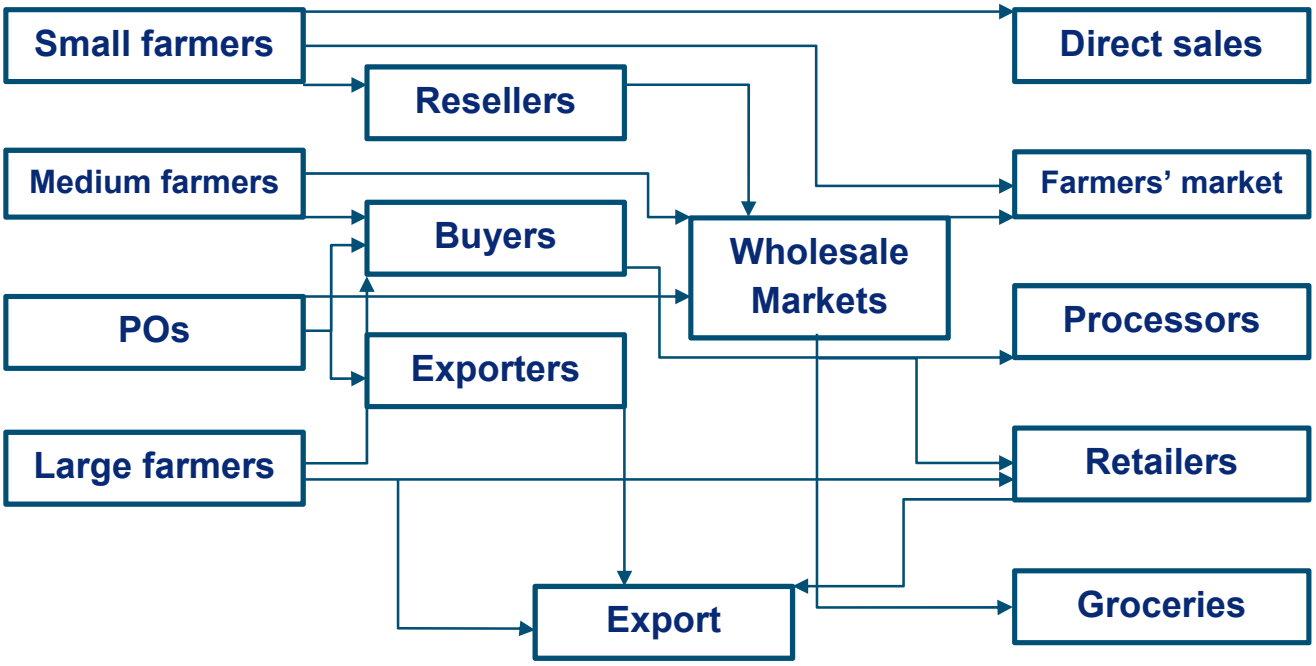
## Market Organization

Unlike many other EU countries Bulgaria does not have a high level of producer organization. There is a total of 10 POs in fruit production, five in vegetable production and six are mixed POs for fruit and vegetables. They cover 7.2% of the fruit area and 4.5% of vegetable area.

There is a high level of mistrust regarding cooperation in the sector that can be traced back to the socialist era when means of production were collectivized by force. This may change with generation renewal. So far, farmers are used to relying on themselves and even participation in branch associations is not widespread.

Market access depends mainly on the individual ability to organize sales. Thus, small farmers rely mainly on direct sales, resellers, or, in some cases on open markets. Medium size farmers usually use the purchase networks established by large processors but also use to sell to buyers (either contractors of supermarkets and groceries, or exporters). Large farmers (>80 ha) usually export directly or work with local retailers.

Figure 7: Market chain



# SWOT (FRUIT)

## Strengths

Favorable climatic conditions.

Strong cherry industry.

Relatively low labor costs.

Strong organic sector.

Government support.

Strategic geographic position between three continents.

## Weaknesses

Low density orchards producing poor quality poroduce.

Outdated varietal structure.

Poor post-harvesting handling and logistics.

Low level of cooperation.

## Opportunities

Available technologies for productivity improvement.

Growing domestic market.

Increase quality and achieve bigger fresh market share.

Developing more organic end products.

## Threats

Strong competition on common EU market.

Climate change - severe draughts, late spring frosts and hail storms.

Increasing quiality standard requirements.

# SWOT (VEGETABLES)

## Strengths

Favorable climatic conditions.

Relatively low labor costs.

Government support.

Strategic geographic position between three continents.

## Weaknesses

Relatively small average size of holdings.

Low productivity per UAA and AWU.

Low level of cooperation.

Lack of production standard certification.

Lack of know-how for organic.

## Opportunities

Available technologies for productivity improvement.

Growing domestic market.

Traditions and capacity in processing.

Potential for development of organic production.

## Threats

Strong competition on common EU market.

Climate change - severe draughts and hail storms.

Increasing quiality standard requirements.

Increasing labor costs.

# Key Players

**Production**

Horticultural production in Bulgaria is represented by 257 farms over EUR 100,000 SO (Standard Output) and 395 farms between EUR 50,000 and EUR 100,000. They are almost equally distributed between fruit and vegetable growing with a slight prevalence of the latter. The rest of the sector is comprised of thousands relatively small, family farms.

As already mentioned, there are a total of 21 POs – 10 in fruit growing, 5 in vegetable and 6 mixed for F&V.

1. **Bulgarian Peach** is the largest PO by number of farmers (47). The PO covers 250 ha of peaches and apricots in the region of Sliven, which renowned for its peach production.
2. Fruktalina is a producer group from North-Eastern Bulgaria that grows apples, cherries, apricots, and grapes at 100 ha. Its members are Global Gap certified and sell to Lidl Bulgaria.
3. **Bulgar Plod** is a PO from South-Western Bulgaria specialized mainly in cherry production.
4. Yablena Natura & Partners is a PO – the largest Bulgarian producer of organic apples and pears. It is present in most of the retailers in the country and has Global Gap certification.
5. **Gradinar Group** is a producer group.
6. Dunav plod **(Danube Fruit)** is a producer group from the Silistra region (NE Bulgaria), famous for cherries, apricots, peaches, and grapes production. It covers 120 ha of orchards.
7. **Orchard Group Karnobat** is a PO from Karnobat (SE Bulgaria). Its members grow pome and stone fruits on > 400 ha.
8. **Sunny Fruits Bulgaria** is a PO registered in 2019.
9. **Green Fruit BG** is a PO registered in 2019.
10. BulApple is a PO that covers seven farmers from South central Bulgaria, specialized in the production of apples and plums. Total area is 67 ha.
11. **Trakya Valley** is a PO of vegetable farmers.
12. **Ideal Partners** is a PO of vegetable farmers.

13. **Veggie Frost** is a PO in Northern Bulgaria.
14. **Zar Group** is a PO in Northern Bulgaria which members grow carrots, onions and other vegetables on 700 ha.
15. **All Brands** is a PO in the Ruse region (Northern Bulgaria). Its members grow carrots, cabbage, and onions.
16. **Sakar Mellon Farm** is a PO from South Eastern Bulgaria.
17. **Fruit Logistic** is a PO from South central Bulgaria. Its members grow plums and other F&V which are exported to the Czech republic, Austria and Germany.
18. Semele is a PO of four producers growing different fruit and vegetable crops on 130 ha in South central Bulgaria.
19. Happy Fruits is F&V PO that supplies apples, cherries, table grapes, cabbage, lettuce, and herbs. Its members are Global Gap certified and are approved Lidl Bulgaria supplier.
20. **Thracian F&V** is a PO from South central Bulgaria.
21. **Agroecoselect** is a PO of four producers from the region of Plovdiv. Its members grow and market tomatoes, cucumbers, lettuce, cabbage, spinach, onions, melons, and strawberries.

Recently Aron, one of the oldest and largest buyers of F&V in Bulgaria developed a program for sourcing of fresh produce. It covers more than 200 ha of 20 different categories and includes farmers from all over the country that comply with Global Gap. Aron supplies all major retailers in the country, including Kaufland, Lidl, METRO, T Market and Fantastico.

Table 4: Top 20 Vegetable Producers by Amount of Coupled Support for 2020

| Company | Address | Hectares | Production |
|---|---|---|---|
| Greenhouse Gimel | Sofia | 32 glass + 50 open | Cucumbers, tomatoes, peppers, eggplants, zucchini, salads, cherries |
| Domato Crop | Rakovski | 400 | Tomatoes |
| Greens | Parvomay | 24 glass + | Cucumbers, tomatoes, peppers |
| Agriplanet | Rakovski | 230 | Tomatoes |
| Interagro Sliven | Sliven | 230 | Cucumbers, tomatoes |
| “Tzar Samuil” COOP | Petrich | 220 | n/a |
| Agrarika Strandzha | Burgas | n/a | n/a |
| Agrologic | Samokov | | Potatoes |
| ST “Yordan Velichkov-Vladi” | Sofia | Glass + open | Cucumbers, tomatoes, onions |
| Agra star 2015 | Hisarya | Glass | n/a |
| ST “Ganka Taneva” | Petrich | Glass | n/a |
| Vesina 62 | Yambol | 110 | Potatoes, onions, garlic |
| Dimitrovi 2002 | Samokov | 110 | Potatoes |
| Melgi | Sofia | Glass | Tomatoes |
| ST Venko Giuzelev | Burgas | Glass | n/a |
| GNC | Plovdiv | Glass | n/a |
| Agrocommerce 98 COOP | Hisarya | Glass | Eggplants, tomatoes, cucumbers |
| Greenhouse Petrov dol | Varna | Glass | Cucumbers, tomatoes |
| Greenhouse Sandasnki | Sandanski | 13 glass | Tomatoes, cucumbers, gherkins |

Source: SFA, Internet

Table 5: Top 20 Fruit Producers by Amount of Coupled Support for 2020

| Company | Address | Hectares | Production |
|---|---|---|---|
| Shans – 92 | Burgas | 350 | Stone fruits, pome fruits |
| ST ISM 91 – Isa Sali | Dobrich | 150 | Stone fruit, pome fruits |
| Niva – 93 Coop | Silistra | 130 | Stone fruits |
| ST Ignat Monev | Silistra | n/a | n/a |
| ST La Rey – Ivan Dimov | Sitovo | n/a | n/a |
| Evro 2002 | Silistra | 120 | Stone fruits |
| Jump Fruit | Loznitza | n/a | n/a |
| Dimitar Chaushev | Plovdiv | n/a | n/a |
| Srebren Produckt | Straldzha | n/a | n/a |
| Doyan Agro | Sofia | 90 | Pome fruits |
| Dimitrinka Stoyanova | Popovo | 81 | Berries (field + glass) |
| National Producers Ass. | Tutrakan | n/a | n/a |
| Agrola Ecoinvest | Ruse | n/a | n/a |
| Shatrovo – 94 Coop | Bobov dol | 80 | Stone fruits |
| Diva Agro | Stara Zagora | 80 | Stone fruits |
| ST Hristo Nikolov | Plovdiv | 75 | n/a |
| Agrispa | Stara Zagora | 73 | Stone fruits |
| Ecoprodukti | Sliven | 132 | Stone fruits, Nuts |
| Edinstvo Coop | Burgas | 60 | n/a |
| Sirio BG | Plovdiv | 60 | Stone fruits |

Source: SFA, Internet

# Identified Needs for Innovation and Technology

## A quantitative study among decision-makers in farms

- F&V growing has increasing capital needs for investment in new technologies and know-how. The ad hoc survey found that frost and hail protection, followed by pest monitoring, automated irrigation & fertigation, sorting & calibrating equipment have the highest potential for market penetration.

*Objectives: To understand the needs for innovative technologies among farmers, we conducted a dedicated research among decision-makers. The goals of the study are to reveal the level of familiarity with innovative technologies among farmers, their needs related to these technologies, their openness to adopting them, the benefits they expect from innovative technologies, and the barriers to adoption.*

*Methodology:*

- *The survey was conducted among a list of 300 farmer that were preselected by size of operation criteria. The list includes largest recipients of Coupled Support for Fruit based on State Fund Agriculture data.*
- *The survey was prepared in Google Forms and delivered by email. Response rate was 14%. Of all respondents 66% are specialized in fruit growing, 5% are specialized in berry production, 12% are specialized in vegetable growing and 17% are mixed fruit, berry and vegetable growing.*
- *The interviews were conducted with a questionnaire specifically designed to address the objectives of the project. The average interview length was about 15 minutes.*
- *The study covered the following technologies: frost protection technologies, pest monitoring, automated irrigation / fertigation, data collection software, farm management software, traceability technologies, sorting and packing, new crop varieties.*

*Respondent profile:*
*Three quarters of all respondents are farm owners (76%); the rest are managers of farms (12%) and other personnel (still with decision-making power)*
*Age: 8% of all respondents are <30 years of age, 19% are 30-39, 24% are 40-49, 38% are 50-59, and 11% are 60 or over.*
*Education: 65% of all respondents have master's degree, 20% bachelor's degree, 5% colleague and 10% high school degree.*

***Survey results:***

- ***Attitudes towards innovative technologies***
  - **Automated frost protection** is the technology that appears to hold the highest potential for near future growth:
    - It is one of the currently least adopted technologies
    - The interest towards it and the share of farmers who consider adopting it is mid to high
    - Farmers claim to be familiar with the technology, which means that there would be less of a need to educate farmers to its benefits
    - It is the technology which the highest share of farmers would adopt immediately if there were no barriers (e.g. financial or others)
  - **Hail protection** and **Pest monitoring systems** are also technologies with high potential for near-future growth.
    - Both are adopted by comparatively few farms
    - Both are among the technologies most farmers consider adopting in the future.
  - **Automated irrigation with fertigation** also holds a high growth potential, which might be to some extent limited by its higher adoption rate (higher in comparative terms – in absolute ones its adoption is relatively low (about a third)).
  - **Precision fertigation/spraying** and **Calibration & sorting machines** are two other technologies a lot of farmers consider adopting. Their growth rate is likely to be lower compared to the technologies just discussed, as

- The adoption of these technologies is one of the highest among all.
- Too few farmers consider adopting these technologies immediately – i.e. if there were no obstacles it is not these technology that they would go for. This indicates that while valuable, if given a choice, farmers would first tackle other challenges. Unless offered at very attractive terms for Precision fertigation/spraying and Calibration & sorting machines farmers would probably first adopt other technologies.

- The rest of the technologies appear to have limited potential for near-future growth as indicated by the low to moderate level of interest towards them, and the relatively lower share of farmers who consider adopting them.

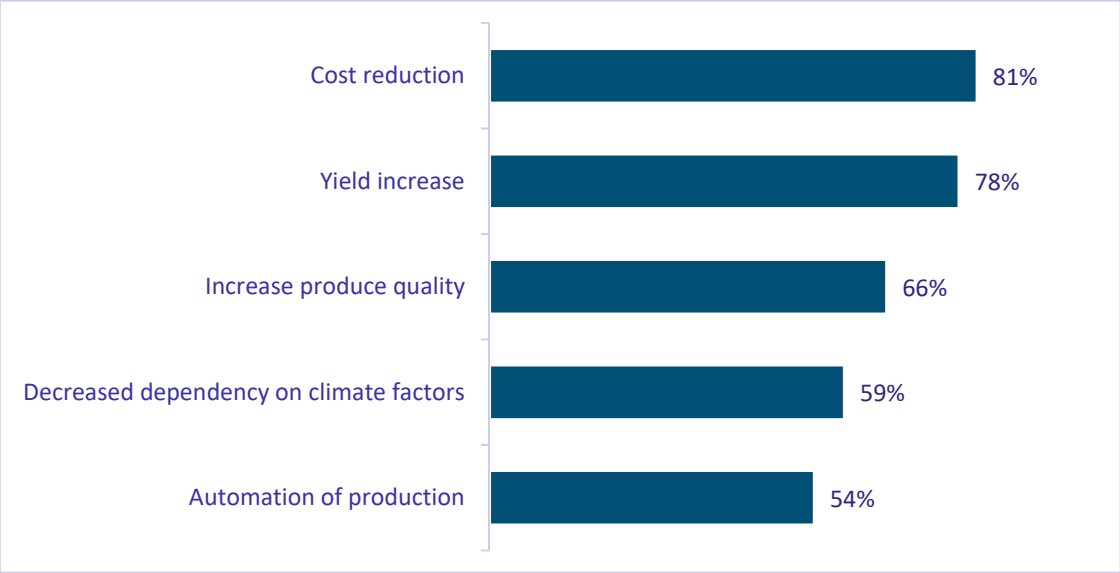
Table 6: Comparison of the evaluated technologies by subjective demand indicators*

| | **Level of adoption**** | **Interest** | **Consideration** | **Adopt immediately** |
|---|---|---|---|---|
| | % who have adopted | % Extremely interested | % who consider adopting, among those who have not adopted yet | % who would adopt immediately if there were no obstacles |
| Automated frost protection | 11% | 51% | 57% | 56% |
| Automated irrigation with fertigation | 32% | 61% | 76% | 51% |
| Hail protection (net, gun, other) | 18% | 55% | 65% | 33% |
| Pest monitoring system | 16% | 41% | 74% | 39% |
| Precision fertigation/spraying | 38% | 58% | 82% | 10% |
| Automated scaling & packing of produce | 26% | 55% | 47% | 8% |
| Farm management software | 11% | 37% | 45% | 0% |
| Calibration & sorting machine | 36% | 47% | 55% | 18% |
| Meteo station | 22% | 26% | 53% | 8% |
| Traceability software | 19% | 37% | 25% | 3% |
| Data collection software | 17% | 37% | 42% | 8% |

** Color coding traces technologies from highest potential for adoption (dark green) to lowest (dark red)*
*** Lower level of adoption implies higher market potential. Higher interest/consideration/adopt immediately rate shows higher market potential.*

- **Benefits of innovative technologies:**
  - The benefits of the new technologies are widely recognized by farmers, which is another indication for their openness towards them.
    - About 80% of the farmers consider innovative technologies to be beneficial for cost reduction (the cost side of business) and yield increase (the revenue side of business).
    - Another 66% acknowledge innovative technologies' role in increasing produce quality, and 59% - in decreasing dependency on climate factors (e.g. lower risk).

Figure 8: The benefits of innovative technologies

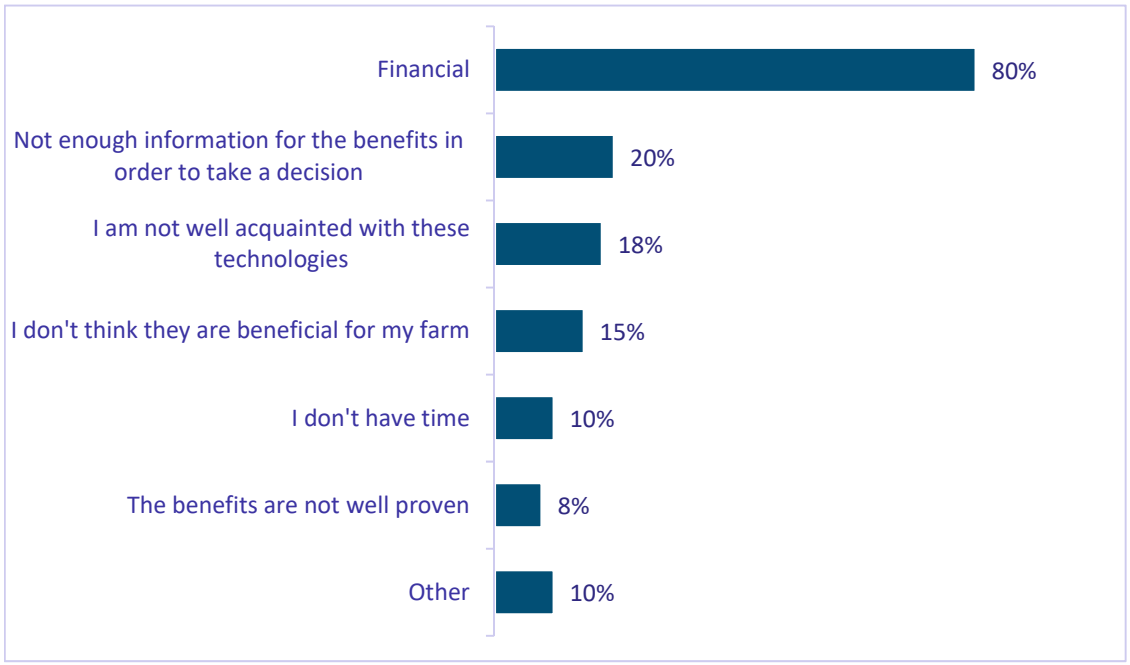



Based on all 41 respondents
Question wording: What are the three main benefits of the beforementioned technologies, according to you?

- **Barriers in front of the adoption of innovative technologies:**
  - The single major barrier to the adoption of innovative technologies mentioned by farmers is the financial limitations.
  - Much fewer farmers have not adopted these technologies for lack of information or understanding of the benefits.

- While the financial challenge would be difficult for vendors to tackle, there is a readiness on the side of farmers to adopt new technologies. The question for farmers is not whether to adopt them or not – the question is how to afford them.

Figure 9: The barriers facing technology adoption



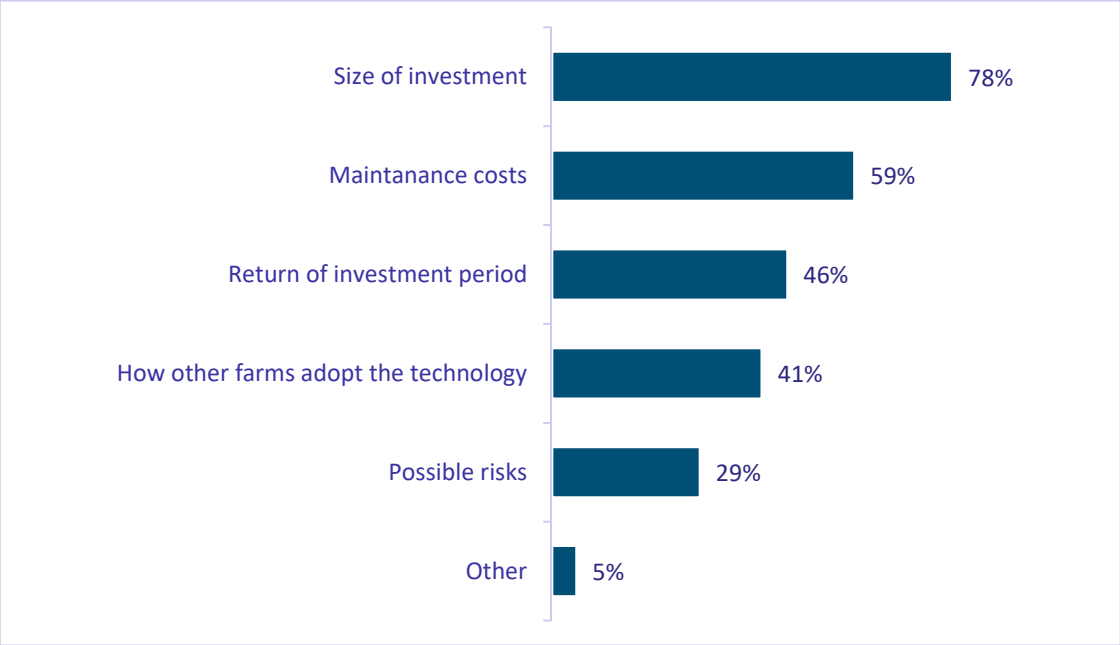

Based on all 41 respondents

Question wording: What are the main reasons for you not to adopt the beforementioned technologies in your farm so far?

- **Information needs and channels:**
  - Considering that the biggest barrier in front of technology adoption is financial, the information most farmers need in relation to innovative technologies is cost related – the size of investment (78%) and the maintenance costs (59%).
  - A considerably high number of farmers would also like to receive information about the return-on-investment period (46%).
  - Information on how other farms adopted the technology is needed by less farmers (41%); even less are interested in the possible risks (29%)

- The vast majority of farmers receive information for innovative technologies from the internet. Friends/colleagues, producers/distributors, and business association are also widely used source of information. It is the information that farmers acquire through these channels that will impact their attitudes towards innovative technologies.

Figure 10: What information do farmers need?



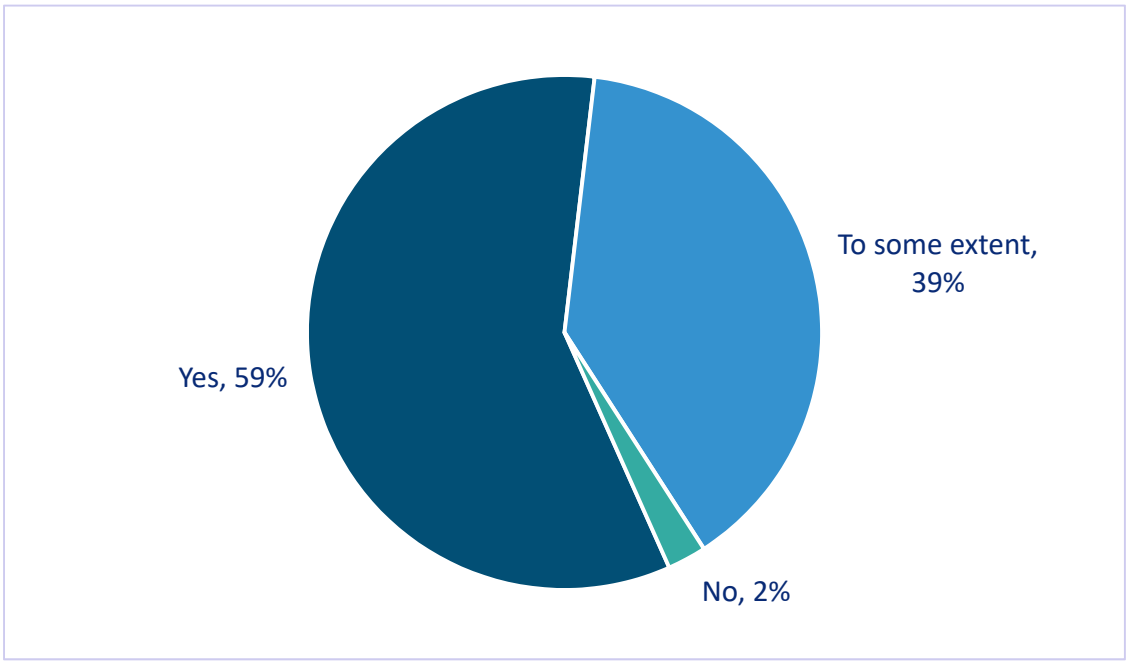

Based on all 41 respondents

Question wording: What kind of information would be useful in deciding to implement the beforementioned technologies

- ***Crop varieties:***
  - Close to 60% of all farmers claim to keep themselves informed about the newest crop varieties in their domain of work. Another 40%, while not that actively, also try to keep up with the latest developments.
  - On overall level, seeds/propagation material from Italy (34%), Bulgaria (20%), and the Netherlands (20%) is considered the best one.

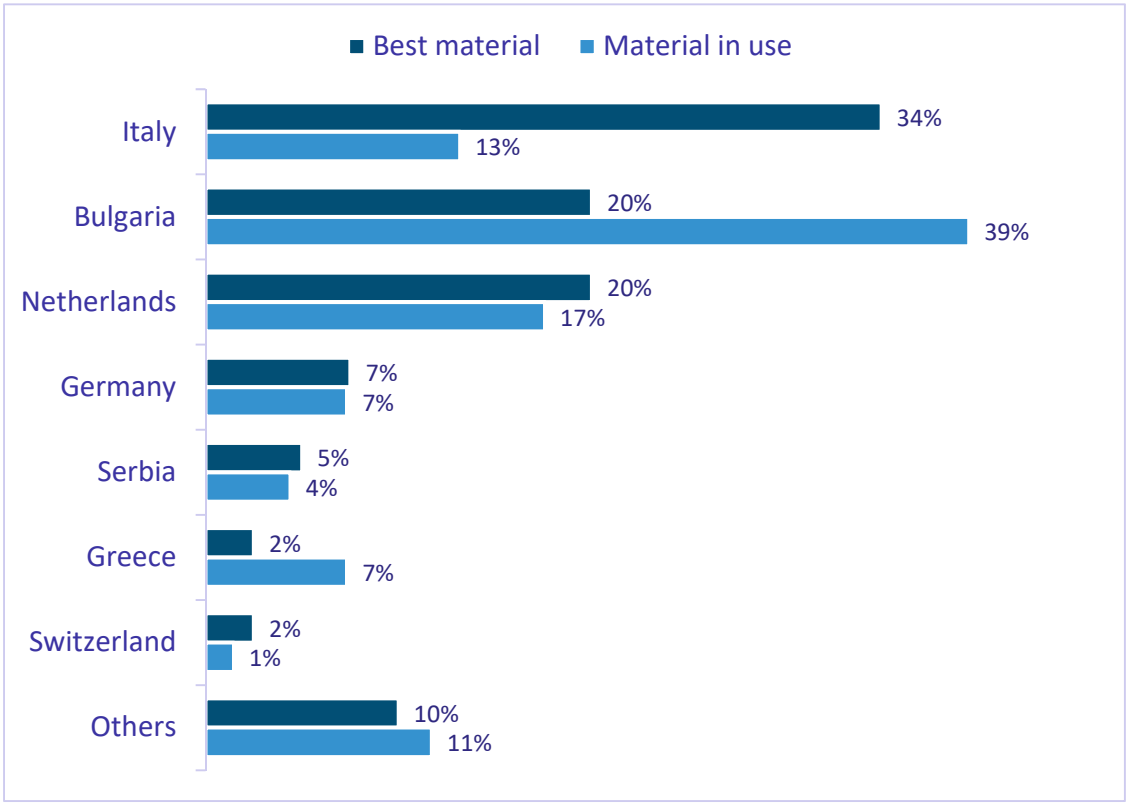
- Most probably for financial reasons, results for the material-in-use differ considerably from this – seeds/propagation material from Bulgaria is the most widely spread one (39%), followed by the Netherlands (17%), and Italy (13%).
- Results for which propagation material is the best vary significantly between producers of fruits-vegetables-mixed farms (see below)

Figure 11: Do farmers keep themselves informed about the newest  latest crop varieties in their domain?




Based on all 41 respondents
Question wording: Do you keep yourself informed about the newest crop varieties in your domain of operation?

Figure 12: Seeds / propagation material perception of quality by country of origin and material in use by origin




Based on all 41 respondents
Question wording: Where can the best producers of seeds / propagation material in your domain of operations be found? / What is the origin of the seeds / propagation material in your farm?

- The survey results, looked at from the lens of ***fruits vs vegetables vs mixed farms,*** indicate that the latter two groups are at a higher level of business maturity compared to fruit producers. This indicates that the potential for innovative technology adoption is higher among producers of vegetables/mixed farms.
    - Producers of vegetables and mixed farms claim to keep themselves informed with the newest crop varieties to a higher extent (78%) than fruit farms.
    - Opinions of the two groups are markedly different as to which countries provide the best seeds/propagation material. While propagation material from Italy is the best one, according to fruit growers (41% vs 11% among

producers of vegetables or mixed farms), for producers of vegetables or both fruits and vegetables, the best material provided by the Netherlands (44% vs 13% among fruit producers).

- The adoption of all innovative technologies is higher among producers of vegetables or mixed farms, compared to fruit growers.
- While the financial barrier is the number one obstacle to innovative technologies' adoption across all types of farms, fruit growers are more likely to say they are also not well acquainted with these technologies than producers of vegetables or mixed farms.

# Funding Opportunities

**How to support investments in innovation**

- Funding for innovation and investments is available through various channels, EU CAP being the most prominent. Bank credit is also an option, and its significance is increasing.

## CAP support till 2022 and through 2030

The main source of finance is the European Common Agricultural Policy with its two Pillars. Under Pillar I (Direct Payments) all Bulgarian farmers are eligible to € 150/ha. Fruit and vegetable growers receive additional coupled support at an amount from € 450/ha to € 1000/ha depending on the crop and the size of the farm. Eligible crops are cherries, plums, apricots, peaches, apples, pears, strawberries, raspberries, table grapes, melons, watermelons, tomatoes, cucumbers, peppers, eggplants, carrots, cabbage, potatoes, onions, and garlic. Support is higher for the first 30 ha of a farm and lower for the hectares after 30. Greenhouse producers of tomatoes and cucumbers receive additional coupled support at the amount of € 8700/ha.
**Total allocations** for **coupled support** account for **€ 40m a year** distributed evenly between fruit and vegetable growing. This policy will remain in place until the end of 2022. Coupled support will continue to be implemented through the new programing period 2023-2030, and although exact figures are not yet published it seems clear that the budget will at least stay within the same limit. However, a few policy changes are being discussed during the procedure for adoption of Bulgaria Strategic Plan. Those are as follows:

- Support for fruit will be limited by the age of the orchard.
- Vegetable producers will have to provide documents proving that certified seed material has been used in accordance with the size of the planted area.
- Coupled support for tomatoes, cucumbers, peppers, gherkins, and eggplants will be provided only to irrigated land.
- Additional coupled support scheme for F&V production in mountain areas is to be introduced.

- Additional coupled support scheme for the greenhouse production of strawberries and raspberries is to be introduced.

Rural development measures (Pillar II) are more suitable to foster modernization, namely M 4.1 “Investments in physical assets”. Under M 4.1 farmers and groups of farmers can apply for up to € 1m by presenting a business plan and are eligible for up to 60% subsidy. Fruit and vegetable growing are considered priority sectors and get higher ranking compared to field crops. Eligible costs include irrigation, frost protection, anti-hail nets and precision agriculture solutions. Call for project proposals are expected to continue through 2022. **The total amount of available funding for 2021 and 2022 under the RDP is € 880m.**

**The RD envelope for Bulgaria for the next programing period is € 2b** which represents a 13% decrease compared to 2014-2020. Around 40% of the budget is expected to be allocated to M04 “Investments in physical assets”. The new programming period will continue to favor F&V producers, among others. A slight difference might occur in the level of financing which will probably be cut to 30% for larger investment projects.

Suppliers can benefit indirectly from both types of support – direct and project based. However, there is one measure under the RDP with impact on innovation – EIP groups (M16). EIP-AGRI Operational Groups are intended to bring together multiple actors such as farmers, researchers, advisers, businesses, environmental groups, consumer interest groups or other NGOs to advance innovation in the agricultural and forestry sectors. The maximum amount of total eligible costs for one applicant for one project under the procedure is € 450 000. The maximum amount of current costs has an intensity of 100%, while the direct costs necessary for the implementation of the innovative project, have an intensity of 60%. These direct costs are financed in the form of depreciation costs, and their total value may not exceed 20 percent of the eligible costs.

Priority is given to innovative projects contributing to the application and dissemination of new products, processes, and practices in one of the following areas:

1.1. Increasing the productivity in the economy and efficient use of resources.

1.2. New products and services to expand market opportunities for primary agricultural production.

1.3. Biodiversity, ecosystem services and soil functionality and Natura 2000.
1.4. Production of quality and safe food and healthy lifestyle.
1.5. Effective and efficient water management in agriculture and protection from the harmful effects of water in agricultural lands.
According to IOF 2020 EU funding for the development of precision farming technologies is mainly provided under Horizon 2020 Societal Challenges 2. In addition, the ICT strand of the H2020 program (under whose scope falls the IoF2020 project) foresees numerous calls for proposals with regards to data-enabled business models.

## Banking Sector

Access to capital considerably improved with the increasing amount of EU support for Bulgarian agriculture. Aggregated loans of the sector increased 2.5 times in the past decade reaching € 1.2b in 2020. Top 5 banks in terms of asset exposure to agriculture hold ~70% of the market. Those are UniCredit Bulbank (Italy), Raiffeisen Bank (Austria), ProCredit Bank (Germany), DSK Bank (Hungary) and United Bulgarian Bank (Belgium). Dutch banks are not present on Bulgarian market.
There is no specialized agri bank in the country, the sector being serviced by universal banks. Over half of the credits are working capital loans with direct payments used as a collateral. Credit products lack sophistication. Project financing is rarity if not for the RDP.

## Role of EBRD

Role of EBRD in the country is limited regarding agriculture. The institution committed over € 740m to support Raiffeisen Leasing and Procredit Bank to increase MSMEs' access to finance in 2015-2019 period but what part of that money went into the sector is not known. Main focus during the period was energy efficiency and infrastructure.
In 2020 EBRD and Lidl Bulgaria launched a joint initiative for financing agricultural producers to get Global Gap certification. The total amount of the project was € 85 000 of which Lidl secured € 25 000. The program aimed to include 15 agricultural producers throughout the country.

# Recommendations

## The ideal trajectory and next steps

Targeting & Establishing of Consortium

Dissemination of the results of the Market Scan among potential interested parties needs to be done in order to elaborate on business opportunities in Bulgarian horticultural sector. Media coverage followed by an online seminar might be a good channel for targeting audience. The following table provides a clear overview of identified needs by sub-sector.

Table 7: Identified needs by sub-sector

| BG sectors | Identified needs | | | | | | |
|---|---|---|---|---|---|---|---|
| | Frost protection | Hail protection | Pest monitoring | Automated Irrig & Fert. | Precision Fert/spray | Planting material | Packing / calibrating |
| Tree fruits | √ | √ | √ | √ | √ | √ | √ |
| Berries | | | √ | √ | √ | √ | |
| Field veget. | | | √ | √ | √ | √ | √ |
| Greenhouse | | | √ | √ | √ | √ | √ |

Source: Farm survey, interviews

We recommend the consortium (cluster) approach to be used based on selected crop (e.g., blueberries, cherries, greenhouse peppers/egg plants/cherry tomatoes, etc.). The cluster should include companies able to provide a turn-key technological solution for the advertised crop, preferably including marketing of end produce as well. Investment in field research and knowledge transfer will make the consortium more visible among customers.

Potential partners & local coordinator

Hiring a local coordinator may be vital. Bulgarian partner can lead through initial legal formalities, will break the language barrier, and can facilitate networking by large. The local coordinator will easily track funding options and arrange access to different financial instruments. This approach will also eliminate cultural differences between

supplier and customer. It can also prove successful when dealing with local authorities.
Local coordinator can lead communication and marketing activities on behalf of the cluster, set up connections with interested parties and potential partners among branch or producer organizations.
Formal presentation of intentions in front of the Ministry of Agriculture and Food should be enough as a first step. Local administration can come handy and prove effective and even accommodating for initial set up of operations. Sectoral associations can be engaged. However local POs and opinion leaders among farmers can prove best partners for field trials and demonstrations.

Building the network, communication activities
A shortlist of interested parties shall be compiled to build a successful communication strategy. It must include strong digital presence but must also engage local farmers / influencers as they are also a preferred information channel in the sector.

Local presence & Boosting potential
The establishment of a demonstration center is always a good advertisement but is usually hard to support in the long term. This is why we would recommend a pilot project on a real farmer's field to be implemented as a start. A virtual showroom presenting newest technology solutions shall be established as well.
Marketing strategy addressing local specifics must be developed to foster sales. It should include local agronomists, experts, and opinion makers. Seminars and open field days are very successful ways for building momentum.

# Influencer Analysis

**Who is making the difference in the sector**

- Successful farmers and independent experts are often the most preferred channel used by suppliers to establish a business case, while branch associations are used mainly for their contact network.

Sectoral organization is mediocre. There are more than 10 branch associations, none of which can claim national or subsector representation. Among the most prominent of them are the following:

1. National Horticultural Union which unites F&V producers from different regions of the country. It run a few promotional programs and established a not very successful web-based marketing platform for fresh produce called Gradinaria.
2. Union of Danube Fruit Growers claims to unite around 300 farmers from North Eastern Bulgaria with a total area of 2300 ha of orchards.
3. National Association of Potato Producers
4. Bulgarian Association of Greenhouse Producers – covers 64 greenhouse producers with 272 ha.
5. Association Bulgarian Pepper includes 135 members, among which 116 farmers and 23 processors. Production area is claimed to be 2000-2300 ha.
6. Bulgarian of Raspberry and Berry Producers

There are also a few organic producer associations.
All these organizations are active participants in the political dialogue shaping the agricultural policy of the government. Most of them also organize trade missions, exhibitions, and open field days with suppliers of different production inputs. Others are more or less fictious organizations looking for publicity. Their direct outreach, however, must be explored case by case in order to establish fruitful partnership.
Most suppliers prefer to make business cases using successful farmers and experts from the scientific circles. Open field days and seminars are the probably the most successful marketing channel, while media coverage remains the most popular.

The most common names commenting on F&V topics in media:

## *Nikolay Valkanov*

*Founder and CEO of InteliAgro*

InteliAgro is Bulgarian think-thank dedicated to agribusiness. Mr. Valkanov organizes Bulgarian fresh produce forum InteliFresh for three consecutive years now.

# Google results: 15 400

## *Svetlana Boyanova*

*Founder and CEO of Institute for Agrostrategies and Innovations*

Mrs. Boyanova is former Deputy Minister of Agriculture. She is among the founders of Bulgarian Digital Innovation Hub, part of the European network Smart Agri Hubs.

# Google results: 9 820

## *Eng. Kuman Kumanov*

*Fruit Growing Institute*

Professor Kumanov is specialized in systems and technologies for irrigation of fruit crops with emphasis on micro-irrigation (drip and micro-spraying), fertigation, pestigation and others. He has led a number of seminars.

# Google results: 7 740

## *Eng. Krasimir Kumchev*

*Agroconsultant & Founder of Agroproduct Group*

Mr. Kumchev is agronomist and producer with >30 years of experience in fruit production.

# Google results: 7 240

## *Dr. Stoilko Apostolov*

*“Bioselena” Foundation*

Mr. Apostolov works for the development of organic and sustainable agriculture in Bulgaria on behalf of Bioselena Foundation (founded by FIBL – Switzerland).

# Google results: 5 880

## *Valeri Velev*

*Owner and CEO of “Rozita 98” Ltd*

Mr. Velev is a leading vegetable producers in Bulgaria. He hosts Open Field Days of the Pepper in his farm in Gorni Dabnik. Mr. Vasilev is member of the Management Board of the National Horticultural Union in Bulgaria

# Google results: 3 480

## *Mariana Miltenova*

*Chairman of National Horticultural Union*

Mrs. Miltenova has over 30 years of experience in agriculture and food sector. She is media present mainly on public policy topics.

# Google results: 3 610

## *Nikolay Kolev*

*Chairman of Danube Fruit Growers Union*

Mr. Kolev is a farmer from North Eastern Bulgaria. He grows 35 ha apples, pears and peaches orchard. He is one of the founders of the Danube Fruit Growers Union and its chairman since 2015.

# Google results: 2 680

## *Bozhidar Petkov*

*Chairman of Bulgarian Association of Raspberry Producers*

Mr. Petkov is also a farmer, producer of raspberries.

# Google results: 2 180

# Competitor Analysis

## The landscape of agri tech suppliers

General Overview

The landscape of Bulgarian supply market for horticulture solutions is quite competitive. Many well-established world brands are represented by official dealerships or distributors. This is the most preferred way for doing business in Bulgaria by foreign companies. Main competitors for Dutch business on Bulgarian market in the domains of interest are:

Table 6: Competition in different domains of interest to NL suppliers

| Domain of interest | Main Competitors |
|---|---|
| Vegetable seeds | IT, DE, US |
| Irrigation | IL, IT |
| Greenhouse constr. | IL, DE, SP |
| Frost protection | NZ |
| IoT | BG |

*Source: Own research*

There are 3907 registered vegetable seed traders in Bulgaria. 993 are the registered potato seed traders. A total of 2295 companies are registered as fruit propagation material traders. Most of those are farmers whose main activity is agriculture, but they also trade in small quantities of seed or propagation material from their own fields.

Seeds

Netherlands' companies are well represented in Bulgaria. Main foreign competitors are French and German potato seed producers. There are also many local producers who sell to smaller farmers, as well.

Table 7: Main potato seed suppliers

| Company | Headquarter | Representative |
|---|---|---|
| Agrico | Sofia (2005) | AGRICO |
| Slovbul | Plovdiv (2003) | GERMICOPA DANESPO AGROPLANT S.I.A.C. |
| Norika | Sofia (2009) | NORIKA |

Source: Internet

Table 8: Main Vegetable seed suppliers

| Company | Headquarter | Representative |
|---|---|---|
| Syngenta | Sofia (2008) | syngenta |
| ABS | Sofia (2003) | Seminis agroTiP ROYAL SLUIS agroGene |
| Slovbul | Sofia (2003) | SUPERIOR |
| Agrara | Varna (2013) | Sgaravatti TOKITA Since 1917 SAKATA PASSION in Seed verisem |
| Profiagro | Sofia (2013) | GRAINES VOLTZ |
| Geosem | Sofia (1990) | Own hybrid seeds ZORZI |
| Opora Zaden | Plovdiv (2000) | ENZA ZADEN |
| Agrogid | Sofia (2001) | Own hybrid seeds |
| Bonero | Sofia (2019) | RIJK ZWAAN |
| Agris | Sofia (2008) | CLAUSE VEGETABLE SEEDS |

*Source: Internet*

## Equipment suppliers

Nik Electronics is the largest precision ag supplier in Bulgaria in terms of net sales revenue (EUR 10M). The company was established in Sofia, Bulgaria in 2002. It is representative of Trimble, Berthoud, Kverneland, Pessl, Valley, Norac, Casella, Startec, Apache sprayers, Precision Planting and Horizon Agriculture. The company also provides software solutions for farm management and data collection. Nik

Electronics is focused mainly on field crops (grain, oilseeds, and field vegetables, like potatoes, carrots, etc.). Horticulture is not core business. However, the company expands very aggressively.

Agrodrip was established in Plovdiv, Bulgaria in 2007. It is the largest supplier of complex solutions for horticulture, including irrigation, hail protection, greenhouses, machinery, and equipment. It partners with Ferrari, Naan Dan Jain, Palaplast, Advanced Plastic Technologies (ATP), Eurodrip, Aytok, Calcon, Antor, ARS, Tehnos, Genap, Wilo. Net sales revenue for 2019 amount to EUR 5M.

Bonero was established in Sofia in 1992. The company sells agricultural machinery, greenhouse, storage and climate control solutions, systems for post-harvesting of potatoes, onions and carrots, sorting and packaging solutions. Bonero represents many European suppliers like EOC Group (Belgium), Ouvrie (France), Porawer and Jeluwerk (Germany), Struik, Tolsma, Knnuben, Capway Group, Kimfror (the Netherlands) and etc. Net sales revenue for 2019: EUR 2.7M.

Datra is representative of European suppliers of machinery and equipment for the food, pharmaceutical and cosmetic industries. It partners with Tomra NV (Belgium) for sorting, FAM NV (Belgium) for cutting of vegetables, Finis BV (Netherlands) for vegetable processing, Pigo (Serbia) for fruit processing, and others. Net sales revenue: EUR 2.5M.

Aquapro is focused on trade, design, delivery, installation and maintenance of irrigation systems. The company is official partner of Izraeli Rivulis Irrigation and Tefen, Finnish Itymic OY, Dutch NPI and Ridder. The company also provides climate control solutions for greenhouses. The company reports EUR 2.2M revenue for 2019.

Aquamat 2000 is another provider of complex solutions for horticulture. The company's products include frost protection (NZ FrostBoss), plastic greenhouses (Ginegar), hydroponics, drip & sprinkler irrigation, hail protection and other. Net sales revenue for 2019: EUR 1.4M.

Polimex-Sofia is a drip irrigation company, partner of Greek Eurodrip since 1993. It has EUR 1.35M net sales revenue for 2019.

Visser Opora works in design and construction of greenhouses – glass and polyethylene structures, heating, ventilation, cooling and air conditioning systems, food manipulation and irrigation. It is representative of Visser Holding Group, Aweta, Curtis Dyna – Fog and Munckhof. Sales: EUR 1.1M.

Novita Prim provides irrigation solutions, planting and harvesting machines and equipment, sorting & packaging, storage, and other solutions. The company represents mainly Italian brands but also Danish, French, Swiss and Spanish: Ocmis Irrigazione, RKD, Sime Idromecanina, Caprari, Scova Engineering, Agricola Italiana, Hortech, Imac di Rondelli, Asa-Lift, Skals, Klim Top and Felco. Net sales revenue: EUR 1.1M.

Telcom operates under the “Aris” brand and provides greenhouse solutions of Plantech Hartmann AG and Rodeca Gmbh Germany. The company reported EUR 1.1 net sales revenue for 2019.

Irrisyst is a renowned irrigation solutions provider, a partner of Israeli Netafim. It also sells Top Greenhouse products. Net sales revenue for 2019: EUR 1M.

Stabil Agro Trade is specialized in irrigation. It is part of Stabil Group Holding. Net sales revenue for 2019: EUR 1M.

# Regulatory and Legal Obstacles

## Doing Business in Bulgaria

Bulgaria ranks 61 at ease of doing business among 190 countries with a score of 72.0, according to the World Bank 2020 report. For comparison, the Netherlands rank 42 with a score of 76.1, while neighboring EU countries like Romania and Greece rank respectively 55 (73.3) and 79 (68.4).[1] Bulgaria GNI per capita is in the upper middle range with $8,860 in nominal value. GDP per capita (PPP) is Int$24,790, which makes the country the 57th richest in the world.

**BG snapshot*:**

| **Starting a business (rank)** | **113** | **Getting credit (rank)** | **67** |
|---|---|---|---|
| Score (0-100) | 85.4 | Score (0-100) | 65.0 |
| Procedures (number) | 7 | Strength of legal rights index (0-12) | 8 |
| Time (days) | 23 | Depth of credit info index (0-8) | 5 |
| Cost (number) | 1 | Credit registry coverage (% of adults) | 78.0 |
| Paid-in min. capital (% of income) | 0.0 | Credit bureau coverage (% of adults) | 0.0 |
| **Construction permits (rank)** | **43** | **Paying taxes (rank)** | **97** |
| Score (0-100) | 75.9 | Score (0-100) | 72.3 |
| Procedures (number) | 18 | Payments (number per year) | 14 |
| Time (days) | 97 | Time (hours per year) | 441 |
| Cost (% of warehouse value) | 3.4 | Total tax & contribution rate (% profit) | 28.3 |
| Building quality control index (0-15) | 14.0 | Postfilling index (0-100) | 71.2 |
| **Getting electricity (rank)** | **151** | **Trading across borders (rank)** | **21** |
| Score (0-100) | 55.1 | Score (0-100) | 97.4 |
| Procedures (number) | 6 | Documentary compliance (hours) | 1 |
| Time (days) | 262 | Border compliance (hours) | 1 |
| Cost (% of income) | 386.3 | Documentary compliance (USD) | 0 |
| **Registering property (rank)** | **66** | Border compliance (USD) | 0 |
| Score (0-100) | 69.8 | **Enforcing contracts (rank)** | **21** |
| Procedures (number) | 8 | Score (0-100) | 97.4 |
| Time (days) | 19 | Time (days) | 564 |
| Cost (% of property value) | 2.8 | Cost (% of claim) | 18.6 |
| Quality of the land adm. index (0-30) | 19.5 | Quality of judicial process index (0-18) | 10.5 |

** Protecting minority investors (rank 25) and Resolving Insolvency (61) are not included.*
*Source: World Bank*

*International comparison highlights*

**Starting a business**

Bulgaria ranks behind regional rivals mainly due to the number of procedures and time. Regarding cost and minimal capital requirements the country ranks top (99.5 and 100.0 respectively out of 100.0).

**Construction permits**

Bulgaria ranks better than the regional average and is way ahead of neighboring Greece and Romania.

**Getting electricity**

Bulgaria ranks worst in the region together with Romania with time being the main obstacle.

**Registering property**

Bulgaria ranks lower than the regional average but is well ahead of Greece. The number of procedures and the quality of the land administration are main obstacles.

**Getting credit**

Bulgarian ranks lower than the region medium, behind Romania but ahead of Greece.

**Enforcing contracts**

Bulgaria is comparable to OECD countries and way ahead of neighboring Greece. The main problem is credit bureau outreach.

**Protecting minority investors**

Bulgaria ranks higher than the regional average and ahead of all main competitors.

**Paying taxes**

Bulgaria ranks lower than all its competitors and the region as a whole. The largest obstacle is the time needed for interaction with tax authorities. However, total tax and contribution rate as percentage of profit is among the lowest in Europe – 28.3, compared to an average of 39.9 for OECD economies.

[1] https://www.doingbusiness.org/

## Trading across borders

Bulgaria ranks highest in the region with the only exception being Romania. Import to the country is extremely fast and cheap compared to OECD countries.

## Enforcing contracts

Regarding time, cost and quality of the process Bulgaria is comparable to OECD countries.

*General Information*

There are no general investment approvals required for carrying out business in Bulgaria. The formal set-up of a business requires fulfilling certain legal formalities, such as registering with the Bulgarian Companies' Registry. In addition, running a business in certain sectors may require that particular authorization/licenses be obtained before commencing the actual activity.[2]

Most commonly used investment vehicles are a limited liability company (OOD) or a joint-stock company (AD). Other forms, such as limited and general partnerships, or a sole trader are also available and, depending on the case, may be more flexible or suitable for a particular business. Additionally, an investor may resort to other alternatives (not involving the set-up of a separate legal entity) to establish its business presence in Bulgaria like a branch or a representative office. The latter generally does not carry out economic activities, but rather performs marketing or other auxiliary functions.[3]

The minimum share capital is EUR 1 for OOD, divided into one or more shares, while for AD must be at least EUR 25 565.

*Licenses and permits*

Licenses and permits can apply for certain economic activities.

Any natural person or legal entity who trades in seed or planting material within the meaning of the Seed and Propagation Material Act shall be subject to registration with the Executive Agency for Variety Testing, Approbation and Seed Control (EAVTASC). An application form must be submitted by the trader or their authorized

[2] **Doing Business in Bulgaria by EY, 2020**

[3] **See above**

representative to the territorial unit of EAVTASC, where the headquarters of the trader are. Registration process takes 14 days.[4]
There are no special requirements for trading with agricultural machinery and equipment.

*Intellectual and industrial property*
Bulgaria is a signatory to major international conventions and treaties on intellectual property rights (IP rights), thereby ensuring an effective shield which protects IP rights created or held in Bulgaria.
Licensing agreements and assignment agreements (with regard to patents, trademarks, and copyright) are not heavily regulated and thus, trade in and exploitation of IP rights is
expanding in the absence of overly burdensome regulatory or practical constraints. Licensing agreements should observe only minimum mandatory legal requirements. Furthermore, Bulgarian law allows IP rights to be contributed in kind to the share capital of Bulgarian companies subject to independent valuation, which is an alternative to the classical assignment or licensing of IP rights.[5]

*E-business*
The regulatory framework of e-commerce on consumer protection, data privacy, electronic identification, among others, is harmonized with the EU legislation and is sufficiently flexible to allow cross-border trade through servers or online platforms maintained in Bulgaria.[6]

*Land ownership*
Restrictions to all natural persons and legal entities apply when acquiring and possessing ownership of agricultural land in Bulgaria. The following categories of natural persons and legal entities can become owners of agricultural land in Bulgaria:

[4] https://iasas.government.bg/wp-content/uploads/2020/08/Naredba-13-ot-31-mart-2004.pdf
[5] Doing Business in Bulgaria by EY, 2020
[6] See above

- Natural persons: (i) who have resided in Bulgaria for more than five years; or (ii) are self-employed farmers — nationals of another Member State of the EU, who wish to establish themselves and legally reside in Bulgaria, and are registered under the BULSTAT Register Act, regardless of the years of residence or establishment preceding the acquisition.
- Legal entities: (i) which have been established in Bulgaria for more than five years; or (ii) legal entities registered in Bulgaria for less than five years, only if their shareholders (natural persons and legal entities) have resided or have been established in Bulgaria for more than five years

Some entities are not allowed to acquire and possess agricultural land under any circumstances:

- Companies where the shareholders are companies directly or indirectly registered in preferential tax treatment jurisdictions
- Companies where the shareholders are foreign natural persons or legal entities: (i) residents of or established in countries which are not members of the EU or of the European Economic Area (EEA); or (ii) residents of or established in countries with which Bulgaria has not concluded an intergovernmental agreement setting forth specific terms and conditions for acquiring agricultural land
- Joint-stock companies which have issued bearer shares

Possession of agricultural land in breach of the statutory restrictions may result in penalties imposed on the owner.[7]

[7] **Doing Business in Bulgaria by EY, 2020**

# Risks

**What can go wrong**

Bulgaria is an EU and NATO member. The country's currency (Bulgarian lev) is pegged to the EUR (EUR 1=BGN 1.95583) and as of July 2020 is part of ERM II. Bulgaria is expected to join the eurozone in 2024.

Bulgaria ranks relatively high in Transparency International's Corruption Perception Index (44 place, occupied also by Hungary and Romania). Public opinion and media are very sensitive to the issue and corruption scandals can easily escalate. That is why the high level of corruption perception not necessarily mean one will stumble upon it.

In fact, higher risk of corruption may occur if a company has to deal with privately held monopoly utility services (e.g., electricity), rather than when dealing with public administration.

Probably the highest operational risk when doing business in Bulgaria is the intercompany indebtedness. The average time to receive a payment in Bulgaria was 34 days in 2019 according to EOS "Payment practices in Europe". The same report states that 77% of invoices in Bulgaria are paid on time (80% on average for Eastern Europe), 19% are delayed and 4% are not paid at all (compared to 2% for Eastern and Western Europe).

# Market Scan Team

*Authored by:*

**InteliAgro**
Contacts:
Nikolay Valkanov – CEO
nikolay@inteliagro.bg
www.inteliagro.bg

*Commissioned by:*

**Agricultural Department of the Netherlands Embassy**
Contacts:
Arie Veldhuizen – Agricultural Counsellor for Romania, Bulgaria and Republic of Moldova
BKR-LNV@minbuza.nl

Doriana Milenkova – Agricultural Advisor
T +359 2 81603810
SOF-LNV@minbuza.nl
www.agroberichtenbuitenland.nl/landeninformatie/bulgarije

*Sponsored by:*

**Netherlands Enterprise Agency**
**www.RVO.nl**