



Vegetable production in Bulgaria – harvest 2023

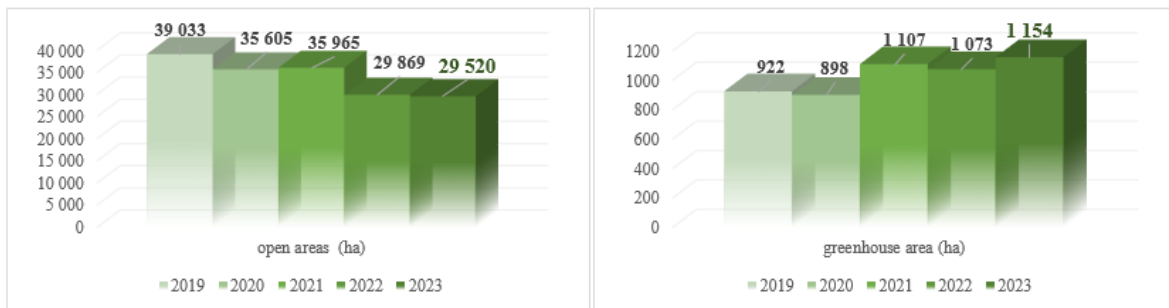
The main area for the production of vegetables in agricultural holdings was 30.7 thousand ha in 2022/2023 crop year. The open area under vegetables accounted to 29.5 thousand ha, of which 29 thousand ha were harvested. The greenhouse area was 1 154 ha. The vegetable production – harvest 2023 amounted to 594 thousand tons, of which 108 thousand tons were greenhouse production. The largest production was potatoes – 119 thousand tons, tomatoes – 116 thousand tons, watermelons – 80 thousand tons, pepper – 52 thousand tons and cucumbers – 50 thousand tons. The production of cultivated mushrooms was 1 656 tons.

Table 1. Main area for vegetable production – harvest 2023

| | Unit of measure | Main area |
|--|-----------------|---------------|
| Open area under fresh vegetables, strawberries and potatoes | ha | 29 520 |
| Greenhouses of glass or other type of hard cover (polycarbonate, etc.) | ha | 297 |
| Greenhouses of plastic cover | ha | 857 |
| Total greenhouse area | ha | 1 154 |
| Total area | ha | 30 674 |

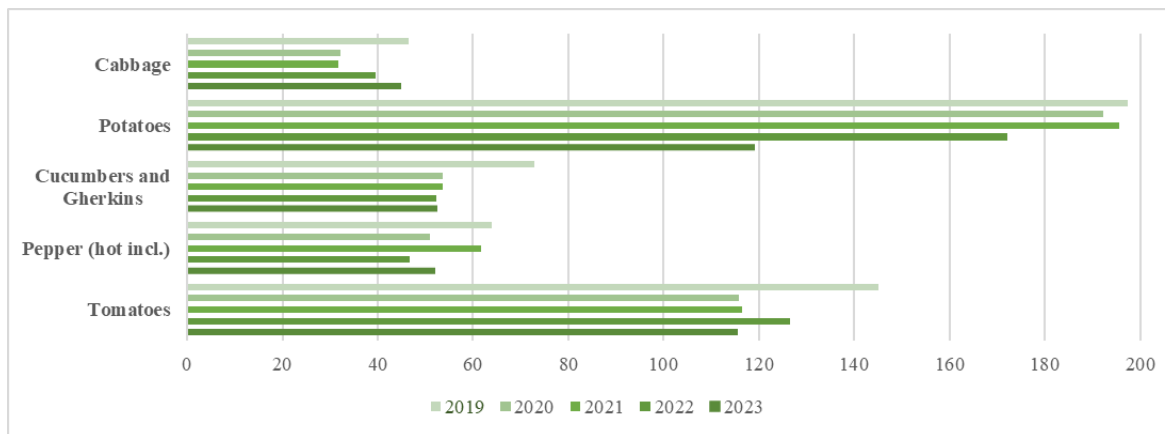
Source: Ministry of Agriculture and Food, Agrostistics Department – Vegetable production survey – harvest 2023

Figure 1. Main area under fresh vegetables, strawberries and potatoes by year



Source: Ministry of Agriculture and Food, Agrostistics Department - Vegetable production survey

Figure 2. Production of main vegetables by year (thousand tons)



Source: Ministry of Agriculture and Food, Agrostistics Department - Vegetable production survey

Table 2. Area, production and average yields of vegetables – harvest 2023

| Type of vegetable | Open area, harvested | Greenhouse area, harvested | Open area, average yield | Production (tons) | | |
|---|----------------------|----------------------------|--------------------------|-------------------|-----------------------|----------------|
| | (ha) | (ha) | (kg/ha) | Open area | Greenhouse production | TOTAL |
| Vegetables cultivated for fruit (melons incl.) | 13 735 | 1 181 | <i>///</i> | 250 794 | 106 534 | 357 328 |
| Tomatoes | 2 540 | 639 | 23 440 | 59 537 | 56 113 | 115 650 |
| Cucumbers | 324 | 389 | 17 293 | 5 603 | 44 528 | 50 131 |
| Gherkins | 128 | c | 18 617 | 2 383 | c | c |
| Eggplants | 357 | 5 | 28 308 | 10 106 | 132 | 10 238 |
| Courgettes and marrows | 154 | 1 | 19 701 | 3 034 | 15 | 3 049 |
| Gourds and pumpkins | 704 | - | 13 271 | 9 343 | - | 9 343 |
| Melons | 2 794 | c | 10 554 | 29 487 | c | c |
| Watermelons | 3 714 | - | 21 575 | 80 130 | - | 80 130 |
| Pepper (hot incl.) | 2 371 | 147 | 19 512 | 46 264 | 5 741 | 52 005 |
| Sweet corn | 649 | - | 7 561 | 4 907 | - | 4 907 |
| Fresh pulses | 610 | 2 | <i>///</i> | 1 710 | 20 | 1 730 |
| Fresh peas | 529 | - | 2 662 | 1 408 | - | 1 408 |
| Fresh beans | 81 | 2 | 3 728 | 302 | 20 | 322 |
| Brassicas | 2 003 | - | <i>///</i> | 47 090 | - | 47 090 |
| Cabbage | 1 847 | - | 24 344 | 44 963 | - | 44 963 |
| Cauliflower | 122 | - | 15 393 | 1 878 | - | 1 878 |
| Broccoli | 34 | - | 7 324 | 249 | - | 249 |
| Leafy and stalked vegetables (brassicas excl.) | 633 | 31 | <i>///</i> | 9 945 | 302 | 10 247 |
| Garlic - green | 73 | 1 | 18 466 | 1 348 | 9 | 1 357 |
| Salads and lettuces | 197 | 22 | 18 391 | 3 623 | 215 | 3 838 |
| Spinach | 36 | 1 | 4 250 | 153 | 5 | 158 |
| Leek | 70 | - | 14 757 | 1 033 | - | 1 033 |
| Onion - green | 133 | 2 | 23 654 | 3 146 | 32 | 3 178 |
| <i>Other leafy or stalked vegetables (asparagus, savory, fennel, parsley, celery, etc.)</i> | <i>124</i> | <i>5</i> | <i>///</i> | <i>642</i> | <i>41</i> | <i>683</i> |
| Root, tuber and bulb vegetables | 3 890 | 1 | <i>///</i> | 51 698 | 17 | 51 715 |
| Onion | 3 016 | - | 12 916 | 38 956 | - | 38 956 |
| Carrots | 446 | - | 21 765 | 9 707 | - | 9 707 |
| Garlic | 266 | - | 4 034 | 1 073 | - | 1 073 |
| Other root, tuber and bulb vegetables (salad beets, turnips, radishes, etc.) | 162 | 1 | <i>///</i> | 1 962 | 17 | 1 979 |
| Other vegetables (okra, etc.) | 407 | - | <i>///</i> | 1 490 | - | 1 490 |
| Potatoes | 7 019 | 5 | 16 973 | 119 135 | 104 | 119 239 |
| Strawberries | 691 | 68 | 5 877 | 4 061 | 1 145 | 5 206 |
| Total: | 28 988 | 1 288 | <i>///</i> | 485 923 | 108 122 | 594 045 |

Source: Ministry of Agriculture and Food, Agrostatics Department – Vegetable production survey – harvest 2023

Table 3. Area, production and average yields of vegetables at NUTS2 – harvest 2023

| Statistical zones & statistical regions | Tomatoes | Pepper (hot incl.) | Cucumbers and gherkins* | Eggplants | Watermelons and melons* |
|--|----------------|--------------------|-------------------------|---------------|-------------------------|
| <i>Open area, harvested (ha)</i> | | | | | |
| Bulgaria | 2 540 | 2 371 | 452 | 357 | 6 508 |
| Severna i Yugoiztochna Bulgaria | 750 | 828 | 279 | 73 | 3 079 |
| Severozapaden | 170 | 167 | 3 | 18 | 352 |
| Severen tsentralen | 164 | 38 | 122 | 3 | 603 |
| Severoiztochen | 126 | 374 | 30 | 32 | 1 525 |
| Yugoiztochen | 290 | 249 | 124 | 20 | 599 |
| Yugozapadna i Yuzhna tsentralna Bulgaria | 1 790 | 1 543 | 173 | 284 | 3 429 |
| Yugozapaden | 151 | 97 | 51 | 46 | 234 |
| Yuzhen tsentralen | 1 639 | 1 446 | 122 | 238 | 3 195 |
| <i>Production, open and greenhouse area (tonnes)</i> | | | | | |
| Bulgaria | 115 650 | 52 005 | 52 514 | 10 238 | 109 617 |
| Severna i Yugoiztochna Bulgaria | 25 199 | 14 642 | 16 811 | 1 552 | 56 901 |
| Severozapaden | 4 066 | 2 113 | 2 917 | 332 | 4 990 |
| Severen tsentralen | 6 652 | 766 | 4 635 | 47 | 10 928 |
| Severoiztochen | 4 416 | 6 559 | 2 585 | 625 | 29 871 |
| Yugoiztochen | 10 065 | 5 204 | 6 674 | 548 | 11 112 |
| Yugozapadna i Yuzhna tsentralna Bulgaria | 90 451 | 37 363 | 35 703 | 8 686 | 52 716 |
| Yugozapaden | 26 427 | 2 537 | 17 710 | 1 133 | 4 409 |
| Yuzhen tsentralen | 64 024 | 34 826 | 17 993 | 7 553 | 48 307 |
| <i>Average yields, open area (kg/ha)</i> | | | | | |
| Bulgaria | 23 440 | 19 512 | 17 668 | 28 308 | 16 843 |
| Severna i Yugoiztochna Bulgaria | 19 188 | 16 011 | 18 226 | 21 514 | 18 481 |
| Severozapaden | 18 747 | 12 413 | 10 333 | 18 389 | 14 176 |
| Severen tsentralen | 15 442 | 11 842 | 17 295 | 15 000 | 18 154 |
| Severoiztochen | 20 810 | 17 155 | 16 867 | 19 531 | 19 575 |
| Yugoiztochen | 20 848 | 17 341 | 19 661 | 28 842 | 18 553 |
| Yugozapadna i Yuzhna tsentralna Bulgaria | 25 232 | 21 391 | 16 866 | 30 123 | 15 374 |
| Yugozapaden | 19 106 | 15 062 | 17 275 | 24 630 | 18 842 |
| Yuzhen tsentralen | 25 797 | 21 816 | 16 694 | 31 185 | 15 120 |
| Statistical zones & statistical regions | Potatoes | Cabbage | Onion | Strawberries | |
| <i>Open area, harvested (ha)</i> | | | | | |
| Bulgaria | 7 019 | 1 847 | 3 016 | 691 | |
| Severna i Yugoiztochna Bulgaria | 1 035 | 611 | 2 106 | 319 | |
| Severozapaden | 516 | 74 | 747 | 67 | |
| Severen tsentralen | 123 | 168 | 131 | 129 | |
| Severoiztochen | 96 | 134 | 68 | 103 | |
| Yugoiztochen | 300 | 235 | 1160 | 20 | |
| Yugozapadna i Yuzhna tsentralna Bulgaria | 5 984 | 1236 | 910 | 372 | |
| Yugozapaden | 4 171 | 321 | 165 | 45 | |
| Yuzhen tsentralen | 1 813 | 915 | 745 | 327 | |
| <i>Production, open and greenhouse area (tonnes)</i> | | | | | |
| Bulgaria | 119 239 | 44 963 | 38 956 | 5 206 | |
| Severna i Yugoiztochna Bulgaria | 18 804 | 14 426 | 29 156 | 1 993 | |
| Severozapaden | 9 910 | 1 515 | 11 384 | 510 | |
| Severen tsentralen | 2 113 | 4 609 | 2 666 | 726 | |
| Severoiztochen | 1 488 | 2 424 | 960 | 638 | |
| Yugoiztochen | 5 293 | 5 878 | 14 146 | 119 | |
| Yugozapadna i Yuzhna tsentralna Bulgaria | 100 435 | 30 537 | 9 800 | 3 213 | |
| Yugozapaden | 73 367 | 7 535 | 1303 | 284 | |
| Yuzhen tsentralen | 27 068 | 23 002 | 8 497 | 2 929 | |
| <i>Average yields, open area (kg/ha)</i> | | | | | |
| Bulgaria | 16 973 | 24 344 | 12 916 | 5 877 | |
| Severna i Yugoiztochna Bulgaria | 18 185 | 23 609 | 13 844 | 5 649 | |
| Severozapaden | 19 205 | 20 459 | 15 240 | 7 433 | |
| Severen tsentralen | 17 179 | 27 435 | 20 351 | 4 535 | |
| Severoiztochen | 15 500 | 18 090 | 14 118 | 5 864 | |
| Yugoiztochen | 17 699 | 25 013 | 12 194 | 5 750 | |
| Yugozapadna i Yuzhna tsentralna Bulgaria | 16 769 | 24 726 | 10 781 | 6 073 | |
| Yugozapaden | 17 587 | 23 547 | 7 945 | 4 422 | |
| Yuzhen tsentralen | 14 888 | 25 139 | 11 405 | 6 300 | |

* The production of gherkins and melons – open area.

Source: Ministry of Agriculture and Food, Agrostatistics Department - Vegetable production survey - harvest 2023

Table 4. Total production (open & greenhouse area)

| Type of vegetable | Harvest 2022 (tonnes) | Harvest 2023 (tonnes) | Change 2023/2022 % |
|-------------------------|-----------------------|-----------------------|--------------------|
| Tomatoes | 126 455 | 115 650 | -9% |
| Pepper (hot incl.) | 46 793 | 52 005 | 11% |
| Cucumbers and gherkins* | 52 267 | 52 514 | 0% |
| Potatoes | 172 209 | 119 239 | -31% |
| Cabbage | 39 590 | 44 963 | 14% |
| Onion* | 27 459 | 38 956 | 42% |
| Strawberries | 5 129 | 5 206 | 2% |

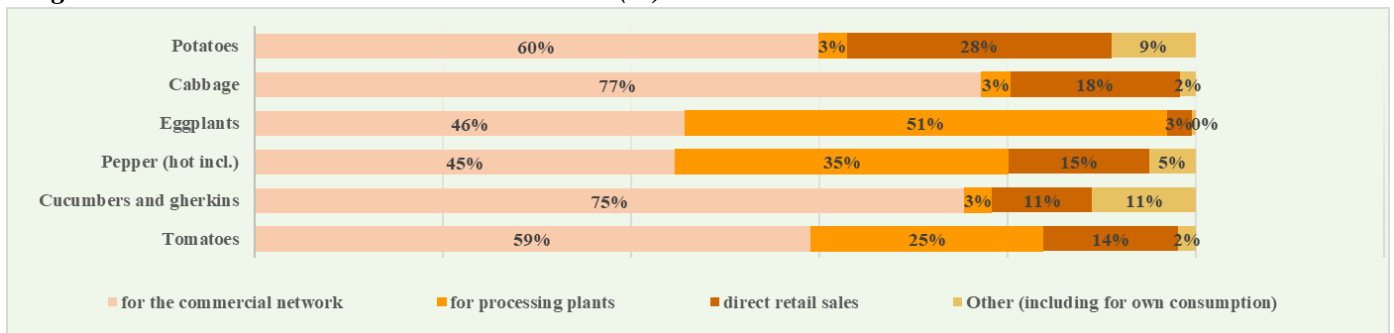
Table 5. Average yields, open area

| Type of vegetable | Harvest 2022 (kg/ha) | Harvest 2023 (kg/ha) | Change 2023/2022 % |
|------------------------|----------------------|----------------------|--------------------|
| Tomatoes | 27 886 | 23 440 | -16% |
| Pepper (hot incl.) | 19 112 | 19 512 | 2% |
| Eggplants | 23 347 | 28 308 | 21% |
| Cucumbers and gherkins | 19 768 | 17 668 | -11% |
| Watermelons and melons | 18 727 | 16 843 | -10% |
| Potatoes | 18 800 | 16 973 | -10% |
| Cabbage | 22 295 | 24 344 | 9% |
| Onion | 11 846 | 12 916 | 9% |
| Strawberries | 6 553 | 5 877 | -10% |

* For the harvest 2023, the production of gherkins and for the harvest 2022 of onion – open area.

Source: Ministry of Agriculture and Food, Agrostistics Department – Vegetable production survey

97% of the production of fresh vegetables, strawberries, potatoes and mushrooms were distributed on the market. The remaining quantities are in stock or were reported as farm losses.

Figure 3. Production distribution – harvest 2023 (%)

Source: Ministry of Agriculture and Food, Agrostistics Department – Vegetable production survey – harvest 2023

Methodological notes

The Vegetable Production Survey – harvest 2023 was conducted by the Agrostistics Department at the Ministry of Agriculture and Food in accordance with the requirements of Regulation (EC) No. 543/2009 of the European Parliament and of the Council and Commission Delegated Regulation (EU) 2015/1557 concerning crop statistics. National characteristics and additional information needs were accounted for.

The survey was conducted in the period from 01.11.2023 to 23.02.2024.

The survey purpose: To provide statistical information on the production of fresh vegetables grown outdoors and in greenhouses. To establish the harvested area by types of vegetables, production and average yields - harvest 2023.

Survey method: The observed farms were determined by random stratified sampling. A threshold was applied above which all units were exhaustively observed.

Method of conduct: The survey was organized by the Agrostistics Department at the Ministry of Agriculture and Food, and implemented by experts in agrostistics from the Regional Directorates Agriculture and employees in the municipal agricultural services.

Geographic scope – the survey covers the territory of the entire country.

Reference period – harvest 2023.

Questionnaire – includes administrative information for holding identification and questions on open and greenhouse area under vegetables, production from open area and from greenhouses, vegetable sales, fertilized and treated area.

Confidentiality – in order to ensure the confidentiality of individual data, some indicators were published in aggregated positions or replaced by "c" (confidential data). These are the cases when:

- There are less than 3 holdings in the considered category;
- One of the holdings in the considered category covers more than 85% of the activity in this category.

The kohlrabi data for 2023 harvest was confidential and not included in the results.

Accessibility of statistical information - the results of the surveys conducted by the Agrostistics Department are published on the Ministry of Agriculture and Food website.

The information is provided to Eurostat and published in the NSI statistical yearbook and statistical directory.

The statistical regions cited in the publication are in accordance with the requirements of the general classification of territorial units for statistical purposes applied in the European Union (NUTS) according to Regulation (EU) № 31/2011. Statistical regions, on second (NUTS 2) level, are as follows:

Severozapaden: Vidin, Vratsa, Montana, Lovech, Pleven;

Severen tsentralen: Veliko Tarnovo, Gabrovo, Ruse, Silistra, Razgrad;

Severoztochen: Varna, Dobrich, Targovishte, Shoumen;

Yugoiztochen: Burgas, Sliven, Stara Zagora, Yambol;

Yugozapaden: Blagoevgrad, Kyustendil, Pernik, Sofia-cap., Sofia region;

Yuzhen tsentralen: Kardzhali, Pazardzhik, Plovdiv, Smolyan, Haskovo.

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