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## Organic Agriculture Worldwide: Key results from the FiBL survey on organic agriculture worldwide 2018

Part 2: Land use and key crops in organic agriculture 2016

Julia Lernoud and Helga Willer

Research Institute of Organic Agriculture (FIBL), Frick, Switzerland © FiBL 2018

#### **Organic Agriculture Worldwide: Key results from the FiBL** survey on organic agriculture worldwide 2018: Part 1: **Global data and survey background**

- Data compiled by the Research Institute of Organic Agriculture FiBL, Frick, Switzerland, based on national data sources and data from certifiers.
- Data as published February 2018 in FiBL & IFOAM Organics International (2018) The World of Organic Agriculture. Statistics and Emerging Trends 2018. Frick and Bonn
- For updates check <u>www.organic-world.net</u>
- This presentation is available online at: <u>http://www.organic-</u> world.net/yearbook/yearbook2018/slide-presentations.html
- Texts and graphs: Helga Willer and Julia Lernoud; Research Institute of Organic Agriculture, FiBL, Frick, Switzerland
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#### **Acknowledgements\***

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International Trade Centre ITC

- Nürnberg Messe, the organizers of the BIOFACH World Organic Trade Fair
- IFOAM Organics International
- 200 experts from all parts of the world contributed to the FiBL survey 2018.

 $\ensuremath{^*}\xspace$  See also disclaimer on last page of this slide show



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Swiss Confederation

Federal Departement of Economic Affairs, Education and Research EAER State Secretariat for Economic Affairs SECO







## The World of Organic Agriculture 2018

The 19th edition of ,The World of Organic Agriculture', was published by FiBL and IFOAM in February 2018.\*

- Contents:
- Results of the survey on organic agriculture worldwide;
- Organic agriculture in the regions and country reports; Australia, Canada, the Pacific Islands, Ukraine, and The United States of America.
- Chapters on the global market, standards & legislations, PGS, policy support, European market.
- Numerous tables and graphs.
- Commodity case studies:
  - Chapter on organic cotton
  - Overview of the state of other Voluntary Sustainability Standards
- The book can be ordered via IFOAM.bio and shop.FiBL.org.
- \*Willer, H, Lernoud, J, (2018) The World of Organic Agriculture. Statistics and Emerging Trends 2018. FiBL, Frick, and, IFOAM – Organics International, Bonn



FIBL ORGANICS

FIBL & IFOAM - ORGANICS INTERNATIONAL THE WORLD OF ORGANIC AGRICULTURE STATISTICS & EMERGING TRENDS 2018





#### Website www.organic-world.net

- **Detailed** statistics in excel format
- Graphs & Maps
- Data revisions
- News and background information

#### **Organic World**

Global organic farming statistics and news





#### **About this presentation**

There are 3 presentations summarizing the key results of the FiBL survey on organic agriculture worldwide 2018 (data 2016). Apart from the global data, key results on crop and on regional data are presented. More information is available at www.organic-world.net

The following three presentations are available at <u>http://www.organic-world.net/yearbook/yearbook2018/slide-presentations.html</u> :

- Part I: Global data 2016 and survey background
- Part 2: Land use and key crops in organic agriculture 2016
- Part 3: Organic agriculture in the regions 2016



#### The 19th Survey on organic agriculture world-wide

The 19th survey on organic agriculture worldwide was carried out by the Research Institute of Organic Agriculture FiBL in cooperation with partners from all around the world. The results were published jointly by FiBL and IFOAM – Organics International.

The survey was carried out between July 2017 and February 2018.

Data were received from 178 countries.

Updated data on area and producers were available for 150 countries.

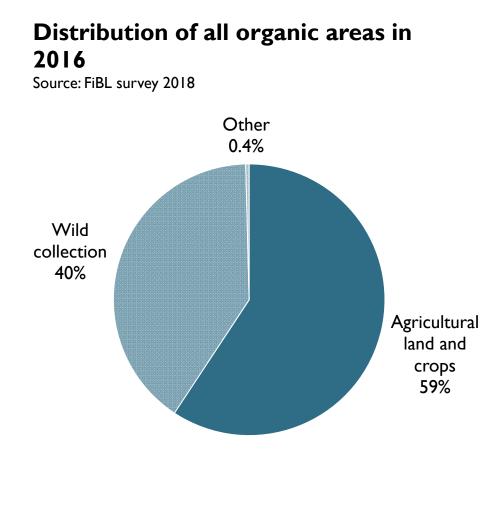
Data was provided by almost 200 country experts (representatives from NGOs, certification bodies, governments, researchers).

The following data was collected: area data (including land use and crop details); producers, other operator types; domestic market values; export and import data; and livestock data (animal heads and production in metric tons);

The results are published in the yearbook "The World of Organic Agriculture 2018" and at www.organic-world.net.



### World: Distribution of organic areas 2016



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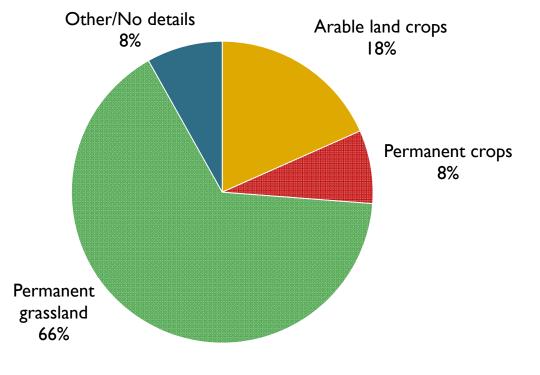
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- Agricultural land (57.8 million hectares in 2016)
  - Cropland
    - Arable land (cereals, vegetables etc.)
    - **Permanent crops** (fruit, grapes, olives ...)
    - Cropland, no details (arable land and permanent crops with no further details)
  - Permanent grassland
  - Other agricultural land
- Non-agricultural areas (39.7 million hectares in 2016)
  - Wild collection/Bee keeping (39.3 million hectares)
  - Forest
  - Aquaculture
  - Grazing areas on non-agricultural land

#### World: Use of organic agricultural land 2016 (total: 57.8 million hectares)

## Distribution of main land use types and crop categories 2016

Source: FiBL survey 2018; based on information from the private sector, certifiers, and governments.





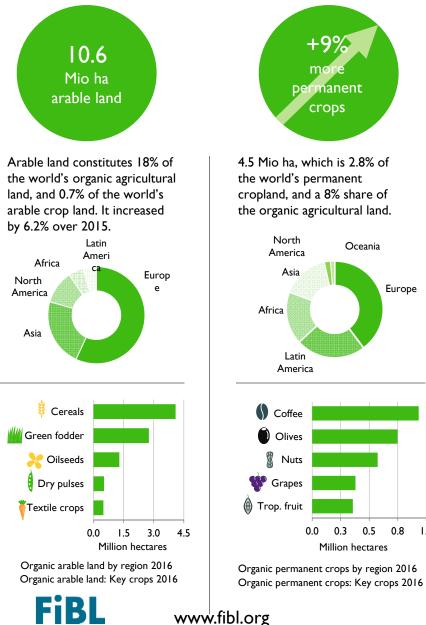
### Main land use types in organic agriculture 2016

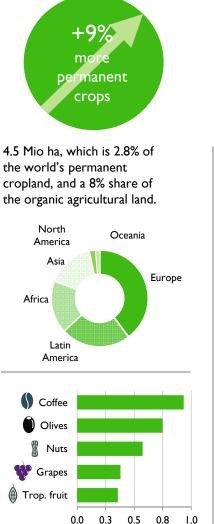
The chart of the share of land use types in the regions shows:

- For a large part of the organic agricultural land in both Africa (11%) and Asia (34%), land use information is not available
- Africa has a large proportion of permanent crops (58%); these are mainly cash crops such as coffee, nuts, olives, and cocoa.
- Europe and North America use about half of their organic agricultural land as grassland, and the other half is arable land. In Europe the share of permanent crops is higher than in North America, mainly due to olives and grapes grown in the Mediterranean countries.
- Latin America has little arable land and permanent crops land compared to the large grazing areas (Uruguay and Argentina). It has a comparatively high share of permanent crops (mainly coffee and cocoa).
- Oceania is characterized by the large grazing areas of Australia. The Pacific Islands
  produce a large range of permanent crops, such as coconuts; New Zealand produces
  a lot of grapes and temperate fruits.

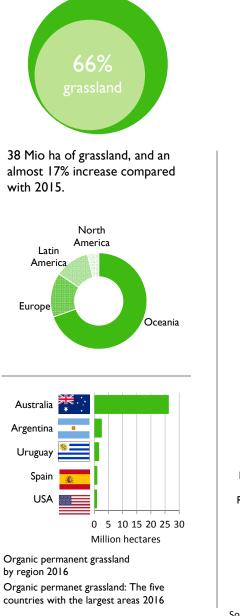


#### WORLD: ORGANIC LAND USE 2016





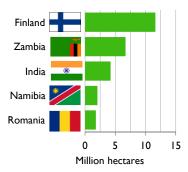
Million hectares



39.3 Mio ha of wild collection

The organic wild collection areas are concentrated in Europe, Africa, Asia, and Latin America.





Organic wild collection by region 2016 Organic wild collection: The five countries with the largest areas 2016

Source: FiBL survey 2018 www.organic-world.net

#### World: Agricultural land use by region in organic agriculture 2016

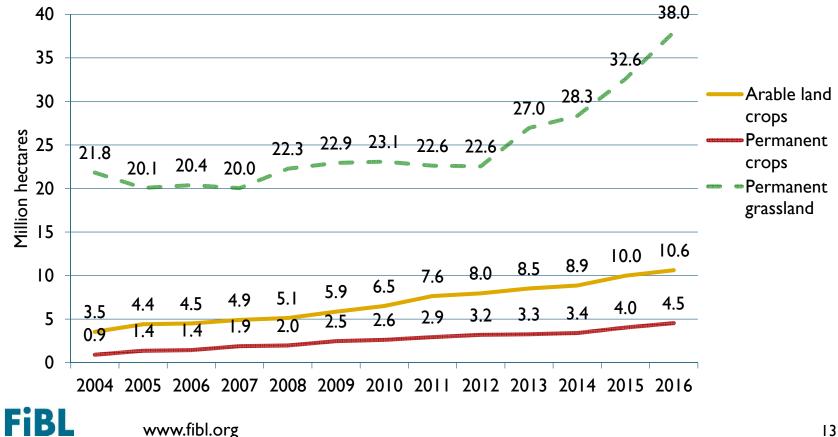
#### 100% Share of organic agricultural land No details 80% Other agricultural land Permanent grassland 60% Permanent crops Arable land crops 40% 20% 0% Africa Asia Europe Latin Northern Oceania America America **FiBL** www.fibl.org

Distribution of main land use types by region 2016 Source: FiBL survey 2018

#### World: Development of land use types in organic agriculture 2004-2016

#### Development of the organic land by land use type 2004-2016

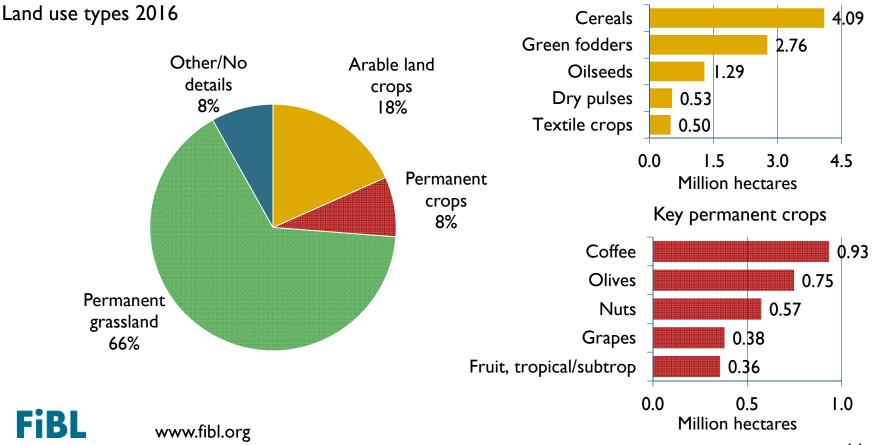
Source: FiBL-IFOAM-SOEL-Surveys 1999-2018



#### World: Use of organic agricultural land 2016 (total: 57.8 million hectares)

#### Distribution of main land use types and crop categories 2016

Source: FiBL survey 2018; based on information from the private sector, certifiers, and governments.

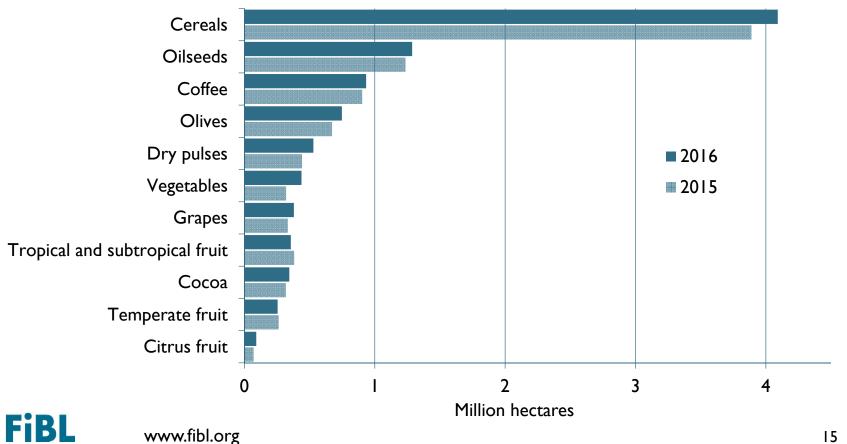


Key arable crops

#### World: Key crop groups in organic agriculture: 2015 and 2016 compared

#### Growth of selected crops between 2015-2016

Source: FiBL survey 2017-2018



## World: Organic grassland/grazing areas 2016

- With a total of almost 38 million hectares, the organic grassland/grazing areas constitute over two thirds or 66 percent of the organic agricultural land.
- The organic grassland/grazing areas account for I.2 percent of the world's total grassland/grazing areas.
- An increase of 5.4 million hectares or over16 percent was reported compared with 2015.
- More than two third of the organic grassland/grazing areas is located in Oceania (almost 70 percent of the organic grassland/grazing area or 26.4 million hectares), followed by Europe (15 percent or 5.6 million hectares) and Latin America (12 percent or 4.4 million hectares).

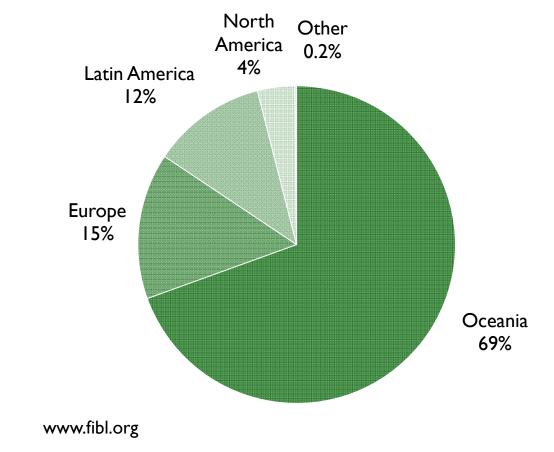


## World: Organic permanent grassland/grazing areas by region 2016 (total 38 million hectares)

#### Organic permanent grassland/grazing areas by region 2016 (total 38 million hectares)

Source: FiBL survey 2018

FiBL



## World: Organic arable land 2016

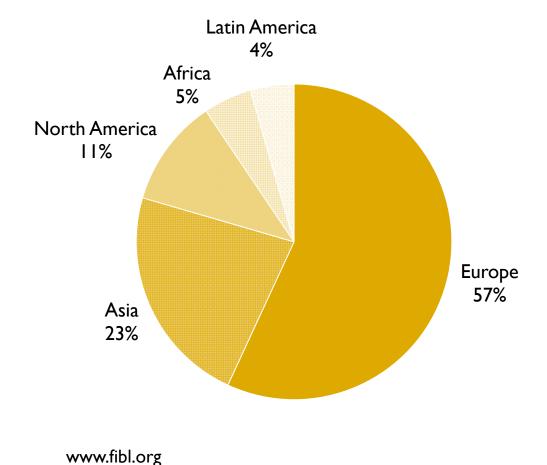
- With a total of almost 10.6 million hectares, organic arable land constitutes almost 20 percent of the world's organic agricultural land and 0.7 of the world's arable cropland.
- An increase of almost 6.3 percent compared with 2015 was reported.
- Almost 60 percent of the arable land is located in Europe, followed by Asia (23 percent), and North America (11 percent).
- Most of the arable cropland is used for cereals including rice (4.1 million hectares), green fodder (2.8 million hectares), and oilseeds (1.3 million hectares).



#### World: Organic arable land by region 2016 (total 10.6 million hectares)

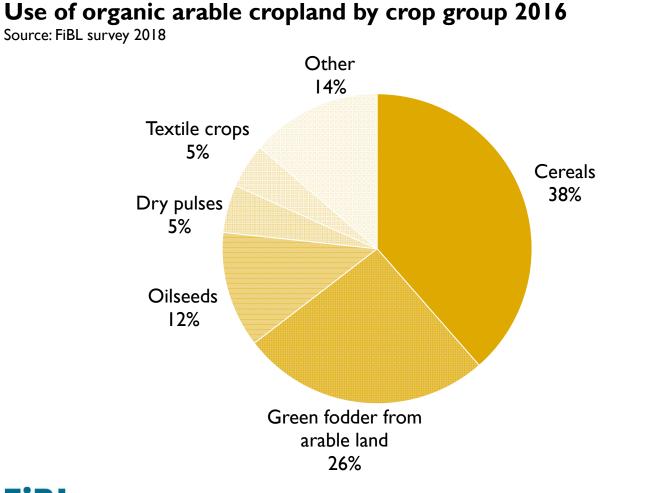
Distribution of organic arable cropland by region 2016

Source: FiBL survey 2018



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#### World: Organic arable land worldwide by main crop groups 2016 (total 10.6 million hectares)

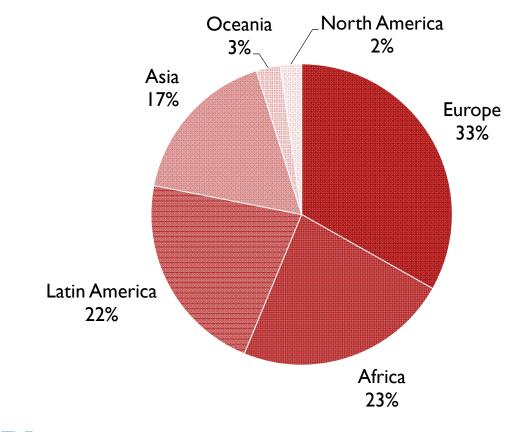


## World: Permanent cropland 2016

- Permanent crops account for more than 4.5 million hectares, which is 2.8 percent of the world's permanent cropland.
- Compared with 2015, an increase of more than 126'000 hectares, or 9 percent, was reported.
- With 8 percent, permanent cropland has a higher share in organic agriculture than in total agriculture, where it accounts for three percent of the agricultural land.
- Most of the permanent cropland is in Europe (1.5 million hectares), followed by Africa (1 million hectares), and Latin America (almost 1 million hectares).
- The most important crop is coffee, with more than 0.9 million hectares constituting 20 percent of the organic permanent cropland, followed by olives (0.7 million hectares), nuts (almost 0.6 million hectares), grapes (almost 0.4 million hectares), and tropical and subtropical fruits (over 0.3 million hectares).



#### World: Organic permanent cropland by region 2016



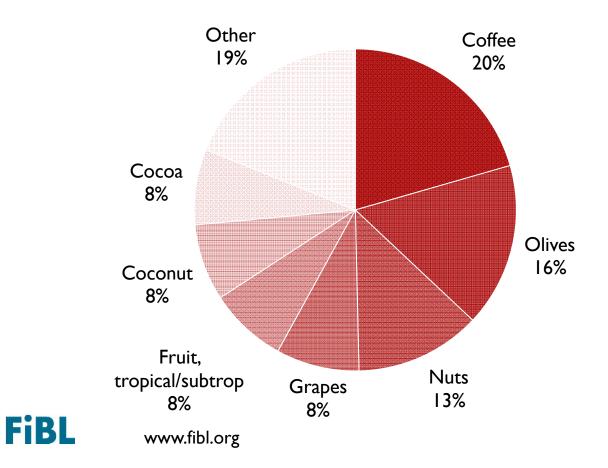
#### **Distribution of organic permanent cropland by region 2016** Source: FiBL survey 2018



# World: Organic permanent cropland worldwide by crop groups 2016

#### Use of permanent cropland by crop group 2016

Source: FiBL survey 2018



## World: Organic wild collection and beekeeping 2016

- A wild collection area (including beekeeping) of 39.3 million hectares was reported for 2016.
- The organic wild collection areas are concentrated in Europe, Africa, Asia, and Latin America .
- The countries with the largest areas are Finland (mainly berries), followed by Zambia (beekeeping), and India.
- Wild berries, apiculture, and medicinal and aromatic plants, as well as shea nuts in Africa and Brazil nuts in Latin America, play the most important roles .

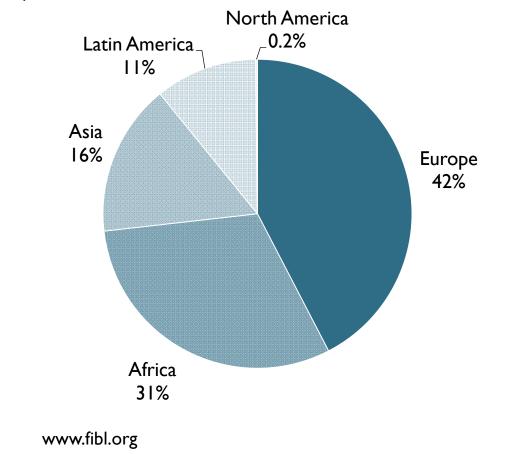


# World: Distribution of organic wild collection and beekeeping areas by region 2016

## Distribution of organic wild collection and beekeeping areas by region 2016

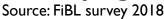
Source: FiBL survey 2018

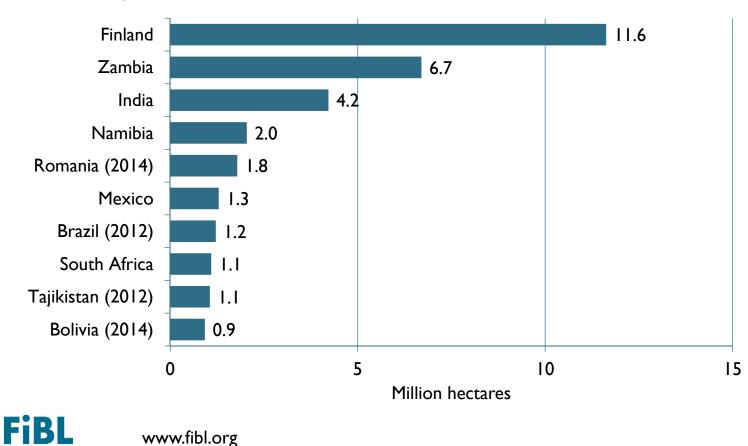
**FiBL** 



## World: Organic wild collection & beekeeping: The ten countries with the largest areas 2016

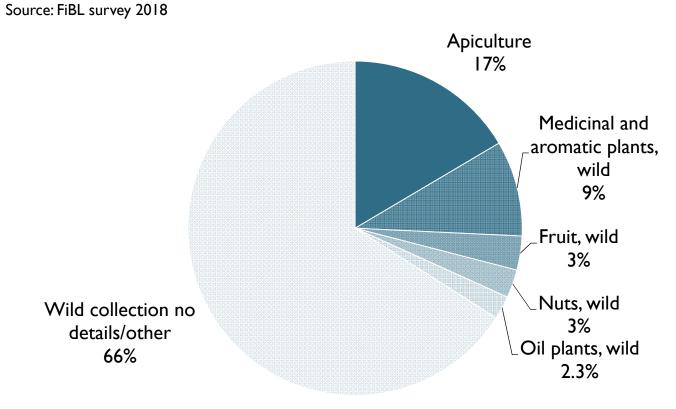
The ten countries with the largest wild collection and beekeeping areas 2016





## World: Use of organic wild collection and beekeeping land worldwide 2016

Use of organic wild collection and beekeeping land worldwide 2016



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## World: Organic beehives 2016

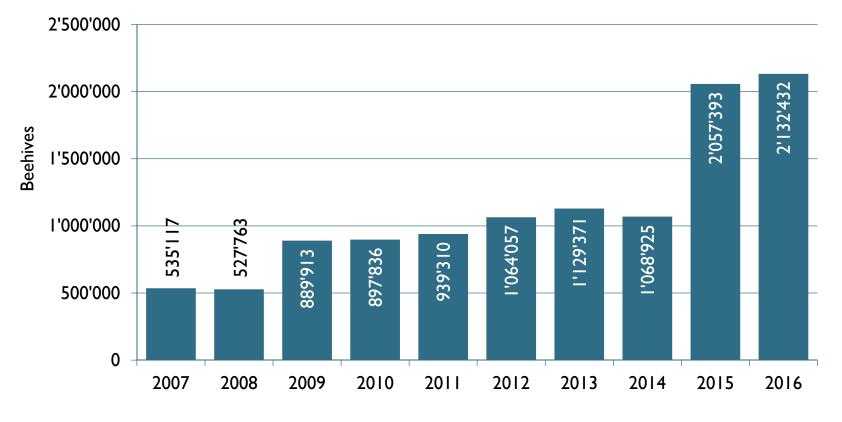
- There were over 2.1 million organic beehives in 2016, representing almost 2.4 percent of the world's beehives.
- Organic beehives are concentrated in Latin America (46 percent) and Europe (42 percent).
- The country with the largest number of organic beehives is Brazil (537'014), followed by Mexico (368'000), and Bulgaria (236'462).
- Their numbers have increased four-fold since 2007, when over 535'000 beehives were reported. However, it is important to note that some of the increases can be attributed to the continually improving data availability.



#### World: Development of the organic beehives 2007-2016

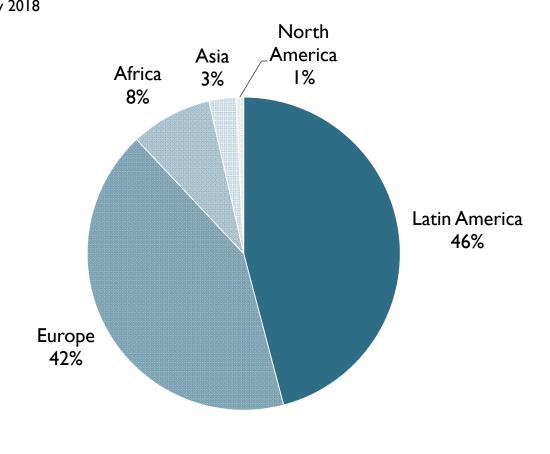
#### Development of the organic beehives 2007-2016

Source: FiBL-IFOAM-SOEL-Surveys 2006-2018





#### World: Distribution of organic beehives by region 2016



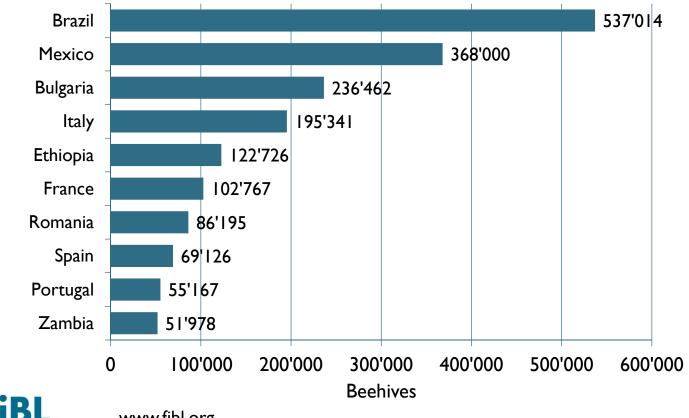
Distribution of organic beehives by region 2016 Source: FiBL survey 2018



#### World: The ten countries with the largest number of organic beehives 2016

The ten countries with the largest number of organic beehives 2016







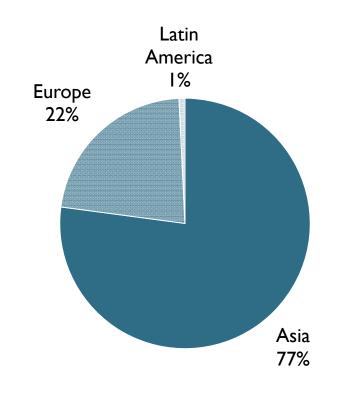
### World: Organic aquaculture 2016

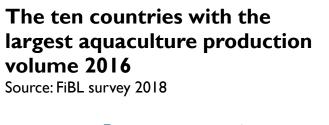
- A production volume of over 400'000 metric tons of organic aquaculture was reported in 2016.
- According to the available data, aquaculture production is concentrated in Asia (77 percent, mainly China) and Europe (22 percent).
- The largest production volume was found in China (over 300'000 metric tons), followed by Ireland (almost 41'000 metric tons, mainly blue mussel, salmon and oysters), and Norway (17'200 metric tons, mainly salmon).
- The aquaculture production volume has increased by 8 percent compared to 2015.
- A breakdown by species was only available for less than 20 percent of the total production. According to the available data, organic salmon is the most produced species (almost 40'000 metric tons), followed by mussels (19'000 metric tons), carp (almost 6'000 metric tons), and shrimps (over 3'000 metric tons).

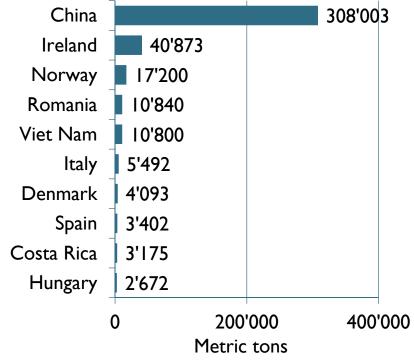


#### World: Organic aquaculture production volume: Distribution by continent and top 10 countries 2016

Distribution of organic aquaculture production volume by region 2016 Source: FiBL survey 2018





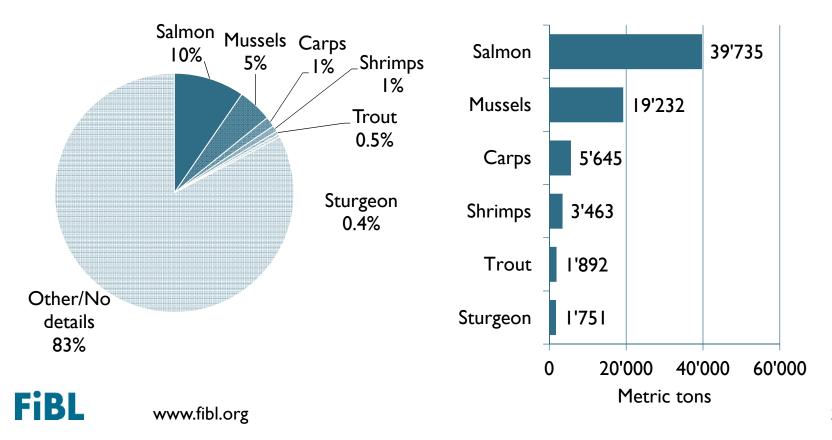




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#### World: Organic aquaculture production volume: Distribution by species and key species 2016

Distribution of organic aquaculture production volume by species 2016 Source: FiBL survey 2018 Key organic aquaculture species by production volume 2016 Source: FiBL survey 2018



## World: Organic cereals 2016

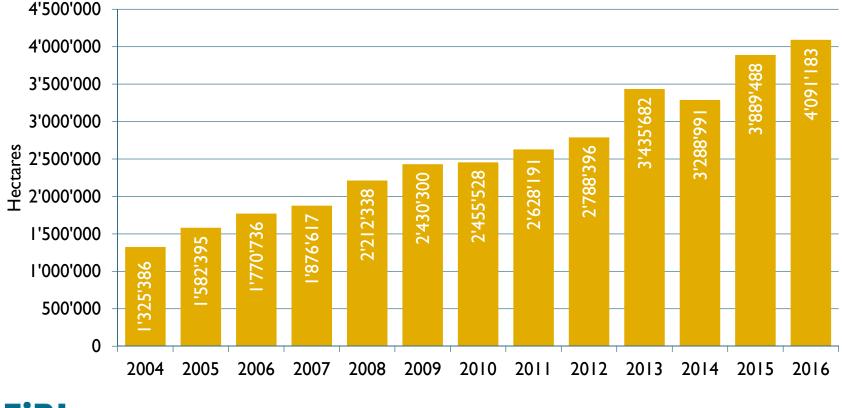
- At least 4.1 million hectares of cereals were under organic management in 2016. Comparing the organic figure with FAO's figure for the world's harvested cereal area of 718 million hectares in 2016 (FAOSTAT), 0.6 percent of the total cereal area is under organic management.
- Cereals include wheat, spelt, barley, oats, grain maize, rice, rye, and triticale.
- The key cereal producers worldwide, according to FAO, are India (98.5 million hectares), China (96.3 million hectares), the United States (58.5 million hectares), and the Russian Federation (44.4 million hectares).
- Of these four countries, information on the organic cereal area was available for all except India, and for the Russian Federation data is not complete. China (over 811'000 hectares), Italy (almost 300'000 hectares), and the United States (over 281'000 hectares) are the largest organic cereal producers. In China, 0.8 percent of the total cereal area was organic, and in Italy, the organic cereal area represented 9.2 percent of the total cereal area, one of the highest organic shares.
- Some countries reach organic shares that are far higher than the global organic cereal share of 0.6 percent. For example, Austria (13 percent), Sweden (10.5 percent), Estonia (9.8 percent), Italy (9.2 percent), and Lithuania (7.6 percent) greatly exceed the global share.
- As some of the world's large cereal producers (such as India and the Russian Federation) provided little or no land use and crop details, it can be assumed that the cereal area is larger than what is shown here.
- The organic cereal area has more than trebled since 2004 (1.3 million hectares), and in 2016, it increased by 200'000 hectares or 5 percent.
- The available data on the conversion status indicates that 20 percent of the organic cereal area was in conversion in 2016 (over 800'000 hectares). Thus, there could be a considerable increase in the supply of organic cereals in the near future.



## World: Organic cereals: Growth of the organically managed land 2004-2016

#### Cereals: Development of the global organic area 2004-2016

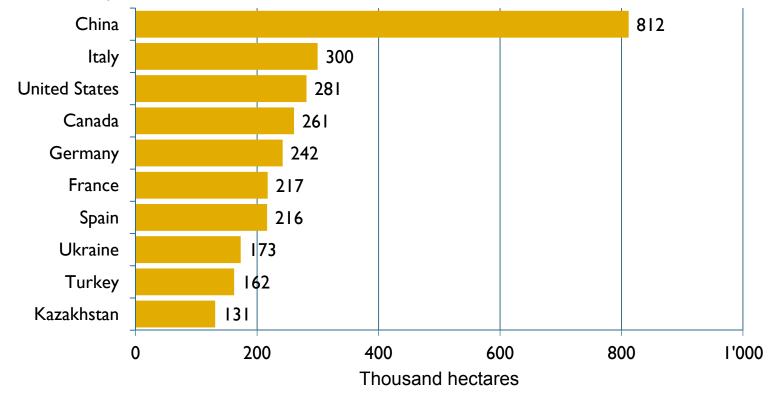
Source: FiBL-IFOAM-SOEL-Surveys 2006-2018



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# World: Organic cereals: The ten countries with the largest areas 2016

### Cereals: The ten countries with the largest organic areas 2016





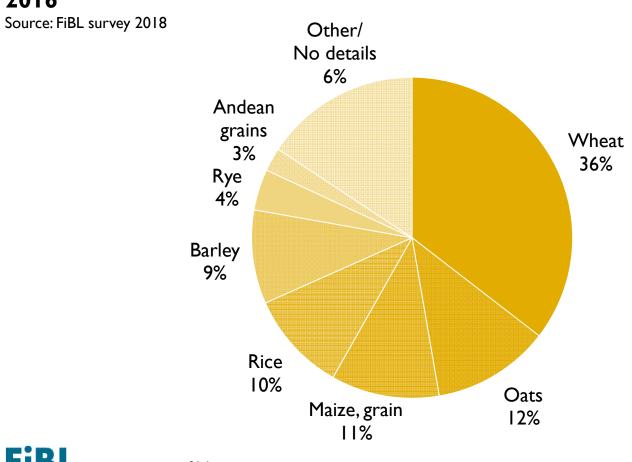
## World: Organic cereals: The ten countries/areas with the highest organic shares 2016

## Cereals: The ten countries/regions with the highest organic shares 2016

Austria 13.0% Sweden 10.5% 9.8% Estonia 9.2% Italy 7.6% Lithuania Bolivia 6.9% Latvia 6.8% Switzerland 6.3% Montenegro 6.1% Greece 4.7% 2% 6% 8% 10% 12% 0% 4% 14% Organic share in %



#### World: Organic cereal land worldwide by cereal types 2016



#### Cereals: Distribution of global organic area by cereal type 2016



#### World: Organic citrus fruit 2016

- Almost 91'000 hectares of citrus fruits were grown organically worldwide in 2016. This constitutes 1 percent of the world's total citrus area of 9.4 million hectares in 2016 (FAOSTAT).
- As no crop details for the organic area were available for some of the world's leading citrus producers India (0.9 million hectares) and Brazil (0.8 million hectares according to FAOSTAT), it can be assumed that the global figure for the organic citrus area is higher.
- In organic agriculture, the largest producer is Italy with over 36'000 hectares, constituting 24.6 percent of Italy's harvested citrus fruit area, followed by China (14'400 hectares, 0.6 percent), Mexico (almost 13'000 hectares, 2.2 percent), and Spain (over 10'000 hectares, 2.8 percent). Since 2004, when 28'500 hectares of organic citrus were grown, the area more than trebled. In 2016, the organic citrus area increased by 28 percent after the drop registered between 2013 and 2015.
- Burkina Faso has the highest organic share of citrus fruit with 33.5 percent of the harvested citrus fruit area being organic. It is followed by Italy and Ghana (16.4 percent).
- The area of organic citrus fruits includes oranges (almost 40 percent of the organic citrus fruit), lemons and limes (16 percent), grapefruit and pomelos (13 percent), and tangerines (4 percent); for 28 percent of the organic citrus area, no crop detail was available.
- The available data on the conversion status indicates that at least 30 percent of the organic citrus area was in-conversion in 2016 (more than 28'000 hectares).



#### World: Organic citrus fruit 2016

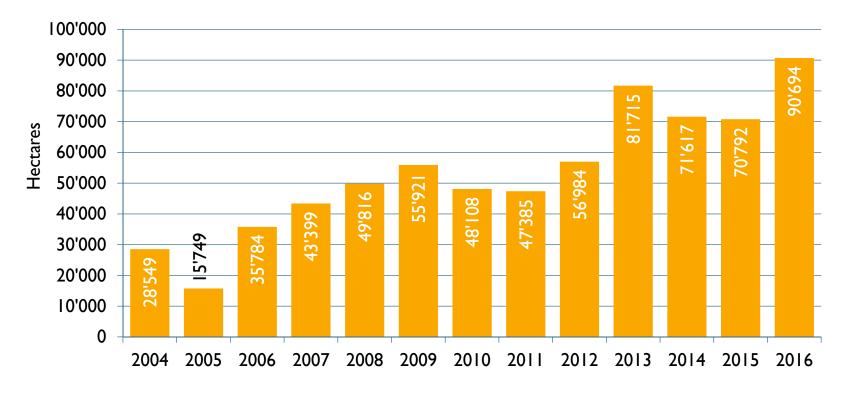
- Between 2013 and 2015, a drop of 13 percent of organic citrus fruit area was registered (Figure 32).
- This drop can be attributed to the spread of the Citrus Greening Disease that is transmitted by the vector Asian Citrus Psyllid, Diaphorina citri, and the African Citrus Psyllid, Trioza erytreae. In Latin America and the United States, the Greening Disease has caused strong losses. In the case of Cuba, a high percentage of the citrus fruit is infected with the Greening Disease, and it has provoked a strong decrease in production.
- Some Caribbean countries have decided to abandon producing organic citrus fruit and revert to conventional farming, where chemical pesticides are used to control the disease.
- Currently the African Citrus Psyllid, Trioza erytreae, vector is spreading in Portugal (Lisboa Region) and Spain (Galicia). It will only be a matter of time until the Greening Disease will be found in the Iberian Peninsula.
- In Mexico, which is a key organic citrus producer, FiBL has been developing an integrated organic management strategy to control the vector and regulate the greening since 2011



## World: Organic citrus fruit: Growth of the organically managed land 2004-2016

### Citrus fruit: Development of the global organic area 2004-2016

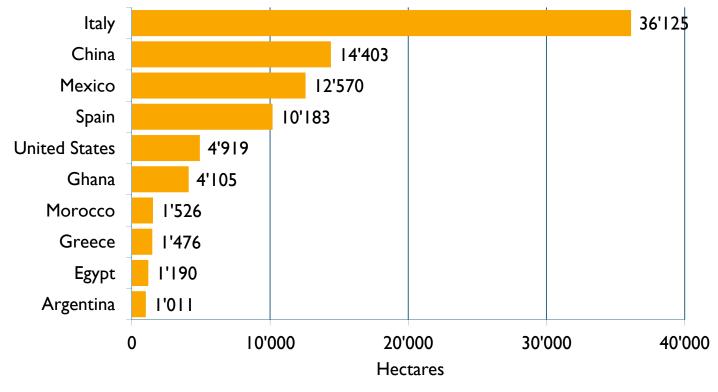
Source: FiBL-IFOAM-SOEL-Surveys 2006-2018





# World: Organic citrus area: The ten countries with the largest areas 2016

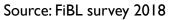
### Citrus: The ten countries with the largest organic areas 2016

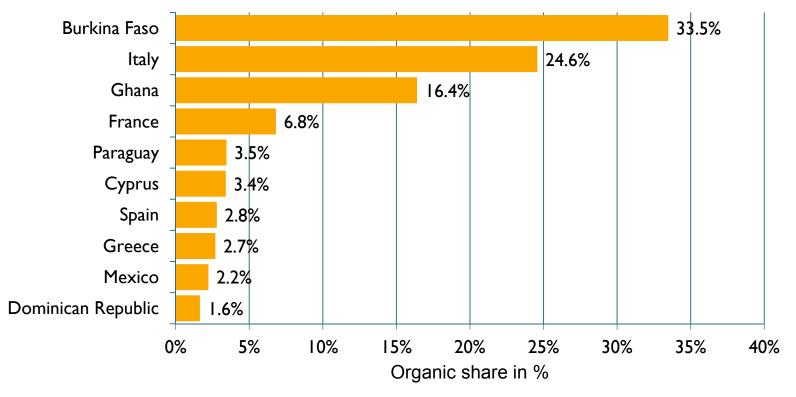




# World: Organic citrus: The ten countries/areas with the highest organic shares 2016

## Citrus: The ten countries/regions with the highest organic shares 2016







# World: Organic citrus fruit: Use of the citrus fruit area 2016

Citrus fruit: Distribution of the organic citrus area by citrus type 2016 Source: FiBL survey 2018 Oranges 39% Other/no details 28% Tangerine 4% Pomelos and grapefruit Lemons and acid 13% limes 16%



#### World: Organic cocoa 2016

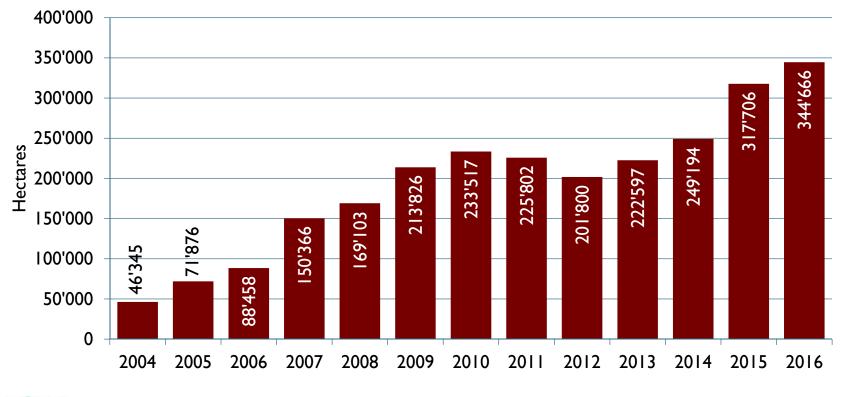
- Almost 345'000 hectares of cocoa were under organic management in 2016. This constitutes 3.4 percent of the world's harvested cocoa bean area of 10 million hectares 2016 (FAOSTAT).
- The world's leading producers are Côte d'Ivoire (2.8 million hectares), Indonesia (1.7 million hectares), Ghana (1.7 million hectares), and Nigeria (0.8 million hectares).
- The largest organic cocoa areas are found in the Dominican Republic (159'178 hectares), the Democratic Republic of Congo (37'039 hectares), and the United Republic of Tanzania (29'013 hectares). Almost 70 percent of the world's organic cocoa area is in Latin America, and over 30 percent is in Africa.
- Some countries have when compared with the FAO data on harvested area, very high organic shares. This can probably be attributed to the fact that FAO data might be incomplete.
- The organic cocoa area has grown almost seven-fold since 2004 and thus faster than most other crops/crop groups. However, part of the increase can be attributed to the continually improving data availability.
- In 2016, almost 27'000 hectares more were reported, an increase of 8.5 percent compared to 2015. The available data on the conversion status indicates that almost eight percent of the organic cocoa area was in conversion in 2016 (over 26'000 hectares). Thus, a slight increase in the supply of organic cocoa may be expected in the near future.



# World: Organic cocoa: Growth of the organically managed land 2004-2016

#### Cocoa beans: Development of the global organic area 2004-2016

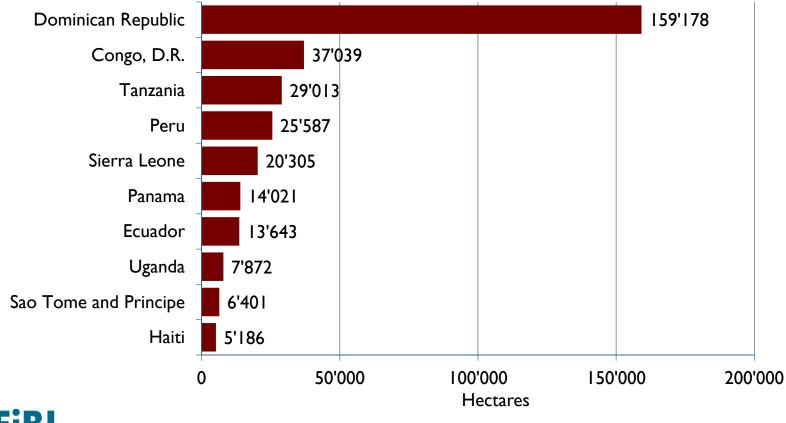
Source: FiBL-IFOAM-SOEL-Surveys 2006-2018



**FiBL** 

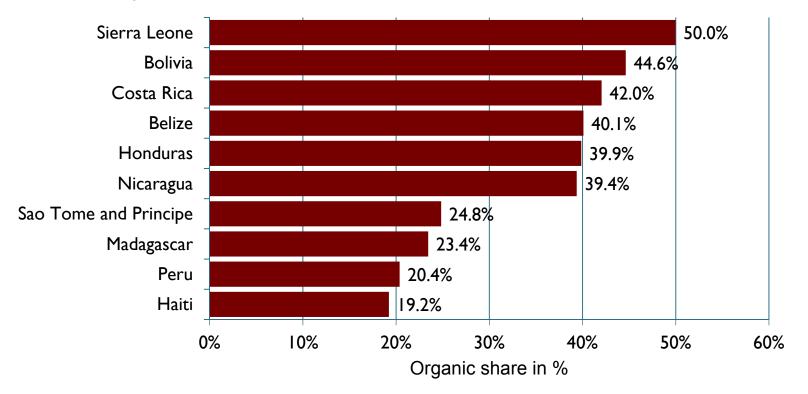
# World: Organic cocoa area: The ten leading countries 2016

### **Cocoa beans area: The ten countries with the largest areas 2016**



# World: Organic cocoa: The ten countries/areas with the highest organic shares 2016

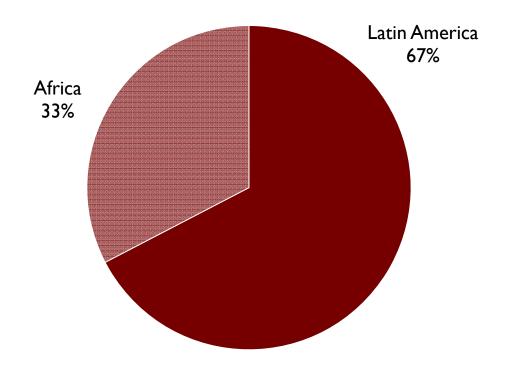
## Cocoa beans: The ten countries/regions with the highest organic shares 2016





#### World: Organic cocoa area: Distribution by region 2016

Cocoa beans: Distribution of the organic area by region 2016





#### World: Organic coffee 2016

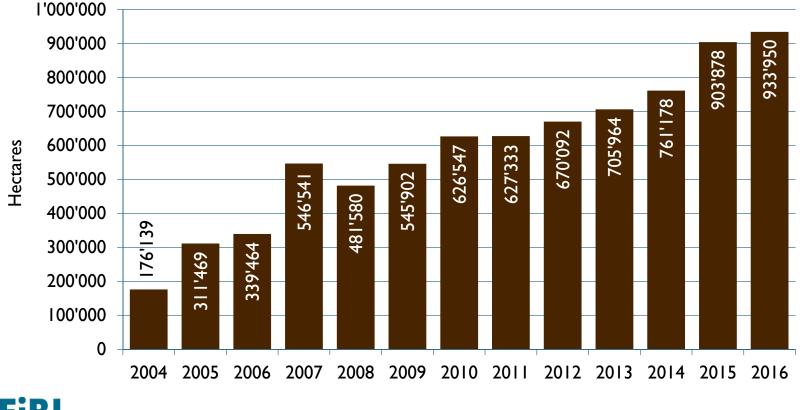
- Almost 934'000 hectares of coffee were grown organically in 2016. This constituted 8.5 percent of the world's harvested coffee area of almost 11 million hectares in 2016, according to FAOSTAT.
- The world's leading producers are Brazil (2 million hectares), Indonesia (1.2 million hectares), Côte d'Ivoire (1 million hectares), Colombia (0.9 million hectares), and Ethiopia (0.7 million hectares). Data on organic production was available for all of these countries with the exception of Brazil. Slightly more than 45 percent of the world's organic coffee area is in Latin America, and 41 percent is in Africa.
- In organic farming, the largest areas were in Mexico (231'000 hectares), Ethiopia (161'000 hectares), and Peru (110'000 hectares). Timor-Leste had the highest organic share, with almost 53 percent organic coffee, followed by Bolivia (48 percent), the United Republic of Tanzania (42 percent), and the Democratic Republic of Congo (almost 38 percent).
- The organic coffee area has increased more than five-fold since 2004. Compared with 2015, the organic coffee area grew by 3 percent or more than 30'000 hectares in 2016.



## World: Organic coffee: Growth of the organically managed land 2004-2016

Coffee: Development of the global organic area 2004-2016

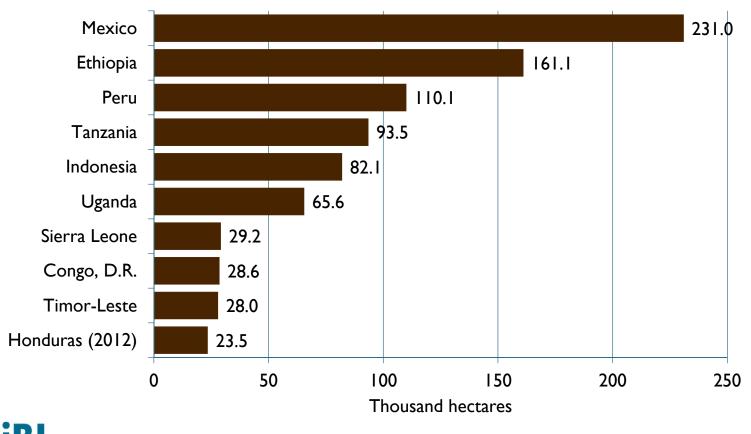
Source: FiBL-IFOAM-SOEL-Surveys 2006-2018



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## World: Organic coffee area: The ten countries with the largest areas 2016

**Coffee: The ten countries with the largest organic area 2016** Source: FiBL survey 2018

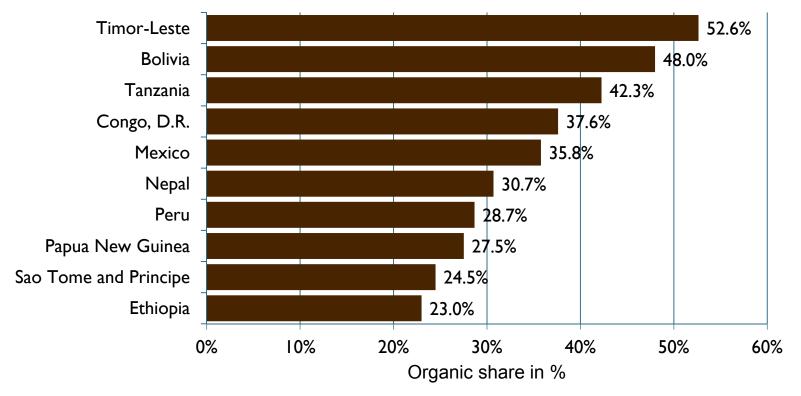




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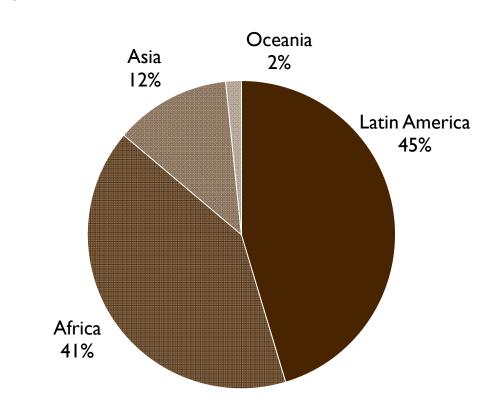
# World: Organic coffee: The ten countries/areas with the highest organic shares 2016

## Coffee:The ten countries/regions with the highest organic shares 2016





#### World: Organic coffee: Distribution by region 2016



#### **Coffee: Distribution of the organic area by region 2016** Source: FiBL survey 2018



#### World: Organic dry pulses 2016

- The total area under organic dry pulses is almost 530'000 hectares, which is 0.6 percent of the total area of dry pulses grown in the world (almost 82.4 million hectares in 2016, according to FAOSTAT).
- No current data on the organic area was available from the three most important dry pulsegrowing countries in the world: India, Niger, and Myanmar. India (26 million hectares) was by far the largest grower, representing over 32 percent of the global area used to grow dry pulses.
- The countries with the largest organic dry pulses areas are France, Canada, Poland, Italy, Germany, and Spain. Overall, organic shares can be high as dry pulses play an important role in organic farming, particularly in Europe.
- The dry pulses area has increased six-fold from 79'000 to 530'000 hectares since 2004. However, some of the increase can be attributed to the continually improving availability of crop data.
- In 2016, the dry pulses area grew compared to 2015 by more than 87'000 hectares, or by almost 20 percent. A breakdown by crop is not available for many countries; for instance, Eurostat the statistical office of the European Union publishes only one figure for "dry pulses," without breaking that figure down by crop.
- The data available for a breakdown of the total fully converted and in-conversion area shows that at least 20 percent is in conversion, and will be fully converted in the next few years. This has implications for the availability of organic dry pulses in the near future.

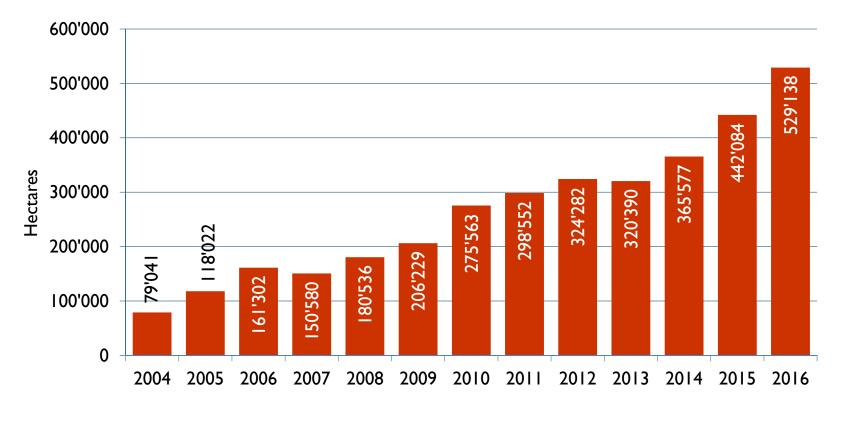


www.fibl.org FiBL survey 2018

## World: Organic dry pulses: Growth of the organically managed land 2004-2016

#### Dry pulses: Development 2004-2016

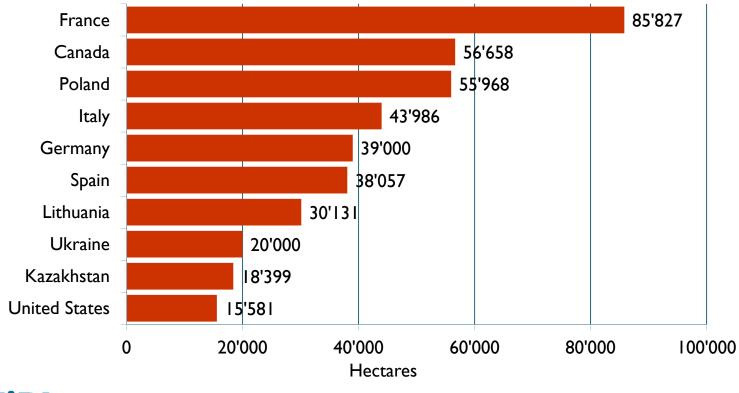
Source: FiBL-IFOAM-SOEL-Surveys 2006-2018





# World: Organic dry pulses area: The ten leading countries 2016

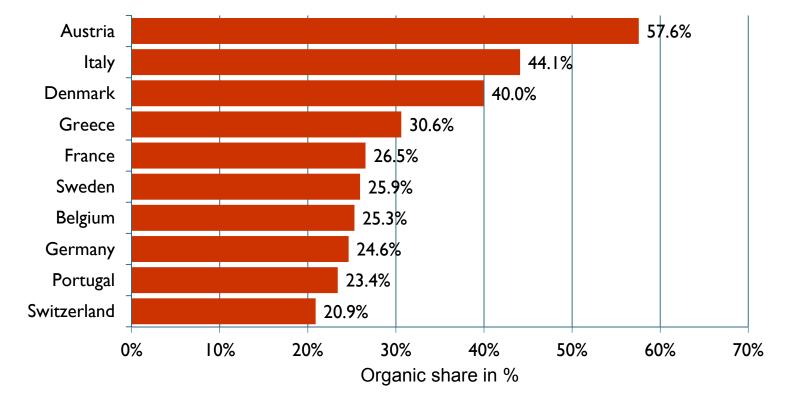
#### Dry pulses area: The ten countries with the largest area 2016





## World: Organic dry pulses: The ten countries/areas with the highest organic shares 2016

### Dry pulses: The ten countries/regions with the highest organic shares 2016





#### World: Organic temperate fruit 2016

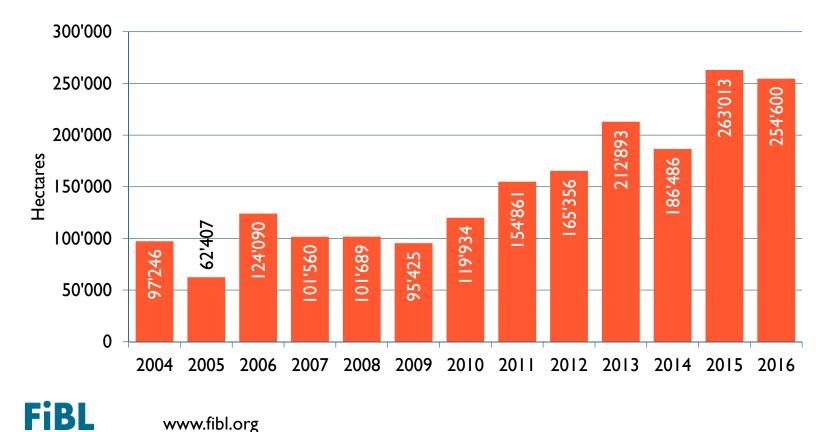
- The total area under organic temperate fruit production recorded here (almost 255'000 hectares), is 2 percent of the total area of temperate fruit grown in the world (12.6 million hectares in 2016, according to FAOSTAT).
- Of the seven most important temperate fruit growing countries in the world (China, Turkey, Iran, India, Russia, the United States, and Uzbekistan), five countries (China, Turkey, Iran, Russia, and the United States) provided data on the area of organic temperate fruits in 2016. It can, therefore, be assumed that the organic temperate fruit area is higher.
- The countries with the largest organic temperate fruit areas are China (almost 98'000 hectares), Italy (22'400 hectares), Poland (almost 19'000 hectares), Turkey (16'000 hectares), France (almost 14'000 hectares), and the United States (almost 12'000 hectares).
- Since 2004, when data on land use and crops were collected for the first time, the temperate fruit area has almost trebled. However, some of the increase can be attributed to the continually improving crop data availability. In 2016, a drop of over 8'000 hectares occurred, this was mainly due to a decrease in China.
- The key temperate fruits are apples, with one-third of the temperate fruit area, followed by apricots, cherries, plums, and pears. Poland has one-third of the total organic apple area.
- The available data on the conversion status indicates that more than 30 percent of the total temperate fruit area is in conversion. Thus, a considerable increase in the supply of organic temperate fruit in the near future.



## World: Organic temerpate fruit: Growth of the organically managed land 2004-2016

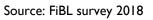
### Temperate Fruit: Development of the global organic area 2004-2016

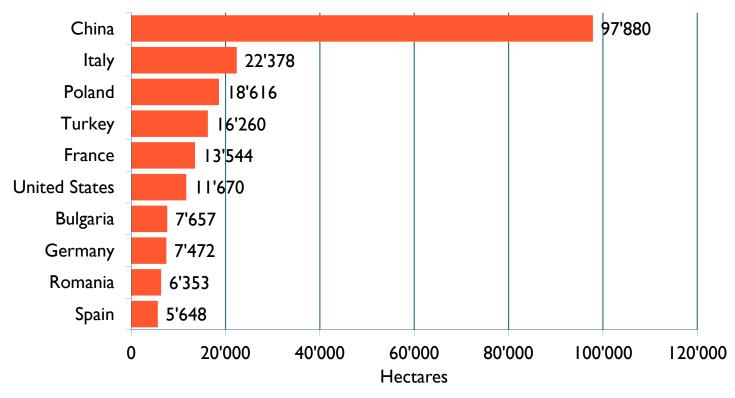
Source: FiBL-IFOAM-SOEL-Surveys 2006-2018



# World: Organic temperate fruit: The ten countries with the largest areas 2016

Temperate fruit: The ten countries with the largest areas 2016

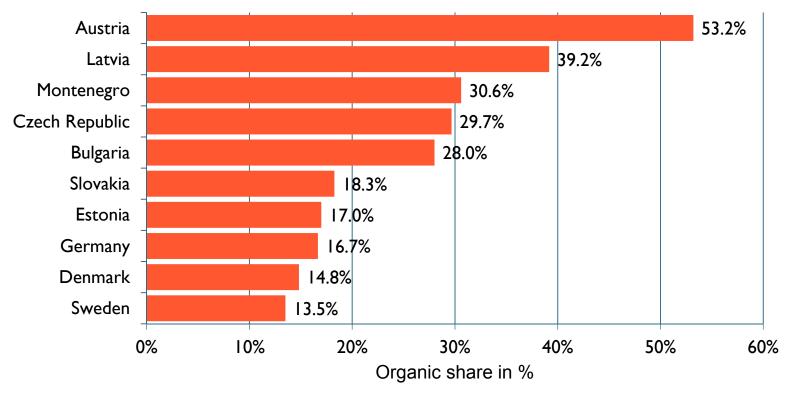






#### World: Organic temperate fruits: The ten countries/areas with the highest organic shares 2016

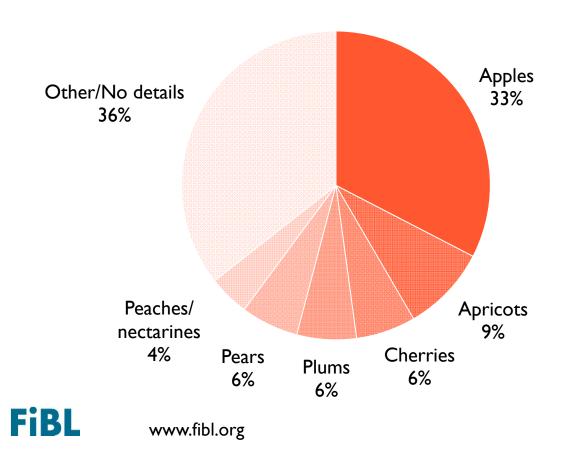
## Temperate fruits: The ten countries/regions with the highest organic shares 2016





# World: Organic temperate fruit land worldwide by key fruit types 2016

Temperate fruit: Use of organic temperate fruit area 2016 Source: FiBL survey 2018



#### World: Tropical and subtropical fruits 2016

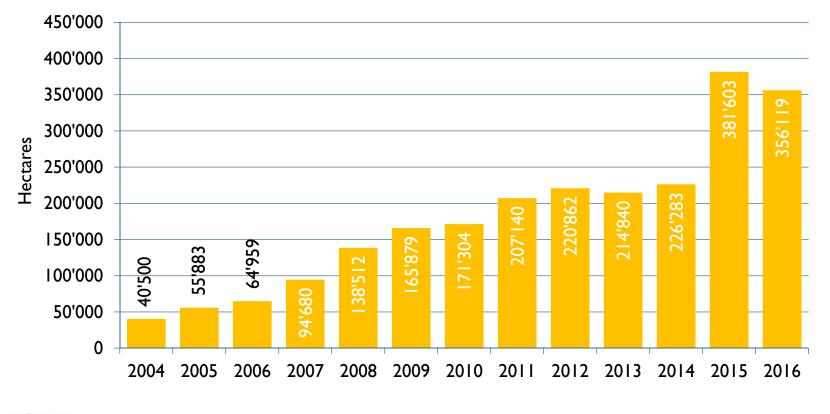
- The total area under organic tropical and subtropical fruit production recorded here (over 356'000 hectares) is 1.4 percent of the total area of tropical and subtropical fruit grown in the world (24.8 million hectares in 2016, according to FAOSTAT data).
- Of the five most important tropical and subtropical fruit growing countries in the world (India, China, Philippines, Brazil, and Thailand, all with more than one million hectares), only China, the Philippines, and Thailand provided data on the area used for growing organic tropical and subtropical fruit in 2016.
- The largest organic growers for which data on the organic area was available were Mexico (almost 131'000 hectares), China (over 28'000 hectares), the Dominican Republic (almost 26'000 hectares), and Madagascar (19'000 hectares). Some of these countries also report very high organic shares of tropical and subtropical fruit, more than the ten percent of their countries' total area for these crops: In the case of the Dominican Republic, bananas; and in the case of Mexico, mangos and avocados.
- The largest organic shares of tropical and subtropical fruit area are in Burkina Faso (46.8 percent), Niue (43.6 percent), Turkey (28.6 percent), and the Dominican Republic (24.6 percent). By area, the key tropical and subtropical fruits are avocados, bananas, and dates.
- Since 2004, when data on land use and crops was collected for the first time, the tropical fruit area has increased eight-fold. Some of the increase can be attributed to the continually improving data availability. In 2016, a drop of the area was noticed compared to 2015; this can be attributed to a decrease of the organic area in Samoa, Kenya, and Madagascar.
- The available data on the conversion status indicates that at least 13 percent of the total tropical and subtropical fruit area is in conversion. This suggests that a slight increase in supply in the near future may be expected.



## World: Organic tropical and subtropical: Growth of the organically managed land 2004-2016

#### Tropical and subtropical fruit: Development 2004-2016

Source: FiBL-IFOAM-SOEL-Surveys 2006-2018

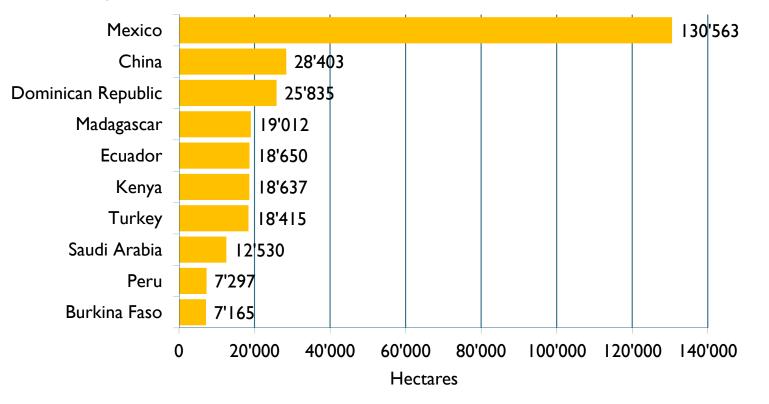




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# World: Organic tropical and subtropical fruit: The ten countries with the largest areas 2016

### Tropical and subtropical fruit: The ten countries with the largest areas 2016

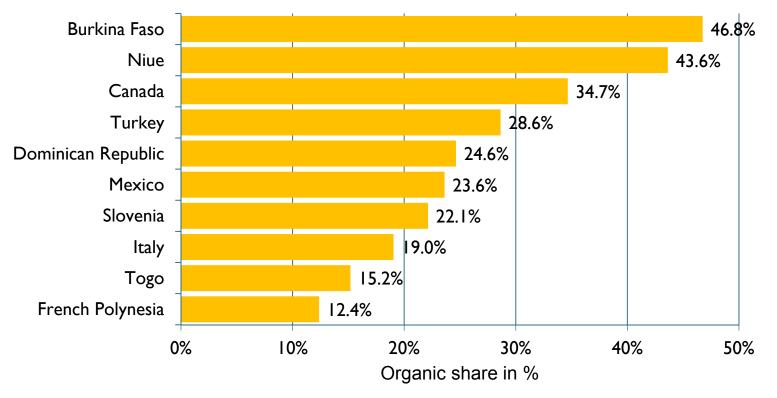




# World: Organic tropical and subtropical fruits: The ten countries/areas with the highest organic shares 2016

## Tropical and subtropical fruits: The ten countries/regions with the highest organic shares 2016

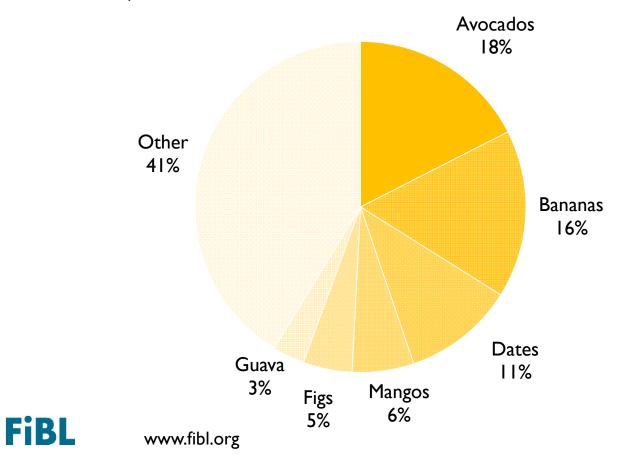






#### World: Organic tropical and subtropical fruit land worldwide by main crop groups 2016

Tropical and subtropical fruit: Distribution of global organic area by crop 2016



#### World: Organic grape area 2016

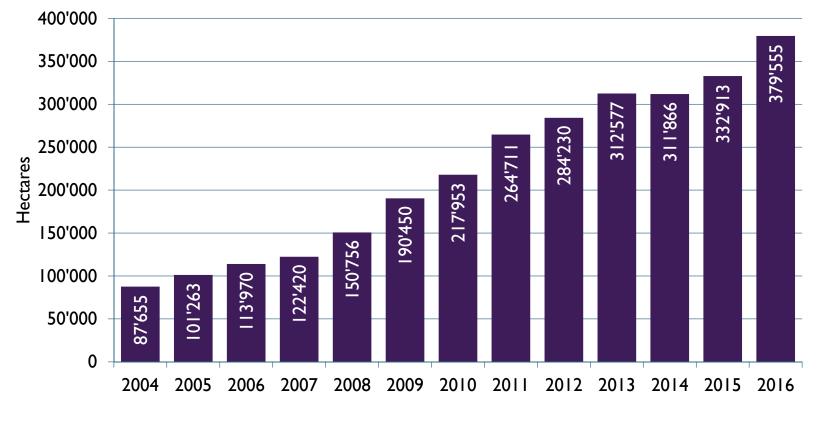
- Almost 380'000 hectares of organic grapes are grown, constituting 5.3 percent of the world's grape-growing area (7.1 million hectares in 2016, according to FAOSTAT). In Europe, over 328'000 hectares (8.4 percent of the harvested grape area) are organic.
- Not all of the grape area listed in the table is used for wine. The production of table grapes and raisins is important in many countries, such as Turkey. All of the five most important grape-growing countries in the world (Spain, China, France, Italy, and Turkey) provided data on the area under organic grape production in 2016.
- The countries with the largest organic grape areas are Spain and Italy, each with more than 100'000 hectares of organic grapes, followed by France with over 70'000 hectares. Some of the highest organic shares of the total grape area are also found in these countries. Almost 90 percent of the world's organic grape area is in Europe. The rest is distributed almost equally among Asia, North America, and Latin America.
- Since 2004, when data on land use and crops were collected for the first time, the organic grape area has increased four-fold. However, some of the increase can be attributed to the continually improving availability of crop data.
- The available data indicates that a large part of the organic grape area (at least 28 percent) is in conversion. Thus, a considerable increase in the supply of organic grapes may be expected, particularly from Spain, Italy, and France.



# World: Organic grapes: Growth of the global organic area 2004-2016

#### Grapes: Development 2004-2016

Source: FiBL-IFOAM-SOEL-Surveys 2006-2018





# World: Organic grapes: The ten countries with the largest organic areas 2016

### Grapes: The ten countries with the largest organic areas 2016

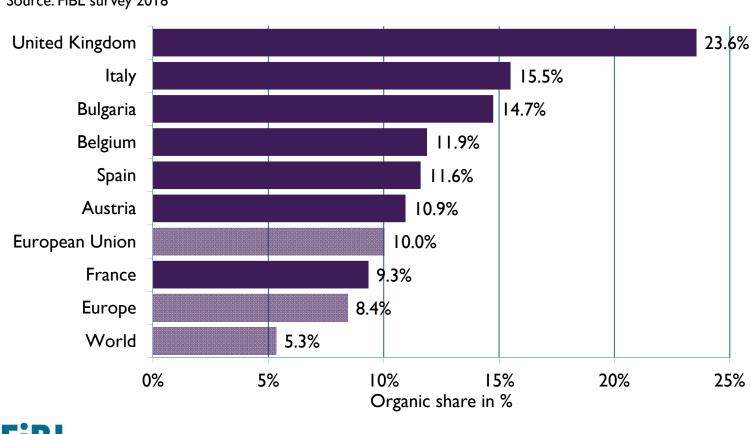
106'720 Spain Italy 103'545 France 70'732 China 20'025 Turkey 13'961 United States 11'071 Germany 8'000 Argentina 6'240 Bulgaria 5'390 Austria 5'088 20'000 40'000 60'000 80'000 100'000 120'000 0 Hectares

Source: FiBL survey 2018

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### World: Organic grapes: The ten countries/areas with the highest organic shares 2016

#### Grapes: The ten countries/regions with the highest organic shares 2016



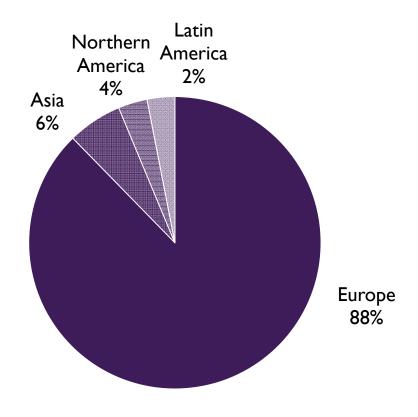
Source: FiBL survey 2018

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# World: Organic grapes: Distribution of the organic area by region 2016

### Grapes: Distribution of the organic grape area by region 2016

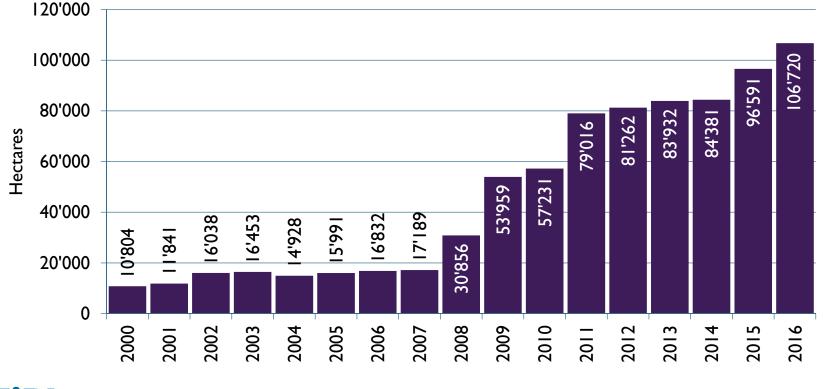




## Spain: Development of the organic grape area 2000-2016 in Spain (including in-conversion areas)

## Development of the organic grape area 2000-2016 in Spain (including in-conversion areas)

Source: MARA 1999-2018

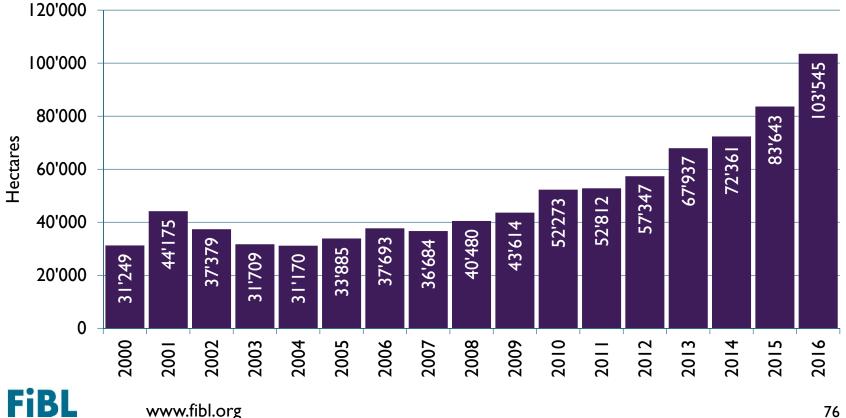


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#### Italy: Development of the organic grape area 2000-2016 in Italy (including in-conversion areas)

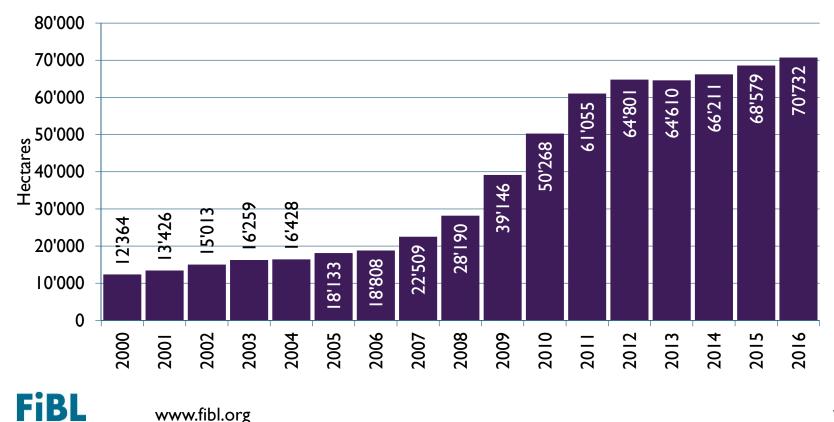
#### Development of the organic grape area 2000-2016 in Italy (including in-conversion areas)

Source: SINAB 2000-2018



#### France: Development of the organic grape area 2000-2016 in France (including in-conversion areas)

### Development of the organic grape area 2000-2016 in France (including in-conversion areas)



Source: Agence Bio 2000-2018

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### World: Organic oilseeds 2016

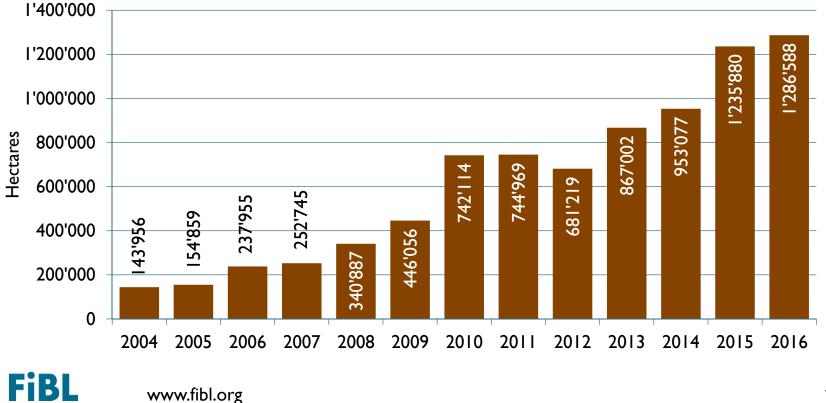
- Almost 1.3 million hectares were used for growing organic oilseeds in 2016. This is 0.6 percent of the world's total harvested oilseed area (almost 230 million hectares according to FAOSTAT).
- The main countries in which oilseeds are grown are the United States, Brazil, India, Argentina, and China (each with more than 20 million hectares). Data on organic production was available for all of these countries but Brazil. The countries with the largest organic oilseed area are China, India, Sudan, the United States, and Kazakhstan.
- The highest organic shares are in Togo (27 percent, mainly soybeans), Peru (23 percent, mainly sesame), and Austria (almost 16 percent, mainly soybeans).
- Since 2004, when data on land use and crops was collected for the first time, the oilseed area (2004: almost 144'000 hectares) has increased more than nine-fold. However, some of the increase can be attributed to the continually improving availability of crop data. In 2016, the organic oilseed area increased by 4 percent (almost 51'000 hectares).
- Over forty percent of the organic oilseed area is for soybeans, and another twenty percent is for sunflower seeds and sesame.
- The data available for a breakdown of the total fully converted and in conversion area shows that at least 19 percent is in conversion and will be fully converted in the next few years. This has implications for the availability of organic oilseeds in the near future.



## World: Organic oilseeds: Growth of the organically managed land 2004-2016

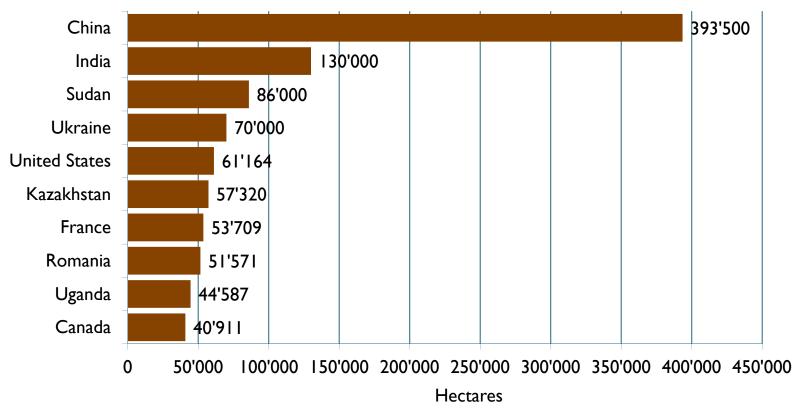
### Oilseeds: Development of the global organic area 2004-2016

Source: FiBL-IFOAM-SOEL-Surveys 2006-2018



# World: Organic oilseed area: The ten leading countries 2016

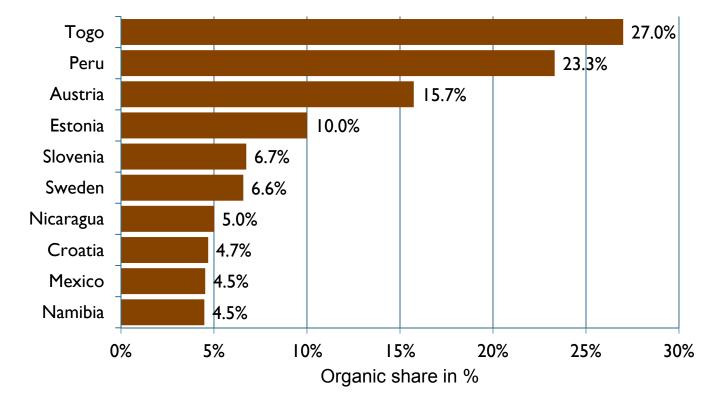
#### Oilseed area: The ten leading countries 2016





# World: Organic oilseeds: The ten countries/areas with the highest organic shares 2016

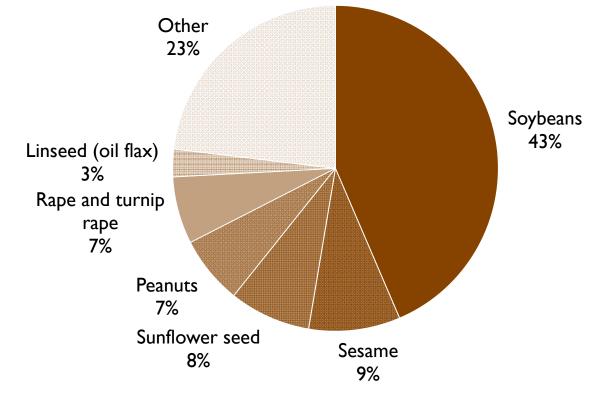
## Oilseeds: The ten countries/regions with the highest organic shares 2016





# World: Organic oilseed area worldwide by main crop groups 2016

#### Oilseeds: Use of organic oilseed area by crop 2016





### World: Organic olives 2016

- Almost 748'000 hectares of olives were reported to be under organic production in 2016. This represents 7 percent of the world's total harvested olive area (10.7 million hectares according to FAOSTAT).
- The main countries in which olives are grown are around the Mediterranean. Spain is by far the largest grower with 2.6 million hectares, followed by Tunisia (1.6 million hectares) and Italy (1.2 million hectares). Greece and Morocco are also important producers. For all these countries, data for the organic area was available.
- Italy has the largest area of organic olives (more than 222'000 hectares), followed by Spain (almost 198'000 hectares), and Tunisia (almost 138'000 hectares).
- Almost 80 percent of the world's organic olive area is in Europe, followed by northern Africa with 20 percent of the world's organic olive area. In Italy, the percentage of area under organic production is relatively high (over 19 percent).
- In Spain, almost 8 percent of the olive area is organic, and in Tunisia 8.4 percent. France has the highest organic share with 27.6 percent of the olive area being organic.
- Since 2004, when data on land use and crops were collected for the first time, the olive area more than doubled. The available data indicates that a large part of the total olive area, 24 percent, is in conversion. Thus, an increase in the supply of organic olives may be expected.



#### World: Organic olives: Growth of the organically managed land 2004-2016

#### Olives: Development of the global organic area 2004-2016

Source: FiBL-IFOAM-SOEL-Surveys 2006-2018

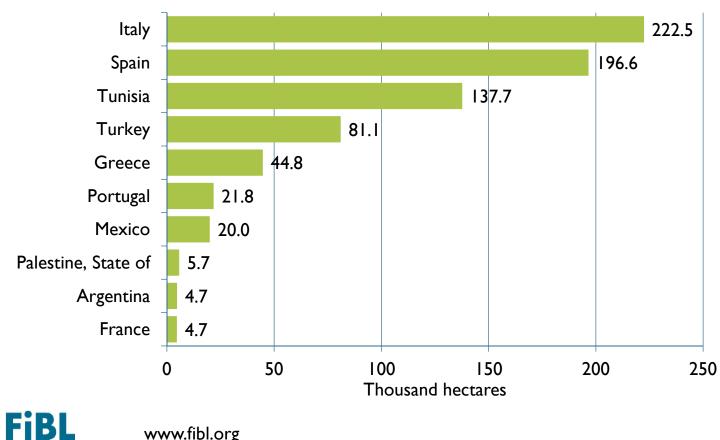
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### World: Organic olive area: The ten leading countries 2016

Olives: The ten countries with the largest organic area 2016

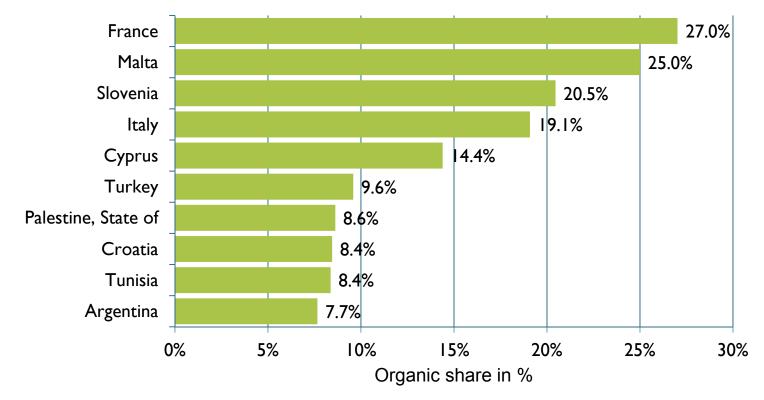


Source: FiBL survey 2018

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# World: Organic olives: The ten countries/areas with the highest organic shares 2016

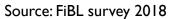
## Olives: The ten countries/regions with the highest organic shares 2016

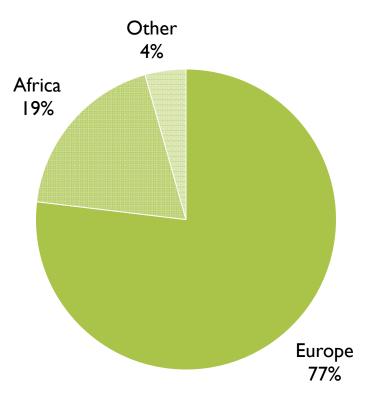




# World: Organic olives: Distribution of the organic area by region 2016

Olives: Distribution of the organic area by continent 2016







### World: Organic vegetables 2016

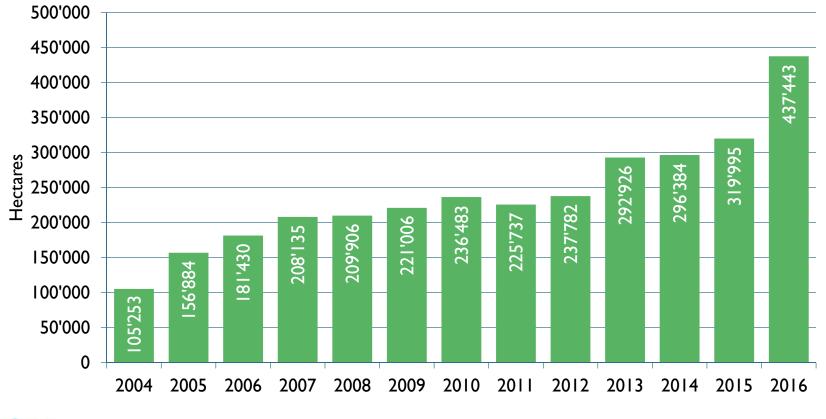
- The total area under organic vegetable production (more than 437'000 hectares) is 0.7 percent of the total area of vegetables grown in the world (62 million hectares in 2016, according to FAOSTAT).
- Of the four most important vegetable-growing countries in the world (China, India, Nigeria, and Viet Nam), data on the organic area was only available for China and Viet Nam. The countries with the largest organic vegetable areas are Mexico, the United States, China, Poland, and Egypt (each with areas over 20'000 hectares).
- The highest organic shares of the total vegetable areas are in Denmark, Austria, Canada, Switzerland, and Mexico. These are also the countries in Europe that, with the exception of Mexico and Canada, have the largest organic market shares for organic food. Furthermore, Sweden and Bulgaria reported high organic shares of the total vegetable area.
- Since 2004, when data on organic land use and crops was collected for the first time, the vegetable area increased by four-fold, from 105'000 hectares to the current 437'000 hectares. The major increase in 2016 is mainly due to a substantial increase of the vegetable area in Mexico.
- A large part (120'000 hectares) is for fruit vegetables, followed by leafy and stalked vegetables (salads). For most countries, however, no crop details for the vegetable area are available.
- The available data on the breakdown of the fully converted and in conversion area at least 50'000 hectares of a large part of the organic vegetable area is under conversion. Thus, it can be concluded that not a big increase of the organic vegetable supply can be expected.



## World: Organic vegetables: Growth of the organically managed land 2004-2016

#### Vegetables: Development 2004-2016

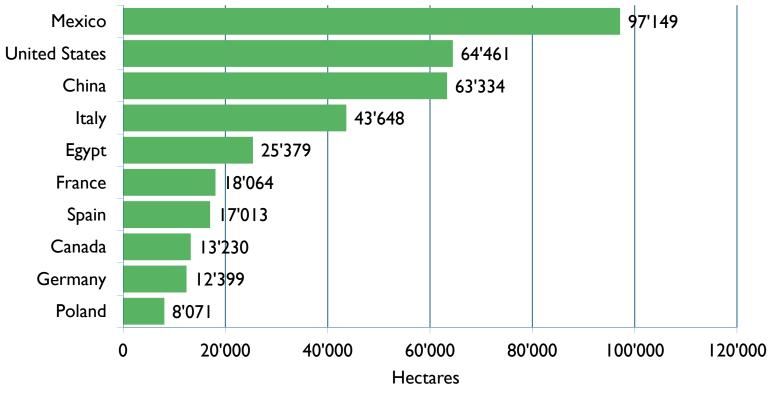
Source: FiBL-IFOAM-SOEL-Surveys 2006-2018





# World: Organic vegetable area: The ten leading countries 2016

### Vegetables: The ten countries with the largest organic area 2016

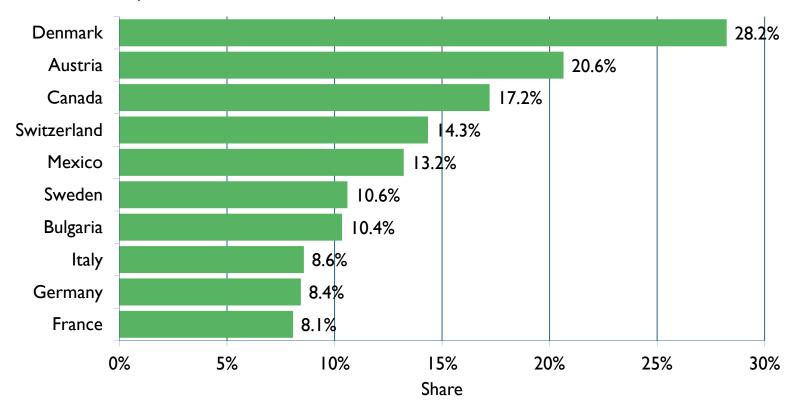


Source: FiBL survey 2018

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# World: Organic vegetables: The ten countries with the highest organic shares 2016

## Vegetables: The ten countries with the highest organic shares 2016





### **More information**

More information (PDF, data sources, graphs) at <u>http://www.organic-world.net/yearbook/yearbook-2018.html</u>

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