

# Social Sustainability

Mushrooms are a socially sustainable food as they have a relatively low water and carbon footprint. These low footprints ensure that precious resources are being preserved for future generations and that greenhouse emissions are minimised.

*Note: This is an American source of information.*

## ► The Mushroom Sustainability Story

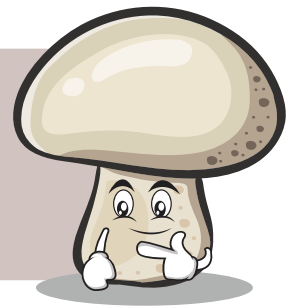
<https://www.mushroomcouncil.com/sustainability/story/>

Conversion Chart
1 lb = 0.453 kg
1 gallon = 3.78 L

## Did You Know

Producing 1 lb requires only 1.8 gallons of water

Producing 1 lb generates only 0.7 Lb of CO<sub>2</sub> equivalents



Using the conversion table above, calculate the following amounts.

1. Calculate the amount of water required to produce 1 kg of mushrooms.

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2. Calculate the amount of CO<sub>2</sub> equivalents to produce 1 kg of mushrooms.

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# Social Sustainability (cont.)

Research the definition of the following terms.

3. Define CO<sub>2</sub> equivalents.

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4. Define water footprint.

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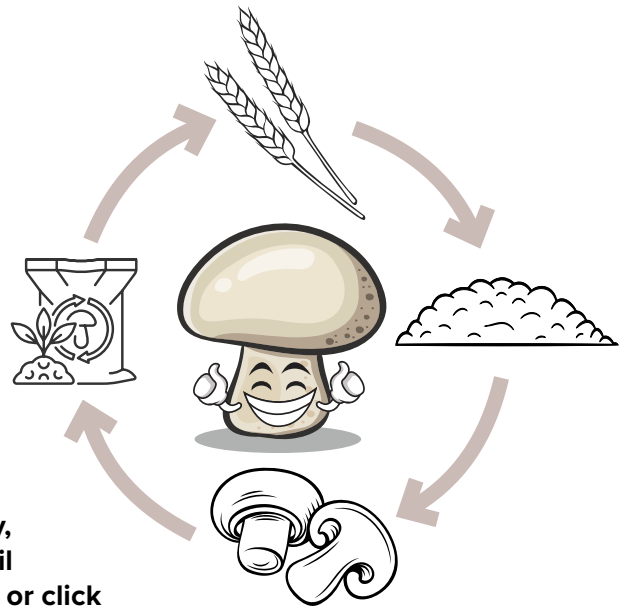
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# Environmental Sustainability



Mushrooms are an environmentally sustainable food. Waste materials from other agricultural processes are recycled into raw materials for mushroom compost.

Mushroom growing requires little space, water and energy, and the spent mushroom compost is also reusable as a soil conditioner and sold through nurseries. Scan the QR code or click on the [link](#) to read the article on mushroom sustainability and answer the following questions.

Note: This is an American source of information.

► American Mushroom <https://www.americanmushroom.org/press-room/more-about-mushroom-sustainability/>



1. Which of the following may be used to create mushroom compost?

- |              |                 |              |              |
|--------------|-----------------|--------------|--------------|
| Grass        | Chicken litter  | Molasses     | Cow dung     |
| Horse manure | Straw           | Almond husks | Rotting wood |
| Mushrooms    | Mushroom stumps | Corn cobs    | Cotton hulls |

2. Design a question based on the following information:

“The substrate for mushrooms grown in Pennsylvania may be a little bit different than that used to grow mushrooms in California or Texas because of each area’s differences in what is available locally. Taking advantage of the products of other agricultural enterprises where mushrooms are grown is part of what makes mushrooms so sustainable, and what makes the mushroom industry a perfect partner for other agricultural operations.”

(American Mushroom Institute, n.d.)

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# Environmental Sustainability (cont.)



3. Name two ways in which spent mushroom compost can be used.

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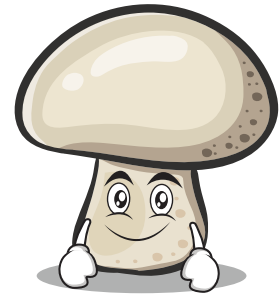
2. \_\_\_\_\_  
\_\_\_\_\_

4. Describe some of the ways in which mushroom growers are environmental stewards.

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# Economic Sustainability



Mushrooms are an economically sustainable food. They are a valuable food crop that contributes to a country’s GDP, and mushroom farms are important employers of local populations.

Scan the QR code or click on the [link](#) to read the article on NSW’s mushroom industry and answer the following questions.



► NSW’s mushroom industry <https://thefarmermagazine.com.au/the-mushroom-industry-innsw-continues-to-grow/>

1. What position do mushrooms hold as a horticultural crop? \_\_\_\_\_
2. Where do mushrooms rank as a fresh produce item? \_\_\_\_\_
3. How many tonnes of mushrooms are produced annually? \_\_\_\_\_
4. How many individuals are employed in the mushroom industry? \_\_\_\_\_

## Australian Horticulture Statistics 2020/21

### Task 1:

Use the following websites to complete the table below. Choose three crops (one must be mushrooms) and tabulate the data for production volume and value in the table below.

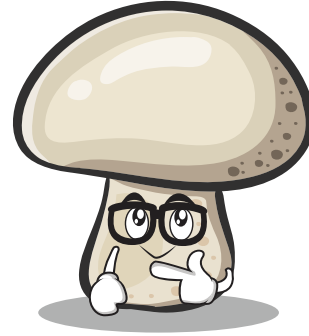
- Australian Horticulture Statistics 2020/21 [https://t.ly/\\_q1z](https://t.ly/_q1z)
- Australian vegetable production statistics <https://ausveg.com.au/resources/economics-statistics/australian-vegetable-production-statistics/>

Crop	Production volume (tonnes)	Production value (\$m)

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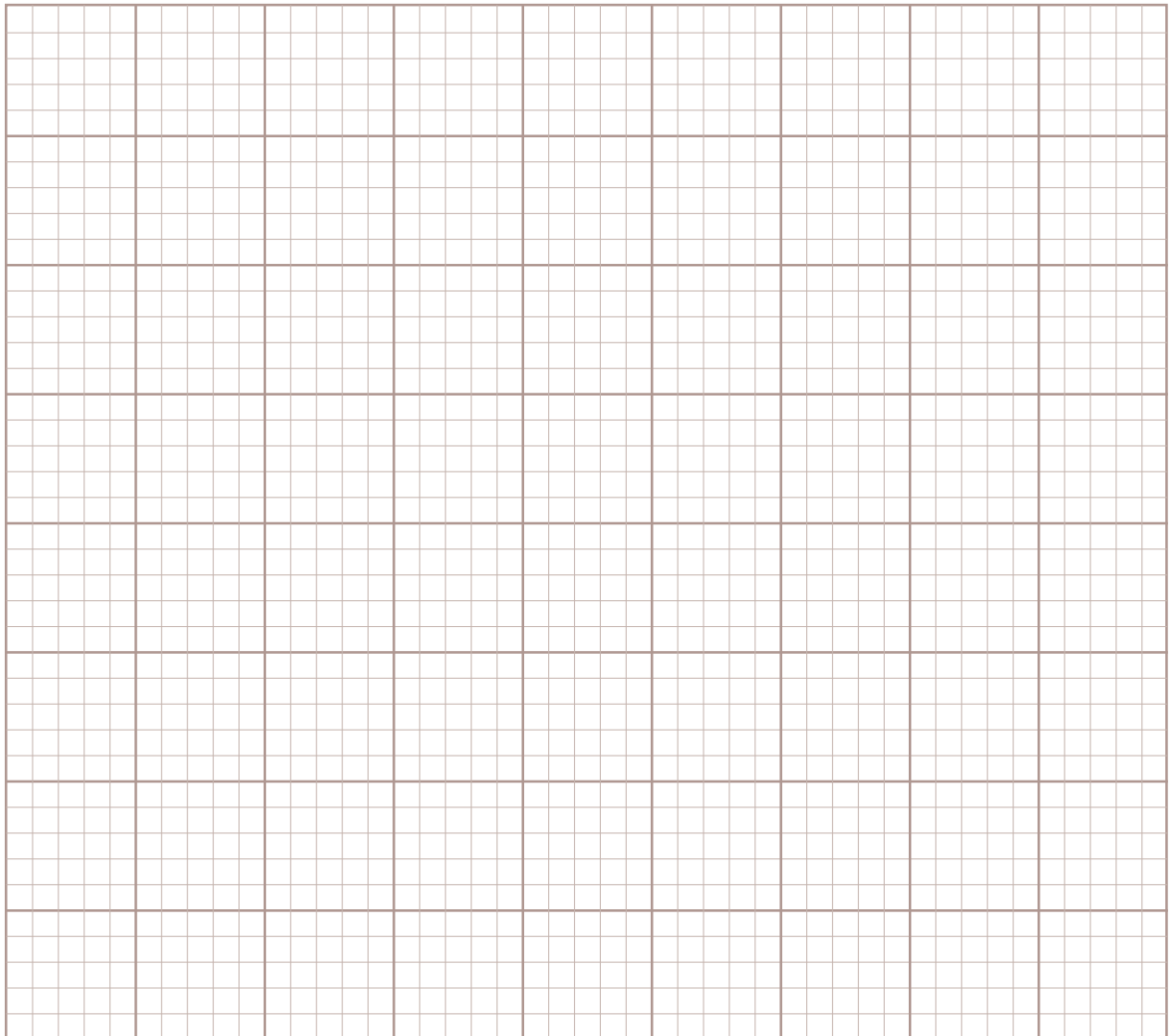
# Economic Sustainability



## Task 2:

Scan the QR code or click on the [link](#) to go to the horticulture PDF (pages 36–39). Select the same three crops from Task 1 and graph the data for production volume and production value.

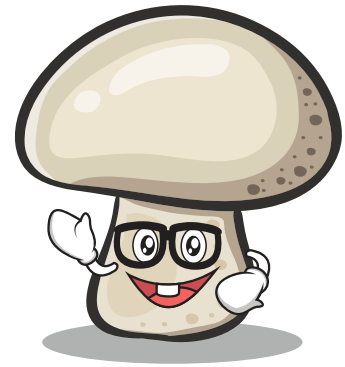
► Australian Horticulture Statistics 2020/21 <https://www.horticulture.com.au/contentassets/6d2b3ef8e45b4504bb6b22b6378d08ae/hort-innovation-ahsh-20-21-vegetables.pdf>



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# Economic Sustainability



## Task 3:

Justify why agricultural industries need to track data every year and identify who might use this data and why.

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# Mushroom Farm Case Study



Click on the [link](#) to watch the video and answer the following questions.



» Marvellous Mushrooms with Farmer Georgia (8:13)  
<https://www.youtube.com/watch?v=5RGezmNp54k>

1. What kind of mushrooms are grown at Bulla Park?

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2. Describe the ways in which the production of mushrooms at Bulla Park are sustainable in economic, social, and environmental sustainability.

Economic	Social	Environmental

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# Challenges Facing the Mushroom Industry

Review the following article to research an example of how the mushroom industry is responding to a particular challenge. Other articles/challenges could be investigated with an internet search.

1.

## ▶▶ The Mushroom Scene ‘Downunder’

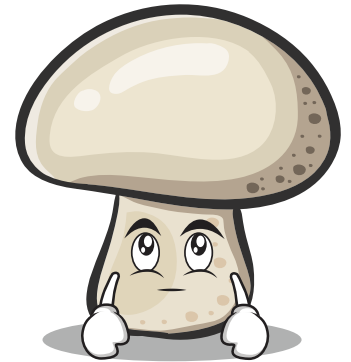
<https://www.champfood.com/news/the-mushroom-scene-downunder/>



Write a report summarising how the mushroom industry is responding to a specific challenge(s) that it is facing. Present your report in a digital format.

Other challenges that you may consider:

- Rising costs of electricity and water.
- Labour shortages.
- Drought and flood affected raw materials such as wheat straw.
- Automated technologies such as robot harvesting machines.
- Supply of appropriate casing materials.
- Supply chain issues due to COVID-19.



Share the link to your design below:

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