

**Ministry of Education  
Curriculum Planning and Development Division**

**Level: Forms 4 & 5**

***CVQ Level 1 – Crop Production - Grow Box Operations***

Unit Code	Unit Title	Mandatory/ Elective
AG00656	Prepare Grow Box for Planting	Mandatory

**Unit Descriptor:**

**This unit deals with the skills and knowledge required for preparing a Grow Box for planting. It describes the work expectations associated with preparing the growing medium and filling the grow box with the prepared growing medium.**

<b>ELEMENTS</b> <i>Candidates must be able to:</i>	<b>PERFORMANCE CRITERIA</b>
1. Preparing the growing medium	Listed in Part 1 of this lesson
2 Fill grow box with growing medium	2.1 Apply appropriate chemical following supervisor's instruction
	2.2 Fill the grow box with the prepared growing medium to the required level
	2.3 Moisten the prepared growing medium as instructed by the supervisor
	2.4 Clear pathways of any excess materials and store as instructed by the supervisor

# Personal Protective Equipment (PPE)

- ▶ Coveralls
- ▶ Steel-tip boots
- ▶ Gloves
- ▶ Helmet
- ▶ Goggles
- ▶ Hat



Source: <https://www.omrindustryjournal.com/personal-protective-equipment-ppe>

## Materials

- Prepared growing medium

## Equipment

- Hoe
- Shovel
- Bucket
- Wheelbarrow
- Rake
- Spray can

## Chemicals

- Soil insecticide
- Soil fumigant

# Element # 2

Filling the grow  
box with growing  
medium

# Mixed growing medium ready to be filled into the Grow box



Source: <https://www.thebulkdepot.com/products/mighty-109-organic-hydromax-pro-grade-bulk-soil-mix>

# Applying appropriate chemicals to growing medium



Source: <https://www.lowes.com/n/buying-guide/garden-sprayer-buying-guide>

- ▶ After the growing medium has been mixed, apply soil insecticide and soil fumigant evenly to the growing medium using a spray can. This prevents insects and diseases from attacking plants in the grow box.

# Filling the grow box with the prepared growing medium to the required level



Source <https://thegrowbox.blogspot.com/2015/01/filling-grow-box-with-soilless-growing.html>

- ▶ After the growing medium materials are thoroughly mixed and sprayed, it can now be filled into the grow box.
- ▶ This can be done using the wheelbarrow or shoveled in if the mixing was done close to the grow box.

# Transporting the growing material to the Grow box



**Correct Posture**



**Incorrect Posture**

Source: <https://gardenever.com/wheelbarrow-handling-tips-handle-wheelbarrow-best-way/>

- ▶ When transporting the growing medium ensure the wheelbarrow is not overfilled and become too heavy and proper lifting posture is maintained while using the wheelbarrow.

# Spreading and levelling the growing medium evenly



Source <https://thegrowbox.blogspot.com/2015/01/filling-grow-box-with-soilless-growing.html>

- ▶ Using rakes and hoes, spread the growing medium evenly throughout the grow box during the process of filling to ensure that there are no air pockets.

# Spreading the growing medium evenly



Source <https://thegrowbox.blogspot.com/2015/01/filling-grow-box-with-soiless-growing.html>

- ▶ Fill in the spaces in the concrete blocks as they can be used for planting.
- ▶ Level the growing medium off using a piece of wood. Two persons can do this (see picture above) so that the entire width of the grow box is levelled as evenly as possible.
- ▶ Avoid standing on the material to compress it.

# Moistening the prepared growing medium

- ▶ Moisten the growing medium thoroughly to allow it to settle. After settling, more material can be applied.
- ▶ Wet the growing medium until water begins to trickle through the spaces in the base of the concrete blocks.
- ▶ This process ensures that the correct amount of material is placed into the grow box and allows the drainage of the grow box to be properly assessed.



Source <https://thegrowbox.blogspot.com/2015/01/filling-grow-box-with-soilless-growing.html>

# Clean up



Source: [https://www.pinterest.co.uk/speedy\\_eady/garden-hollow-blocks/](https://www.pinterest.co.uk/speedy_eady/garden-hollow-blocks/)

- ▶ Clear pathways of any excess materials and store materials, tools and equipment in a suitable location.

# EVALUATION

1. Why is soil insecticide and soil fumigant applied to the growing medium?
2. Why is the growing medium spread evenly throughout the grow box when filling?
3. Why are the spaces in the concrete blocks filled with growing medium?
4. Why is it important to moisten the growing medium?

# ANSWERS

1. Why is soil insecticide and soil fumigant applied to the growing medium?

After the growing medium has been mixed, apply soil insecticide and soil fumigant evenly to the growing medium using a spray can. This prevents insects and diseases from attacking plants in the grow box.

# ANSWERS

2. Why is the growing medium spread evenly throughout the grow box when filling?

Spread the growing medium evenly throughout the grow box during the process of filling to ensure that there are no air pockets.

# ANSWERS

3. Why are the spaces in the concrete blocks filled with growing medium?

Fill in the spaces in the concrete blocks as they can be used for planting

# ANSWERS

## 4. Why is it important to moisten the growing medium?

Moisten the growing medium thoroughly to allow it to settle. After settling, more material can be applied.

Wet the growing medium until water begins to trickle through the spaces in the base of the concrete blocks.

This process ensures that the correct amount of material is placed into the grow box and allows the drainage of the grow box to be properly assessed.

# References

- ▶ The Grow Box
  - ▶ Retrieved from : <https://thegrowbox.blogspot.com/>