

## Option 3 Farming

These are the sub-menu items:

### Option 3.1 Create modular crop farm

Place the turtle lower left corner

1. Start tk
2. Option 3
3. Option 1

The help screen auto-loads:

The inventory requires:

1. 64 stone
2. 128 dirt
3. 4 water buckets
4. 4 chests
5. 1 sapling (oak or spruce work best)
6. 1 crafting table

The completed farm ready for planting or extending:

The position of the turtle is already correct for extending the farm, either to the right side or to the front.

Use [Option 2 Extend modular crop farm](#)

If you want to plant the farm use the option

[Option 3 Harvest of manage crop farm.](#)

This will allow you to either do a one-off harvest, or setup the turtle to start automatically when the chunk is loaded.

```
Choose (+h = help +i = items eg 3h):
1) Create modular crop farm
2) Extend modular crop farm
3) Plant, harvest or manage crop farm
4) Build a wall or fence
5) Fence or wall an enclosure
Back = 'q' or number + Enter: _
```

```
Place me on the ground as below ^
|x| | | | | | | * = Wall
|x| | | | | | |
|x| | | | | | |
|x| | | | | | |
|x| | | | | | |
|B|B| | | | | | B = Barrel or Chest
|B|W| | | | | | W = Water
|^|B|B|*|*|*|*|*|^ ^ = Turtle
Size = 13 x 13

Enter to continue _
```



### Option 3.2 Extend modular crop farm

Place the turtle as shown above, on the left of the tree (or sapling). It will rotate to get into position so the facing direction is not important.

1. Start tk
2. Option 3
3. Option 2

The help screen auto-loads:

```
Place next to the tree as below ^
| x | | | | | | | | x = Wall
| x | | | | | | | |
| x | | | | | | | |
| x | | | | | | | |
| x | | | | | | | |
| B | | | | | | | | B = Barrel or Chest
| B | | | | | | | | W = Water
| B | | | | | | | | S = Sapling or Tree
| S | ^ | B | x | x | x | x | x | ^ = Turtle
Size = 13 x 13

Enter to continue _
```

The next menu asks which direction to extend:

```
Choose an option
1) Add a farm at the back
2) Add a farm to the right
Type number + Enter _
```

The inventory requires:

1. 64 stone
2. 128 dirt
3. 4 water buckets
4. 5 barrels or chests
5. 1 sapling
6. 1 crafting table

The completed extension (to the right):

The function first checks it's position and then travels to either the right or front of the existing farm.

If it does *not* meet a sapling or tree, it knows the farm has *not* been previously extended in that direction.

It then uses the original createFarm() function to make the extension.



### Option 3.3 Plant, harvest or manage crop farm

This option allows either planting or harvesting the farm.

Another option allows for setting it up to be managed automatically. This is useful at early game stage to accumulate large numbers of crops for villager trading while you are working in (or under) the area.

1. Start tk
2. Option 3
3. Option 3

This auto-help screen shows.

The turtle can be placed:

1. On top of the water,

(ideally facing right where it can observe whatever crop is growing)

2. On top of the front chest/barrel facing the tree / sapling, which is the position it ends at after constructing the farm.

```
Place as below (2 choices) > or <
| x | | | | | | | | * = Wall
| x | | | | | | | |
| x | | | | | | | |
| x | | | | | | | | B = Barrel or Chest
| x | | | | | | | | > = turtle on Water
| B | | | | | | | | C = Crop (first)
| B | > | C | | | | | | S = Sapling or Tree
| S | < | B | x | x | x | x | x | x | < = Turtle on Chest
Options to harvest or manage to follow.
Enter to continue _
```

The next option is to plant / harvest or deal with auto-start. If it has not been enabled already the option to enable it shows.

```
Choose your option
1) Plant or harvest this farm complex
2) Enable automatic farm management
Type number (q to quit) + Enter _
```

Select option 1:

A diamond hoe is required for farming. If already in the buried chest / barrel it will be equipped.

```
Diamond Hoe required for planting!
Add 1 diamond_hoe to any slot(s)
```

If there are no crops growing in front of the turtle then this message appears:

Example choose 3. carrot

```
Choose preferred crop
1) wheat_seeds
2) beetroot_seeds
3) carrot
4) potato
Type number of your choice _
```

A warning not to mix crops or seeds.

Only 95 are needed for a full field.

Any shortage is made up when the crop is harvested.

```
Do not mix! add as many as you want
Add 100 carrot to any slot(s)
```

The tools are replaced when complete, with the diamond hoe being left in the buried chest / barrel.



### Option 3.3.2 Manage crop farm

Proceed as above until you reach this menu:

```
Choose your option
1) Plant or harvest this farm complex
2) Enable automatic farm management
Type number (q to quit) + Enter _
```

Option 2 Enable automatic farm management  
selecting 'n' will end the toolkit

```
This turtle can be configured to be
a dedicated farm manager.

It will then start automatically and
monitor the farm complex:

harvesting and replanting continuously.

Do you want to enable this? (y/n) _
```

Selecting 'y' will write startup.lua and start.txt:

```
Autostart enabled. Reboot to activate
Thank you for using 'survival toolkit'
> _
```

If you run tk again you get this instead:

```
Choose your option
1) Plant or harvest this farm complex
2) Disable automatic farm management
Type number (q to quit) + Enter
```

Selecting 'n' will exit tk

```
This turtle has been configured to start
Do you want to disable this? (y/n) _
```

Selecting 'y' will remove the files start.txt and  
startup.lua

```
Autostart disabled. Reboot to activate
Thank you for using 'survival toolkit'
> _
```

If enabled, leave the turtle in place and it will monitor the state of the crops in front of it. When ripe, it will harvest and replant the same crop that was originally planted.

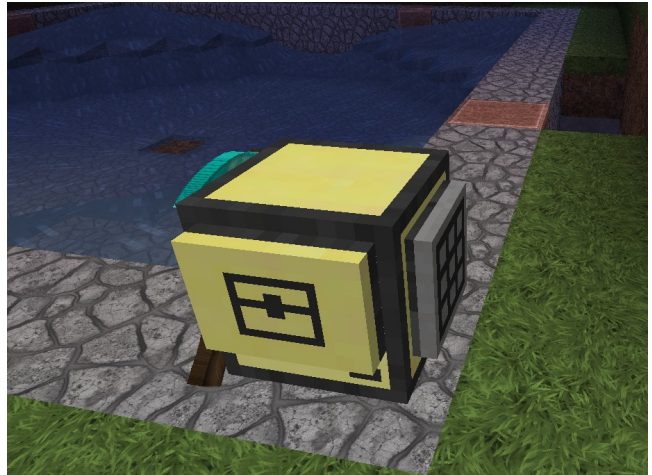
The turtle will keep both diamond\_pickaxe and diamond\_hoe in the inventory, with at least 1 crafting table in the buried chest / barrel

### Option 3.4 Build a wall or fence

This option uses part of the same code as Option 2.5 Fence or wall a forest. All you have to do is supply the length of the wall / fence and whether you want torches:

How about a 15 block fence on the water's edge?

1. Start tk
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3. Option 4 Build a wall or fence



The automatic help screen:

```
Build a fence or wall to chosen length.  
Turtle goes BACKWARDS when started.  
Start: length = 6, Turtle facing right  
| |>| | | | | |> = Turtle  
Finish:  
| |F|F|F|F|F|F| |F = Fence or Wall  
Enter to continue _
```

Enter length and torch spacing

```
Length of wall / fence (1-256) 15  
Torch spacing? (0-64) 8_
```

Completed fence.

To undo this work ready for building a fence round the entire wall: f 15 d



```
Wall or fence completed  
Thank you for using 'survival toolkit'  
> f 15 d  
Fuel level: 43170  
Moved forwards 15 / 15  
>
```

## Option 3.5 Fence or wall an enclosure

This option uses the same code as Option 2.5 Fence or wall a forest. All you have to do is supply fences or walls, and torches.

Starting with the same image as above, this time fence all the way round:

Start tk

Option 3 Farming

Option 5 Fence or wall an enclosure

Help screen

Enter width, length, torches

Finished fence

On rough ground the fence follows the contour the same as enclosing a forest demonstrated earlier.

```
Build a fence or wall
rectangular area.

| | | | | | | F = Fence or Wall
| IFIFIFIFIF|
| IF| | | IF|
| IF| | | IF|
| IF| | | IF|
| ^IFIFIFIF| ^ = Turtle
| | | | | | |

Enter to continue
```

```
Width of the area (1-64) 15
Length of the area (1-64) 15
Torch spacing? (0-64) 8_
```

