

BACKYARD FARMER

USE YOUR LAND

SUSTAINABLE

AGRICULTURE

TECHNOLOGY

RESEARCH

FOR THE
DEVELOPMENT OF
A LOCAL FOOD
ECONOMY

6 W 21 STREET

RICHMOND

VIRGINIA 23225

757.350.1356

BYFARMER@GMAIL.COM

LMR Community Roots Project

Thank you for your interest in volunteering for the Leadership Metro Richmond "Community Roots" project. On Thursday, April 1st, 2010, we will be facilitating the establishment of 8 small community gardens at 8 different locations. Through a partnership with Leadership Metro Richmond, Home Depot, Bon Secours and Backyard Farmer, these 8 organizations have each been granted a full installation of an organic vegetable garden.

The LMR team who planned "Community Roots" has been awarded a grant from Home Depot to provide the materials and labor to establish the gardens. We have agreed to help by providing 3-4 volunteers at each site. Please select the volunteer opportunity to which you would like to commit.

- Garden Site Coordinator** – This individual will be the point of contact for the Home Depot build team and all other volunteers at the site. This is an intensive job that should be accepted with the understanding that you will be required to not only assist with the building of the garden at all stages, but also be able to maintain the work pace of all volunteers with concise and effective direction. The requirements are as follows
 - 1 hour training session, March 30th at 6pm
 - 7:30 am – finish at site on 4/1/10
- Coordinator Assistant** – This individual will be the assistant to the Garden Coordinator at each site. This role requires familiarity with tools and a strong work ethic, as well as the ability to recognize where assistance is needed throughout the build. The requirements are as follows
 - 1 hour training session, March 30th at 6pm
 - 9:00 am – finish at site on 4/1/10
- Home Depot Build Assistant** – This individual will be working with the Home Depot team to keep pace and identify the step by step process of the garden build
 - 1 hour training session, March 30th at 6pm
 - 7:30 am – 12:00 pm at site on 4/1/10
- Activities and Education Assistant** – This individual will be working with community members during the planting process and will answer questions related to the garden
 - 1 hour training session, March 30th at 6pm
 - 10:00 am – finish at site on 4/1/10

Thank you for the generous commitment of your time and talents. This is an important step forward in the growth of Richmond as an example of the sustainable agriculture movement. Contact Sean Sheppard at 757-350-1356 or bvfarmer@gmail.com to confirm your commitment.

BACKYARD FARMER

USE YOUR LAND

SUSTAINABLE

AGRICULTURE

TECHNOLOGY

RESEARCH

FOR THE
DEVELOPMENT OF
A LOCAL FOOD
ECONOMY

6 W 21 STREET

RICHMOND

VIRGINIA 23225

757.350.1356

BYFARMER@GMAIL.COM

Garden Site Selection

The following sites have been selected to host a sustainable garden. Please select the three sites closest to you; we will base our final decision as closely to your top selection as possible. We are welcoming participants on a first come-first-serve basis, so please let us know if you are able to commit as soon as possible

- The Governors Mansion**
- Maude Trevvett Elementary School**
- Goochland Courthouse**
- Binford Middle School**
- Fairfield Resource Center**
- Whitcomb Resource Center**
- Innsbrook Senior Center**
- Child Savers**

We have attached the building specifications provided to Home Depot Team Members to familiarize you with the job-day process. Once we have got a team put together, we will have a preparation meeting on Tuesday, March 30th at 6pm at our warehouse in Manchester.

Thank you again for your interest. Do not hesitate to contact us with any questions or suggestions you have.

LMR Community Roots Garden Plan
Home Depot Volunteer Building Specifications

Overview

This is a step by step guide of what Home Depot Team Members, along with Backyard Farmer Staff and Volunteers, will be doing on Thursday, April 1st in association with the Leadership Metro Richmond Community Roots program.

There are 8 small gardens being established at 8 different locations. Each garden features four 3x10 raised beds in a symmetrical grid layout. Two of these beds will feature a trellis system for vertical growing; two of the beds will feature a simple cold-frame structure for season extension and seed starting. All of the beds will feature a PVC hoop structure with different types of materials for climate control and protection for harsh elements.

Each site will need the following tools and equipment available.

- | | |
|--|---|
| <input type="checkbox"/> 4 Flat Spaded Shovels | <input type="checkbox"/> 4 Pitch Forks |
| <input type="checkbox"/> 2 Mattocks | <input type="checkbox"/> 2 Wheelbarrows |
| <input type="checkbox"/> 1 Post Hole Digger | <input type="checkbox"/> 4 Hammers / 2 Sledge Hammers |
| <input type="checkbox"/> 4 Steel Rakes | <input type="checkbox"/> 2 Saw Horses |
| <input type="checkbox"/> 4 Power Drills | <input type="checkbox"/> 2 Circular Saws |
| <input type="checkbox"/> Extension Cords | <input type="checkbox"/> Staple Gun w/ 3/8" staples |
| <input type="checkbox"/> 2 10x10 Tarps | <input type="checkbox"/> 4 Hand Trowels / Shovels |
| <input type="checkbox"/> 2 Building Squares | <input type="checkbox"/> 4 16' Measuring Tapes |
| <input type="checkbox"/> Marking Pencils | <input type="checkbox"/> Paper for sketches |
| <input type="checkbox"/> Six 5 Gallon Buckets | <input type="checkbox"/> 2 Pair of Scissors |
| <input type="checkbox"/> 1 pair of heavy-duty wire cutters | <input type="checkbox"/> Phillips Head Drill Bits |
| <input type="checkbox"/> 3/4" Paddle Bit | <input type="checkbox"/> Gloves and Eye Protection |

The materials being provided by Home Depot are as follows:

- 2x10x12 Untreated Pineboard – cut into 3' segments for sides of raised beds
- 2x10x10 Untreated Pineboard – uncut and used as sides for raised beds
- 2x4x10 Untreated Pine Board – cut into 10" pieces for corner bracing
- 2x2x8 Untreated Pineboard – cut into 5', 4', 3' and 33" segments for trellises and cold frame lids
- 1x2x8 Untreated Pineboard – cut into 5' segments and drilled with 3/4" Paddle Bit for hoop structure supports
- 3/4" PVC Pipe – Cut to 7' lengths for hoop structure
- 5'x100' Welded Wire – cut to 3.5' lengths for trellis structure
- 10'x100' 6 Mil Clear Plastic – cut to four 20' lengths for hoop structures and two 4' lengths for cold frame lids
- 3'x100' Weedblock – cut to 10' lengths to be laid down in beds before soil is put down (optional)

- Various Hardware- Hinges for Cold Frames, Screws for Assembly, Washers for Trellis Attachment
- Straw Bales – used for mulching

Materials Provided by Backyard Farmer

- Corner Braces for Cold Frames and Trellises
- Staking of Beds at each site
- Agribon Fabric for Each Garden Site (shade netting, temperature control)

We hope that everyone is excited about preparing for and participating in this event. We are available for guidance and support prior to the build date, and will be on site at each location the day of helping with every aspect of this project.

To make this easier, here is an outline of each action item and structure we will be completing on April 1st

Raised Beds – 3x10x10” wooden structures filled with soil for growing vegetables

Hoop Structures – PVC Pipes bent and inserted in raised beds to support agriculture fabrics

Trellis Structure – 2x2 Frame Structure with Welded Wire used for supporting vining plants

Cold Frame Structure – 2x2 Frame wrapped in clear plastic to trap heat for seed starting

Bed Preparation – process of loosening soil and preparing ground for raised bed placement.

Corner Braces – Triangular pieces of wood provided by Backyard Farmer for ensuring structural corners of Trellises and Cold Frame Lids

Mylar Plastic – clear plastic used commonly in greenhouse structures; used here for cold frame lids

Agribon Fabric – porous fabric used to control temperature and provide light shade for plants.

For the first stage, we are recommending that each Home Depot team breaks into two groups; Group 1 is primarily responsible for bed and garden preparation (stripping sod, digging beds, preparing soil) and Group 2 is primarily responsible for preparing and assembling wooden structures. Both groups will work together in setting the beds and cold frames into their final place and will be assisting community members in planting the garden (optional). Below is our step-by-step breakdown of how the work-day should go.

Stage 1 – Set Up: The first thing everyone needs to do is prepare the space and the materials needed for the build. **Team 1, the Garden Team,** will be preparing the garden beds. **Team 2, the Cutting Team,** will be making cuts and pre assembling structures.

Team 1 – Preparing the Garden Site (4-6 People)

Tools Needed: Spaded Shovels, Maddocks, Pitch Forks, 5 Gallon Buckets, Wheelbarrow

Step 1 – Removing Sod and Grass

A: Using flat spaded shovel, remove all sod within the staked out areas.

B: An easy way to do this is to pre-cut the sod in 12 inch strips the same way you would edge a bed (See Figure 4). Be sure to leave a 6” perimeter on all sides so the beds can lay down on the ground and not in the dug area.

C: Remove debris from garden site

Step 2 – Digging Beds

A: Using flat spaded shovel, cut an edge around the perimeter of the scraped bed space and push the soil into the center of the bed

B: Using mattocks and pitch fork, loosen the remaining soil.

Team 2 – Making Cuts (2-4 people)

Tools Needed: Circular Saw, Builders Square, Tape Measures, Pencil, Saw Horses

Step 1 – Raised Bed Ends – cut 2x10x12’s into 3’ segments

Eight (8) 3’ segments needed total

Step 2 – Cold Frame Ends – cut 2x10x12’s into 3’ segments

Two (2) 3’ segments needed total

Step 3 – Trellis Supports (Vertical) – cut 2x2x8 into 5’ segments

Eight (8) 5’ segments needed total

Step 4 – Trellis Supports (Vertical) - cut one end of each 5’ section into pointed stake so it can be driven into the ground

Step 5 – Trellis Supports (Horizontal) – cut 2x2x8 into 4’ segments

Four (4) 4’ segments needed Total

Step 6 – Cold Frame Lid – using 3’ segments left over from Step 3, keep four (4) 3’ segments and make four (4) 33” cuts

Four (4) 3’ segments needed total

Four (4) 33” segments needed total

Step 7 – Raised Bed Braces – cut 2x4x10 into 10” segments

Sixteen (16) 10” segments needed total

Step 8 – Hoop Structures – cut ¾” PVC into 7’ segments

Twenty (20) segments needed total

Step 9 – Hoop Structure Braces – cut 1x2x8’s into 5’ 6” segments

Eight (8) segments needed total

Step 10 – Hoop Structure Braces – drill a 3/4” hole every 2.5’, starting 3” from the end of each 5’ segment (1 hole at 3”, one hole at 2’9”, one hole at 5’3”

Stage 2 – Growing Structure Assembly: At this point, we recommend breaking into 3 groups. Once the beds have been scraped and lightly dug and all the cuts have been made, the assembly can begin. There are two different beds being built at each site

Bed Type 1 – Cold Frame Bed: This bed features a small portion segmented off and covered with a plastic lid to help start young seedlings

Bed Type 2 – Trellis Bed: This bed features a 4x8 trellis for growing climbing or vining plants

At this point, we recommend breaking into 3 groups

Group 1 – Bed Assembly (2-4 People)

Group 2 – Trellis Assembly (2-3 People)

Group 3 – Cold Frame and Hoop Assembly (2-3 People)

Group 1 – Bed Assembly

Tools Needed – Drill, 3 1/2” Screws, Builders Square

Step 1 – Collect Materials – Each bed will require the following materials. There are four beds being built at each garden site

- Ten (10) 2x10x3 segments
- Eight (8) 2x10x10 segments
- Sixteen (16) 2x4x10” segments

Step 2 – Attach Braces – Each 2x10x10 segment will have a 2x4x10” brace attached 1 ½” off of each end of the board. Use 3 ½” screws. (*See Figure 1*)

Step 3 – Assemble Beds - Fasten 2x10x3 segments perpendicular to the 2x10x10 segments. Secure with 3 ½” screws

Step 4 – Repeat for remaining 3 beds

Step 5 – Cold Frame Insert – Once the beds are complete, two of the beds will need an additional cold frame insert. Take 2 pieces of 2x10x3’ and secure them with 3 ½” screws at 36” down the 2x10x10 side pieces. Depending on the orientation of the sun at each particular location, this cold frame insert will want to be where it can receive the best sun exposure. A Backyard Farmer Team Member will assist with this specific placement.

Group 2 – Trellis Assembly

Tools Needed – Drill, 3 1/2” screws, 1” screws, Builders Square

Step 1 – Collect Materials - We are building four trellis features that will require the following materials

- Eight (8) 2x2x5’ segments with pointed stake end
- Four (4) 2x2x4’ segment
- Sixteen (16) corner braces
- Four (4) 3.5’ Welded Wire Segment
- 1” screws and washers

Step 2 – Assemble Trellis Frame – Lay out 2 pieces of 5’ 2x2 and connect the top ends with one 4’ segment of 2x2. Using corner braces (triangle pieces), create a 90° on both sides and attach the corner braces with 1” screws. The end product should look like a giant staple, with the staked ends of the 5’ 2x2 segments pointing down (*See Figure 2*).

Step 3 – Attach Welded Wire – cut four 3.5’ segments from the 100’ roll of welded wire. When cutting, make sure that complete squares are left in the welded wire to ensure tight fitting. The bottom square of the welded wire will have to be cut off. Lay each 3.5’ segment down on a completed trellis frame and secure top corners with 1” screw and washer. Make sure the washer presses down on at least one part of the welded wire. Aim for corner junctions of the welded wire for tighter security. We recommend about 15 screws per trellis set, or 60 per garden site, to make this last.

Step 4 - Bring assembled trellises to appropriate beds and prepare for installation

Group 3 – Cold Frame Lids and Hoop Preparation

Tools Needed: Drill, Staple Gun and Staples, Scissors

Step 1 – Collect Materials – We are building 2 cold frame lids and preparing the covers for the hoop structures that will require the following materials

- Four (4) 36” 2x2 Segments
- Four (4) 33” 2x2 Segments
- Sixteen (16) Corner Braces (Triangle Pieces)
- 1” Screws
- 3 1/2” screws
- Four (4) 10’x20’ 6 Milimeter Mylar Plastic Cuts
- Two (2) 10’x4’ 6 Milimeter Mylar Plastic Cuts
- Four (4) 2 1/2” galvanized hinges

Step 2 – Assemble Cold Frame Lids – Lay out two 36” segments parallel to each other. Connect two 33” segments to the inside of the pieces to make a square. Secure corner braces (triangle pieces) to each corner with 1” screws. Flip frame over and repeat (*See Figure 3*)

Step 3 – Attach plastic – take a 10’x4’ sheet of mylar plastic and layout on ground. Place the 36” side of the cold frame lid near the edge of the plastic and secure with staples every 3 inches. Flip lid on one end so that the plastic folds over top of it and covers the open area of the frame. Have one person hold the plastic tightly while the other person staples along the edge, every 2-3 inches. Flip the lid once more and repeat the same process. Cut any excess plastic off, leaving enough to fold down flaps on either 33” side. Repeat the stapling process for the sides. Attach two hinges on the 36” segment, 6” in from either side of the cold frame. Repeat for the other lid.

Step 4 – Cutting Plastic for Hoops – Cut 4 10x20’ sheets of mylar plastic

Stage 3 – Bed Placement: Once the three primary features have been assembled, we are ready to place and set everything in its final home. Everyone will want to work together to place the beds quickly and start installing the trellises

Step 1 – Place Beds – Each 3x10 bed will be placed over top of one of the four previously prepared bed spaces. Be sure to check the level and proper placement of each bed once it is in place.

Step 2 – Place Trellises – Two of the beds will feature the four trellis components previously built. To install the trellises, simply set 1’ from either 3’ end wall and 12” from the back wall (leaving 2’ in front). (*See Figure 5*). Drive the staked end into the ground with a mallet or sledge hammer, taking care not to damage the wood. Because the trellises are only 4’ long, there will be two in each of the two beds. Secure the two interior 2x2 vertical pieces to each other with 3 1/2” screws.

Step 3 – Place Cold Frame Lids – Two of the beds will feature the cold frame components previously built. To install the cold frame lids, simply rest the cold frame lid

on the 33” insert (previously built into two of the raised beds) and secure the hinges to the outside facing surface of the insert (using screws that come with the hinge set)

Stage 4 – Soil Mixing and Bed Filling

Once the beds have been laid out and assembled, we have to fill the 10” space with a blend of different growing mediums. There are four different types of bagged soil that will need to be mixed and distributed evenly throughout the four beds and cold frame structures.

Step 1 – Each garden bed will need 10 bags of Top Soil, 10 Bags of Composted Manure, 10 Bags of Mushroom Compost and 6 Bags of Moo-Nure

Step 2 – Open the bags in sequence (first top soil, then compost manure, then mushroom compost, then moo-nure) and empty them into the beds

Step 3 – Once all of the bags have been emptied, chop the soils together and even the soil surface with steel rake.

Stage 5 – Finishing Touches

Once the beds have been filled, we are ready to install the hoop structures and begin planting.

Step 1 – Insert one end of a hoop into the corner of each bed and drive it down into the soil as deep as it will go. Repeat every 2.5” (one hoop at each corner, one hoop at 2.5”, one hoop at 5’, one hoop at 7.5”). Once hoop is in desired place, secure with 3 ½” screw.

Step 2 – Insert PVC Pipe into ¾” holes on 1x2x5’ segments. Each 5’ segment will secure 3 poles, with the middle pole (at 5’) being secured by both 5’ segments.

Step 3 – Bend the hoops until the opposite ends can be inserted into the soil in the same manner. Once properly placed, secure end with 3 ½” screw (*See Figure 6*)

Step 4 – Begin Transplanting

LMR Community Roots Schedule – April 1st 2010

8:00 am – arrive on site, lay out tools and materials, group meeting and overview of work day

8:45 am – begin work

Group 1

Prepare 4 garden beds

- strip sod
- loosen soil

Group 2

Make Wood Cuts According to Chart

9:45 – Group 2 continues making cuts while Bed Assembly Group starts putting together beds and placing them and the Trellis Group starts building the trellises. When the cuts are finished, the cutting group will put together the cold frame lids and cut the

11:00 – Everyone comes together to fill beds with dirt

11:45 – Install Hoop Structures

12:00 – begin planting

1:00 – finish and attach Mylar plastic

Quick Cut Chart (In order of priority for job efficiency)			
Description	Original Piece	Cut To Length	Quantity
Raised Bed Ends	2x10x12	3'	8
Cold Frame Ends	2x10x12	3'	2
Raised Bed Braces	2x4x10	10"	16
Vertical Trellis Supports	2x2x8	5'	8
Trellis Support Stake Ends	2x2x5' (from previous cut)	Pointed stake (3-5")	8
Horizontal Trellis Support	2x2x8	4'	4
Trellis Support	5'x50' Welded Wire	5x4' Lengths	4
Cold Frame Lid	2x2x3 (from trellis cuts)	3' (no cut necessary)	4
Cold Frame Lid	2x2x3 (from trellis cuts)	33"	4
Hoop Structures	¾" PVC	7.5'	20
Hoop Structure Braces	1x2x8	5'6"	8
Hoop Structure Braces	1x2x5'6"	¾" Paddle Bit Hole	24 Holes Total
Cold Frame Plastic	10x100 Mylar Plastic	10x4' Lengths	2
Hoop Structure Plastic	10x100 Mylar Plastic	10x20' Lengths	4