AllSeasons Garden
workshop series
**Four Seasons Gardening**
This class is presented by Master Gardener Volunteers with the support of the University of Maine Cooperative Extension and Laudholm Trust at Wells Estuarine Reserve.

Four seasons gardening in our plant hardiness zone is dependent upon a suitable greenhouse or hoop house, row covers, cold hardy crops, and succession planting.

The hoop house we’re constructing in this class is a modified Gothic arch high tunnel design. It is oriented with the long axis east to west and it is lightweight and movable. A movable greenhouse will allow for the soils to be restored by sun, rain, and deep rooted cover crops and avoid pests and disease caused by soil nutrient problems. Row covers are light weight permeable translucent fabric (sold as Agribon or Remay), which is loosely laid over a wire armature close to the crops, and which offers an essential additional layer of cold weather protection.

Cold hardy crops noted below must be resistant to temperatures as low as 12° F without damage. Succession planting means planting small batches of crops many times throughout the season. Succession planting works well because as one crop finishes producing, it can be pulled out and composted, leaving room for another. A good place to start the fall garden is with greens. Spinach, Arugula, Lettuce, Mustard, and Mesclun all grow well in our cool fall weather and are ready to harvest sometimes less than a month after germination. Plants grow slower in fall due to shorter days and less light intensity, so you need to allow a couple more weeks for them to reach maturity than spring planted crops. You may also plant or move crops such as Arugula, Beet Leaves, Carrot, Claytonia, Endive, Lettuce, Mache, Minutina, Spinach, and Turnip under the greenhouse, which along with the row covers will protect the crops from extreme frosts and extend the harvest time throughout the winter. The high tunnel greenhouse may also be used in the summer for heat-loving crops such as Tomatoes, Melons, Eggplant, Cucumbers, Sweet Potatoes, and Peppers.

Many Four Season Gardeners like to move the structure in the spring to cover warm season crops and also to allow the soil where the greenhouse spent the winter to receive natural rainfall which will prevent any build up of soluble salts, which can be a problem when planting in the ground in a greenhouse structure that is not moved.

The All Seasons Garden at Laudholm farm is located at 43°20’05.28 N latitude, USDA Plant Hardiness Zone 5a.

August 2014
(1) 1"ø EMT, Ridge [U]

(4) Gothic Arch fittings [K]

(2) scissor door fittings [K]

Tufflite IV Greenhouse Film 6 mil [K]

10' 1"ø EMT (8), Bent [U]

Door 10' 1"ø EMT (2) straight each end [U]

(2) 1"ø EMT -Purlins [U]

(8) T fitting [K]

(50) snap clamps [K]

(4) Intermediate base to upright connector [K]

(4) Corner Base connector [K]

(2) 1" EMT Cross Brace [U]

[K] - supplied in whole hoop house kit

[U] - user purchased locally (Home Depot, Lowe’s, hardware/lumber yard, etc.)
(1) 1"ø EMT, Ridge
(4) Gothic Arch fittings
(2) scissor door fittings
Tufflite IV
Greenhouse Film
6 mil
(8) 10' 1"ø EMT, Bent,
Door:
(2) 10' 1"ø EMT
straight each end
cut to size
T fitting (12)
(40) snap clamps
(2) 1" EMT Cross Brace
(2) 2x6x10' Lumber
1" EMT Clamps
(4) 2 hole,
(4) 1 hole
each side

[U] - user purchased locally (Home Depot, Lowe’s, hardware/lumber yard, etc.)
[UO] - user ordered (hoop benders/Lost creek, Johnny’s, etc.)

AllSeasons Garden
workshop series
hoophouse
Hoop House A
10’ x 10’ Gothic Arch with 6 mil greenhouse film, scissor door entrance.

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<thead>
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<th>Item</th>
<th>Quantity</th>
<th>Price 1</th>
<th>Price 2</th>
<th>Notes</th>
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<tr>
<td>1” ø EMT tubes</td>
<td>19</td>
<td>$7.33</td>
<td>$139.27</td>
<td>Home Depot, Lowe’s</td>
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<tr>
<td>Complete Kit</td>
<td>1</td>
<td>$281.41</td>
<td>$281.41*</td>
<td>Hoop Benders *reg. price. On sale for 20% ($225.13)</td>
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Also recommended: Sandbags or ground screws, row covers and supports

Hoop House B
10’ x 10’ Gothic Arch, modified

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<td>Top connectors</td>
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<td>$9.71*</td>
<td>$38.84*</td>
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<td>Scissor Door fitting</td>
<td>2</td>
<td>$10.29*</td>
<td>$20.58*</td>
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<td>1” cross connector</td>
<td>8</td>
<td>$16.89/4</td>
<td>$33.78*</td>
<td>Johnny’s *reg. price. On sale (20% off) thru 09/02/13 ($13.51/$27.02)</td>
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<tr>
<td>6 mil Tufflite IV</td>
<td>1/2</td>
<td>$198.00*</td>
<td>$99.00*</td>
<td>Johnny’s *reg. price. On sale (10% off) thru 10/15/14 $178.20 ($89.10)</td>
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<td>Snap Clamps</td>
<td>40</td>
<td>$5.95/10</td>
<td>$23.80*</td>
<td>Home Depot</td>
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<td>2x6 base rails</td>
<td>2</td>
<td>$5.92</td>
<td>$11.86</td>
<td>Estimate - (8) 2 hole 1” EMT clamps, (8) 4 hole 1” EMT Clamps, #10x1</td>
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<td>misc hardware</td>
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<td>self-drilling hex head screws,</td>
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Also recommended: Sandbags or ground screws, row covers and supports

**Tools needed:**
tape measure, drill with hex/screw drivers, permanent marker, flat stable surface, 6’ ladder, center punch, hacksaw, small round metal file, utility knife, rubber mallet. helper, little or no wind.

August 2014
Resources:
Hoop Benders (benders, components, kits, film) - http://www.hoopbenders.net, 903-497-1158
Johnny’s Selected Seeds - (Agribon/row covers, winter greens seed, etc. - search for season extension) - http://www.johnnyseeds.com, 1-877-564-6697
Farmtek (search film remnants, ground anchors) - http://www.farmtek.com
University of Maine Publication #2752, Extending the Garden Season (with video embedded) - http://umaine.edu/publications/2752e/
Extending the Gardening Season Using Raised Beds - http://www.youtube.com/watch?v=9SMedSGbB1Q

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www.extension.umaine.edu

Wells Reserve at Laudholm - http://www.wellsreserve.org

Recommended reading:
Eliot Coleman, Four-Season Harvest: Organic Vegetables from Your Home Garden All Year Long (2nd Edition)
A Garden for All Seasons: http://www.fourseasonfarm.com/pdfs/garden_for_all_seasons.pdf

Copies of these resources may be ordered from:
Four Seasons Farm
609 Weir Cove Road
Harborside, ME 04642
www.fourseasonfarm.com