# Chicken Tractors

## Make your own!

Web sites:

- For plans for a geodesic dome tractor similar to the one assembled during the workshop, including materials, dimensions, and detailed assembly instructions, see http://milkwood.net/2009/07/27/how_to_build_a_geodesic_chook_dome/. Also see the second page of this handout.
- For close to thirty chicken tractor and coop designs, complete with photos and building instructions, see http://www.backyardchickens.com/a/chicken-tractors-mobile-chicken-coop-designs. Many of these are artsy or over-built, but some are more everyday and materials-efficient.
- For some detailed, downloadable plans for wheeled tractors with a PVC pipe frame, see http://freebies.about.com/gi/o.htm?zi=1/XJ&zTi=1&sdn=freebies&cdn=homegarden&tm=73&f=00&su=p284.13.342.ip_&tt=3&bt=8&bts=8&zu=http%3A//www.pvcplans.com/pvc-pastured-poultry-pen.htm.

Palmerston North City Library:

- *Backyard Chickens Guide to Coops and Tractors: Planning, Building, and Real-life Advice* by BackYardChickens.com (2011). Detailed building instructions with photographs for 13 coops and 3 tractors.
- Browse shelves, Dewey Decimal # 636.5. Most chook books will have a coop design (although maybe not a tractor design).

## For Purchase

For purchase in New Zealand – all listed will ship (prices may change and are listed exclusive of GST and freight unless otherwise noted):

- http://www.poultryvalleylifestyle.co.nz/ (Waikato) wheeled chook tractor for $650.
- http://www.chooks.co.nz/ (Nelson) a variety of mobile coops, from tubes for broody hens, to kitsets and larger and heavier wheeled tractors with prices ranging from $420 - $600.
- www.woodworx.co.nz (Rangiora) for an A-frame chook tractor $535 (GST incl).
- Also try TradeMe for tractors and coops with runs.

For pick-up only:

- Phil Stevens (phil@slowfarm.co.nz) for bespoke chicken tractors. Contact for a price and an estimate of when they will be completed. Phil can only do small numbers each year. A small koha is made to RECAP with each purchase.

RECAP
www.recap.org.nz

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# Geodesic chook tractor: Freeman dome (long arc design)

Based on plans and formulas developed by Robert Freeman and illustrated at http://milkwood.net/2009/07/27/how_to_build_a_geodesic_chook_dome/

| Radius (m) | Base circumference (m) | Area (m2) | Total length (m) | 6m lengths | Long arc length (m) 5 required | Short arc length (m) 5 required | Blue-blue spacing (m) | Blue-red spacing (m) | Red-red spacing (m) |
|---|---|---|---|---|---|---|---|---|---|
| 1.00 | 6.28 | 3.14 | 31 | 6 | 2.78 | 2.17 | 0.27 | 0.32 | 0.34 |
| 1.50 | 9.42 | 7.07 | 47 | 8 | 4.18 | 3.26 | 0.41 | 0.48 | 0.51 |
| 1.75 | 11.00 | 9.62 | 54 | 10 | 4.87 | 3.81 | 0.47 | 0.56 | 0.59 |
| 2.00 | 12.57 | 12.57 | 62 | 11 | 5.57 | 4.35 | 0.54 | 0.64 | 0.68 |
| 2.25 | 14.14 | 15.90 | 70 | 12 | 6.27 | 4.89 | 0.61 | 0.72 | 0.76 |
| 2.50 | 15.71 | 19.64 | 78 | 13 | 6.96 | 5.44 | 0.68 | 0.81 | 0.85 |
| 2.75 | 17.28 | 23.76 | 85 | 15 | 7.66 | 5.98 | 0.74 | 0.89 | 0.93 |
| 3.00 | 18.85 | 28.27 | 93 | 16 | 8.35 | 6.52 | 0.81 | 0.97 | 1.02 |
| 3.50 | 21.99 | 38.48 | 109 | 19 | 9.75 | 7.61 | 0.95 | 1.13 | 1.19 |
| 4.00 | 25.13 | 50.27 | 124 | 21 | 11.14 | 8.70 | 1.08 | 1.29 | 1.36 |

**Long arcs** B-B-R-R-B-B-R-R-B-B

**Short arcs** R-B-B-R-R-B-B-R

**Base** B-R-R-B-B-R-R-B-B-R-R-B-B-R-R-B-B-R-R-B

Refer to the photograph at http://plantingmilkwood.files.wordpress.com/2009/07/diagram-dome.jpg to see how the red and blue marks correspond to one another. *Important:* Remember to leave half the blue-blue spacing between the ends of the base and the first and last blue marks.

The smaller sizes of this design can be built with 15mm alkathene tubing, which is inexpensive and easy to work with. Start by cutting the required lengths and placing the red and blue marks. Next, join the ends of the base. I used a short piece of 20mm alkathene pipe as a sleeve and secured it with a couple of short wood screws. Lay the five long arcs flat so that the innermost blue marks form a pentagon, then fasten together at those points. Match the ends of the long arcs with the blue marks on the base and fasten together. Next, place the short arcs around the dome, matching the ends with the red marks on the base. Adjust for symmetry and fasten all remaining points. Choose a section for the hatch and cut lengths to fit, then fasten one side to the dome with either hinges, wire or zip ties. Cut and place netting over the structure and fasten with wire or zip ties. Be sure and peg the dome firmly to the ground, especially if you use a shadecloth or other covering which will catch the wind. Have fun building your tractor! – Phil Stevens