

Chicken tractors

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Introduction

A common challenge for new farmers is finding agricultural enterprises that match their available resources. Chicken tractors are a low-cost, time-efficient way to explore the livestock enterprise without large initial capital outlays. Chicken tractors also provide a low-labor method of developing garden beds for exploring vegetable and herb production without the need for expensive tillage equipment.

Families also may want to raise a small flock to recycle kitchen waste and provide eggs. In a residential setting, chicken tractors provide the ideal housing for a small flock of six to eight hens. Housing them in a chicken tractor prevents the chickens from disturbing neighbor's plants, while allowing the flock to be easily moved to different areas to benefit the soil. If chicken tractors are moved on a regular basis, concentrations of manure and the resulting odor are prevented.

What is a chicken tractor?

Chicken tractors are lightweight, mobile pens that confine chickens to a small garden spot. Chicken tractors also provide a controlled method of poultry pasturage. The tractor provides the chickens with protection against predators and weather. It also keeps the chickens in one area where they can improve the soil, through scratching and feeding activities.

Benefits of a chicken tractor

Key benefits of chicken tractors are reduced weed growth, garden pest control, fertilizer (manure), and food.

Weeding: Weeding occurs as the chickens peck and scratch the soil. This process removes most plant matter, and seeds, thereby clearing the pen of current and future weeds. The soil stays relatively weed-free for about two to four months.



Figure 1. Chicken tractors are lightweight, mobile pens that confine chickens to an area to prepare the soil for planting. Palm fronds, shown here, or a light-colored tarp should be added on the east and west sides of the tractor to provide side shade.

Pest control: The chickens will eat insects and their larvae that find their way into the pen. They also consume diseased plant residue.

Fertilizer: Chicken manure is a great fertilizer for your soil. This manure can supply the nitrogen needs of a small garden. Phosphorus and potassium from their feed are also in their manure. The soil will be ready for planting two weeks after moving the chickens to a new location. The two-week waiting period is necessary so the excess nitrogen can bind with carbon in the soil; otherwise, you will burn your new

plants. This initial nitrogen burn also helps clear the plot of weeds.

Food: The hens will supply you with eggs. You can also raise broilers for meat instead of hens for eggs.

Things to ask before building a chicken tractor

1) How much land area do you plan to use the chicken tractor on?

To figure out the square footage of the area you have, multiply the length of the area by the width.

2) How many chickens do you plan to raise?

One chicken can clear about 3-4 square feet every two weeks.

3) How large of a tractor do you need?

In determining a chicken tractor size, about 4 square feet per bird is needed. A rule of thumb is that the maximum size of your chicken tractor should be less than 1/8 the area you have available to rotate it over. But the tractor can be much smaller; a family that would like five to six eggs per day only needs eight hens. This would require a chicken tractor that is 32 square feet, or 4 feet by 8 feet. A chicken tractor of this size would require an area of 256 square feet (32 sq. ft. x 8 = 256 sq. ft.) for adequate rotation.

4) How much are you willing to spend on the chicken tractor?

A final constraint is how much you want to spend on the construction of your chicken tractor, feeding, and care for your flock.

Types of chicken tractors

You can build many different types of chicken tractors on your own. An internet search on chicken tractors will yield hundreds of styles. UOG Extension has built three types with locally available materials: a small wooden chicken tractor, a small PVC tractor, and a canopy and frame tractor.

Wooden chicken tractors

A wooden chicken tractor is the cheapest to build, but it is the heaviest of the three because it is made of 2x2 boards. It can be built to 4 foot x 8 foot x 4 foot, ideal for backyard use and multiple small garden plots.

PVC chicken tractors

The PVC tractor is about the same size as the wooden tractor, but it is lighter, and easier to assemble. The PVC model has the added advantage of not rotting.

Canopy and frame tractors

The third chicken tractor is basically a modified canopy and



Figure 2. A hanging five gallon bucket with openings cut in the sides can be used as a feeder.



Figure 3. Water cups can be purchased to hang on the outside of the chicken wire pen.

metal tubing frame (common on all our islands) with a base added and fencing around the sides. It covers the largest square footage, which allows for a larger flock and the ability to clear more land.

5 important components of the chicken tractor

The five components of a chicken tractor include feeders, water containers, nesting boxes, roosting perches, and side shade.

Feeders: Five gallon buckets with no lids make excellent feeders. Cut vertical slits on the side about 2 to 3 inches wide by 6 to 8 inches tall so that the chickens' heads can reach in. The opening should be 3 to 4 from the base of the bucket. You might want to run a rope through the handle to hang the feeder away from the ground so the chickens do not climb into it.

Water containers: Water containers can be made of plastic containers cut so that the chickens can get access to the water inside. Follow the same concept as the feeder, except the slit will be horizontal. You can also purchase water cups that will hang on chicken wire. Be sure to provide adequate water for several days.



Figure 4. A large jug or bucket with an entrance cut in the side and shredded paper inside can serve as a nesting box.



Figure 5. Chicken tractors should include a roosting bar strong enough to support the weight of several chickens.

Nesting boxes: Nesting boxes can be made a number of ways. For example a bucket with a lid on (or without), with an entrance cut on the side, or they can be made out of wood nailed together to resemble a box with an entrance. You can use shredded paper, grass clippings, or wood chips inside the nesting box.

Roosting perches: These can be any bar of about an inch in diameter as long as it is strong enough to support the weight of a couple of chickens. You can also use 2x2 boards or metal water pipes. Run the roosting perches through the side fencing and tie them to the sides of pen.

Side shade: Since the chickens are confined, it is important to ensure that shade is always available. Side shade is also necessary for early morning and late afternoon. This can be provided by a cover of some sort, such as a tarp, preferably of a light color, placed on the east and west sides of the chicken tractor. An alternative that can be used for a cover is woven coconut fronds. This will provide the chickens with shade inside the chicken tractor all day long.



Figure 6. In a deep litter pen, the litter can be cleared from the pen and composted every couple months.



Figure 7. Composted dry litter eventually turns into excellent potting soil for container gardening.

Applying mulch once tractor is moved

When chicken tractors are used to prepare a planting area, it is necessary to mulch the area with green waste when the chicken tractor is moved. Mulch is undecomposed organic material applied to the surface of the soil for protection and soil improvement.

Applying mulch serves several purposes:

- 1) Minimizes the possibility of fresh manure or bacteria splashing onto vegetables planted in the area.
- 2) Keeps the area free of weeds.
- 3) Increases water retention in the soil.
- 4) Provides a slow release of nutrients into the soil as it decomposes.

Deep litter management

For those who do not want to move the pen, a deep litter pen is the way to go. A deep litter pen is a bottomless pen that is



Figure 8. For those who do not want to move the pen, a deep litter pen is an alternative. A deep litter pen is filled with dry litter, such as dried grass, leaves, or shredded paper, which absorbs the chicken manure. Fresh litter should be added every few days, and every month or two, the litter should be completely replaced and composted.

filled with dry litter, such as dried grass, leaves, palm fronds, or other high carbon content material to absorb the manure. Well-managed deep litter pens have no odor.

Fresh litter should be added every few days, keeping the upper layer clean for the chickens. When the chickens scratch the litter, it starts to break down and mix with the manure. Every month or two, the litter may be removed from the pen and composted. This compost makes an excellent potting soil for container gardening.

The litter also prevents the manure from leaching into the groundwater by absorbing the waste and preventing rainwater from carrying the waste out of the pen.

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