Design/Build Studio
ARC 407-510, 607-609, Design VII-X,

Mobile Chicken Coop

MW 1:30-6:00, Fall 2016
Adamson/Ceo

Client: Empower Farms

Empower Farms is a young, small farm with a big mission. In the words of Nicolas Miller the farm's manager: *"In addition to farming good, healthy food without chemicals, and getting it to our customers while it is still fresh, our main purpose here is to incorporate people with disabilities into as many of our productive processes as possible, and to give them a place to be active outside. In addition to seeing the results of their efforts, the farms participants learn about growing healthy food without damaging the environment, or better yet; healing it."* With over 500 people with disabilities participating in the farm (over the last two years), the farm is a place of learning and growth that is physical and emotional. The farm's ability to transform people regardless of skills underscores what Empower Farms is all about.

The farm is on a narrow plot of land in Homestead Florida. The different production areas include a nursery, vegetable garden, fruit forest and areas undergoing habitat restoration, through re-introduction of native plants. Additionally, the increase of a small flock of chickens has created the need for expansion of space and equipment, so that the farm can continue to be self-sustaining.

Design Considerations:

They include: security, ease of movement, stability, durability, protection from the elements – (wind and wind-blown rain), ventilation, visibility, iconicity, low maintenance, sustainability - green materials and methods, constructability, signage, and affordability. The structure must also be beautiful and express a clear idea to be meaningful. While all of these considerations must be addressed, some may have more weight than others in the final design solution.

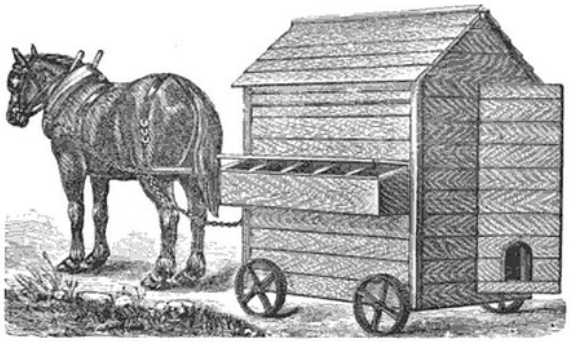

Fig. 2

Fig.2: H.H. Stoddard, Poultry Architecture, 1887, mobile poultry house.

The design of the structure must be rigid and lightweight and be able to be moved around the site without bottoming out or tipping over. The mobility of the structure is essential in providing different foraging areas for the chickens through “free ranging” during the day. Free range chickens are generally healthier, and their roaming helps keep weed growth and insects under control. This forage, along with grain, fruit and vegetable scraps, are an important part of their daily diet and improve the quality of the eggs they produce.

The chickens use the poultry house or coop at night for protection from the elements and predators. The coop must have sufficient space for roosting, nesting and laying eggs, and be easy to clean and maintain since animal waste can make the structure smell and promote bacterial growth and disease, adversely affecting the chicken’s health.

Egg production/ Design

There are many factors to consider when designing for egg production. Some of the considerations include: type of breed, mortality rate of the chicks and a chicken’s age and body weight. The design of the coop must accommodate effective lighting, ease of feeding the chickens, egg collection and careful control of climate. The coop must also provide protection from theft, predators; (dogs, snakes, raccoons and lizards in particular), direct sunlight, rain, excessive wind, high heat or cold, and drastic changes in temperature. In hot humid climates, proper ventilation is key to keeping chickens from overheating. The design of the house must also be easy to maintain and require a minimum amount of time and labor to care for the birds.