

Nebraska Poultry Expansion

Sheila E. Purdum, Extension Poultry Specialist

Richard K. Koelsch, Extension Specialist, Biological Systems Engineering and Animal Science

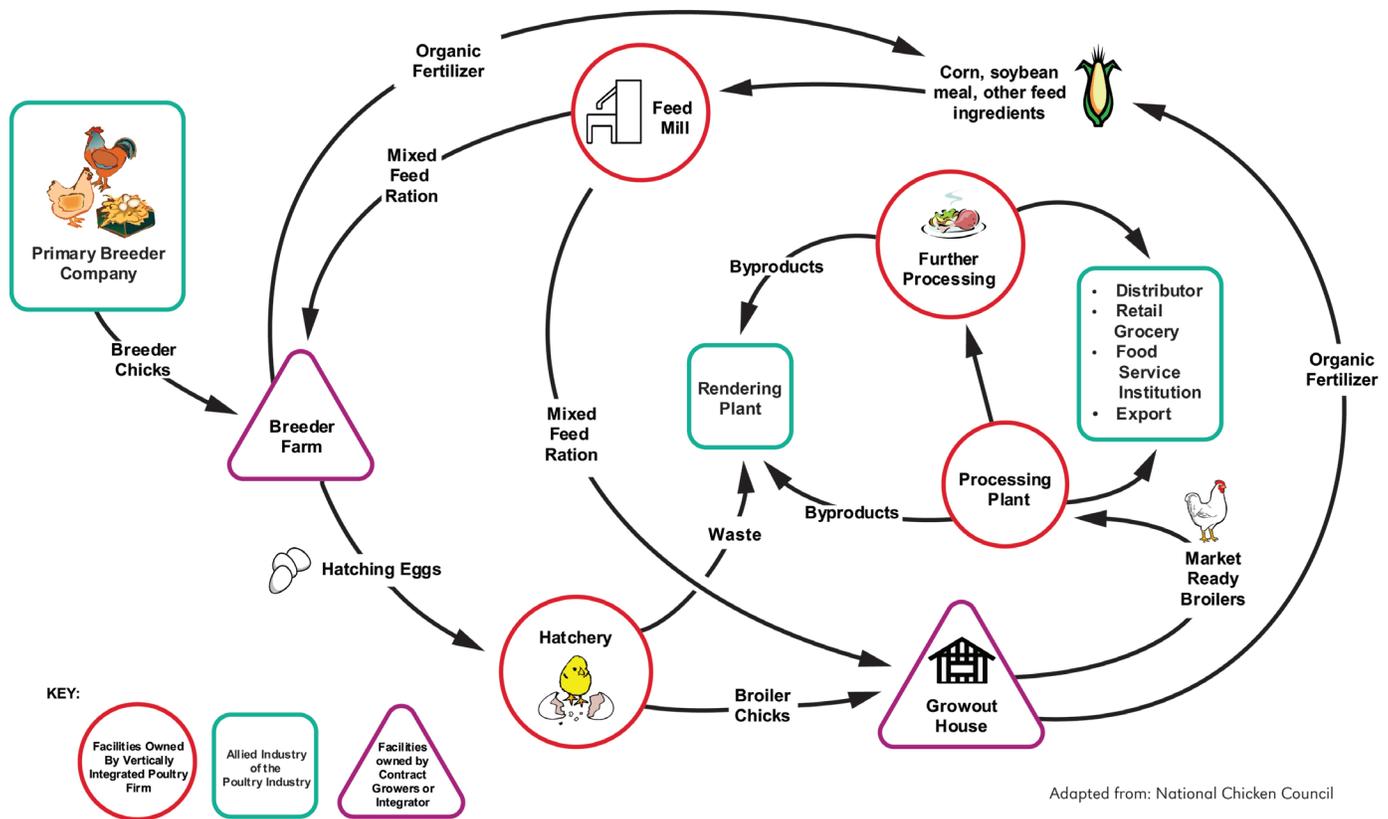


Figure 1. Vertically Integrated Poultry Operations Schematic

Nebraska has traditionally had low chicken numbers with the only significant numbers in the commercial egg industry. It has averaged 8–10 million chickens at one time over the past two decades. As the state’s poultry industry expands in the next three years, Nebraska will nearly triple its total chicken and turkey numbers each year to more than 30 million on farms at one time with a grand total of 150 million hatched and housed per year.

It is important to understand that not all of the 150 million chickens and turkeys are hatched and housed at once. The majority of the chickens in Nebraska during the state’s current poultry expansion are broiler chickens, which have a six-to seven-week life cycle. Since they are only housed during that time period, a farmer raising broilers will likely have six flocks of chickens per year. Thus, the state may have a total of 150 million chickens produced

per year but only 1/6 of those are on farms at one time. Egg laying chickens are a different breed than broilers. They will stay in their houses up to 100 weeks (nearly two years) at a time, so their housed-at-one-time numbers are more reflective of total per annum production. At this time Nebraska only has approximately 8 million laying hens.

In addition to increases in broiler chickens for meat production, some breeder flock production with hens and roosters will increase the state's egg laying chicken numbers by 2 to 4 million hens. This increase is partly due to new construction of hatcheries for broiler, laying hen, and turkey production, and thereby a need for breeder hen barns. In just four years, three hatcheries have been built in Nebraska, and there is good potential for more. This is great for several communities because skilled employees will be needed in a competitive marketplace.

The schematic on the previous page (figure 1) has been adopted from the National Chicken Council to show a Typical Vertically Integrated Poultry Company. While the majority of investment is in chicken houses on contract producer farms, a substantial infrastructure investment will be made in building hatcheries, feed mills (new and expansions), feed source storage (corn and soybeans), a processing plant, and distribution (transportation of products). Community partners that benefit directly from such an expansion include construction companies, insurance companies, banks, electricians, plumbers, truckers, grain farmers and merchandisers, car and truck sales, hardware stores, home construction, fertilizer applicators, etc.

Several management challenges accompany the benefits of poultry expansion to a community. The first and most often discussed is waste management. Waste materials such as poultry manure production on farms or offal processing waste in a plant are traditionally recycled into fertilizer and animal protein feed, respectively, by the poultry industry. Poultry manure is a valuable source of nutrients such as Nitrogen, Phosphorus, and Potassium for fertilizing Nebraska crops such as corn and soybeans as well as pastures. In an ideal situation, farmers would be able to use all of the poultry manure produced in their chicken houses on their own cropland. But in some instances, a poultry farmer may sell the manure to a neighbor needing fertilizer for crop production. In either case, the poultry farmer will work with an agronomist to match the fertilizer NPK supply with the needs of the farm's crops. This is done by soil testing and is managed and overseen by permits administered through the Nebraska Department of Environmental Quality.

Other waste materials, including offal and feathers that are produced daily at a broiler processing plant and hatch-

ery waste materials such as the eggshells from hatched chicks, are typically rendered into poultry by-product meal used in pet foods as a source of protein. Nothing is wasted or disposed of in landfills. The poultry industry is a great recycler of all nutrient sources.

Risks to the public are minimal while the chicken population increases in Nebraska. The poultry industry can be defined as a mature agriculture enterprise that has extensive experience with best management practices to minimize negative effects to a community and environment.

Yet some risks always exist with live animal production, such as exotic disease transmission from migrating wild birds. The Midwest poultry community experienced a large commercial chicken and turkey production loss in 2015 due to an Avian Influenza outbreak, which originated from migrating waterfowl. Containment and eradication of diseased birds was regulated and overseen by the Nebraska State Veterinarian in compliance with USDA federal guidelines. No human illness occurred during this outbreak, only unfortunate bird loss. Because the numbers were high in states such as Iowa and Minnesota, the human effort to euthanize and bury sick birds was large. Remarkably, the disease was contained in only six months and eradicated from the Midwest in less than a year. Lessons learned by veterinarians and scientists will be helpful if such an outbreak were to occur again.

The impact of the current expansion on transportation is also significant. Most truck traffic will be caused by feed delivery, the transfer of finished birds to the processing plant, and litter removal for land application. Additional traffic will result from bedding, fuel, and chick delivery.

It is anticipated that a single broiler house will require as many as 115 tractor trailers or related equipment accessing the farm each year. Most facilities will likely be built in groups of four to eight houses. This would require 460 to 920 truckloads of feed, litter, animals, and bedding annually or nine to 18 truckloads per week. Unlike corn and soybean production, traffic will be relatively constant throughout the year.

To provide some context for the quantity of traffic, the traffic associated with 2,000 acres of corn harvest (hauling of grain to storage) would be roughly equivalent to a four-house broiler facility. This would not include the traffic associated with delivery of inputs (fertilizer, fuel, pesticides) or the equipment for planting, tillage, spraying, and harvest.

The ability of local roads, bridges, and other infrastructure to manage the volume and weight of the traffic will be an important consideration. Of greatest concern will be trucks used for feed and bedding delivery. Similar to tractor trailers used to transport grain to market, feed and bedding delivery trucks will be operating near the allowed

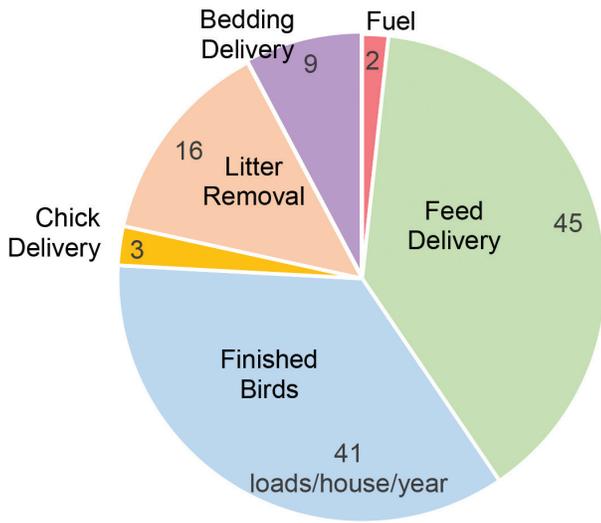


Figure 2. Broiler House Traffic (loads/house/year). Equivalent to just over 2 loads per week.

Nebraska gross vehicle weight limit of 80,000 pounds. Other transportation would likely be under this regulatory limit.

The likely traffic associated with broiler production will have many similarities to existing farming operations. Planning a location for a new broiler facility that has good roads and bridges for accessing the facility is critical.

Questions may also arise regarding the welfare of large populations of chickens raised in confinement. Most of the boiler expansion will involve floor-raised birds with 24-hour access to feed and water, modern ventilation to provide heat in the winter and cooling in the summer, bedding to gather manure droppings, and space to dust bathe. Nebraska’s laying hen industry is also rapidly converting from traditional cages to cage-free environments to meet consumer demands. Both the National Chicken Council and United Egg Producers groups have animal welfare self-auditing programs used by chicken producers to guarantee their birds’ comfort.

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