

# Arkansas 4-H Poultry Chain Program and Management



**UofA** UNIVERSITY OF ARKANSAS  
DIVISION OF AGRICULTURE  
Cooperative Extension Service



# Arkansas 4-H Poultry Chain Program and Management

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## Introduction

The 4-H Poultry Chain project is designed to teach 4-H members recommended management practices for the family laying flock. Many Arkansas farm families who keep birds for egg production do not have adequate year-round production due to improper management practices. Many families keep laying hens not capable of high egg production. Chicks provided in the 4-H Poultry Chain program will come from the commercial egg industry's disease-free flocks and have the genetic potential for very high, efficient egg production. Chicks will be vaccinated at the hatchery, and your Extension agent will administer a vaccination program as your birds mature.

## How the Program Is Administered

County Extension agents enroll 4-H members to participate and provide guidance and supervision for growing out the birds. In March or April, each member is given 25 to 50 day-old chicks to grow out. When the birds are approximately 22 weeks old, the member will return a preset number of pullets to a show and sale. The number returned will be determined by the county Extension staff in each county. The money from the sale is used to buy chicks the following year. This is why this project is called the 4-H Club Poultry Chain project.

## How 4-H Members Are Selected

1. Interest of the individual 4-H member.
2. Age of the 4-H member.
3. Facilities available on the farm for rearing the chicks.
4. Parents' cooperation.
5. Past performance of 4-H'er in this project.

## Kinds of Chickens Used

County Extension agents will make arrangements for a high-quality, efficient, egg-producing strain of day-old (white leghorn type or commercial brown egg type) pullets to be purchased for the project from commercial egg industry.

## Awards

County sponsors, such as county fairs, provide prize money to be divided among participating 4-H members at the show and sale. The pullets are judged and are awarded a blue, red or white ribbon. The amount of prize money you get depends on the kind of job you do and the color of ribbon you are awarded.

## How to Be Considered for This Project

4-H members enrolled in poultry projects may apply for participation in the 4-H Poultry Chain. Members and their parents sign an agreement to properly feed and care for the pullets and to return the required number of pullets to the show and sale. They may also be asked to keep a record of production costs and turn it in to the Extension office at the end of the project.

To be considered for this project, sign the attached agreement yourself and get one of your parents to sign the form also. Return the agreement to the county Extension office. Your request will be given careful consideration. You will be notified if you are selected.

# Management Program

## Getting Ready for Chicks

1. Clean entire brooder thoroughly, and put in clean litter.
2. Disinfect feeders and waterers. Scrub with hot water and detergent; then disinfect with a commercial disinfectant or 3 tablespoons of chlorine bleach per gallon of water. Rinse with tap water.
3. Make sure there are no openings in brooder unit that will allow cats, dogs or predatory animals access to your chicks. If rats and mice are a problem, put out a recommended rat bait or rodenticide.
4. Check brooding equipment to make sure it is operating properly and is not a fire hazard.
5. Read your 4-H Poultry Project Book for further information.

## Brooding

1. Take every precaution to avoid chilling your chicks. The brooding temperature should be 95°F the first week. If your brooder is not ready when chicks arrive, keep the chicks by a heater until the brooder is ready.
2. Watch the chicks closely the first few days. If they are too cold, they will bunch up under the brooder or heat source. If they become too hot, they will move away from the brooder. The brooder guard should be out far enough from the brooder to allow the chicks to move away from the brooder if they become too hot.
3. Reduce the temperature 5°F each week until heat is no longer needed. Remove the brooder guard at the end of the first week.

## Feeding

1. Start your replacement chicks off on a “chick starter” feed. A complete feed should be fed at all times. Use “starter” feed to 6 weeks, then switch to “grower” feed. At 14 weeks of age, switch to a “developer” ration. If “developer” ration is not available, continue feeding “grower” to start of egg production, then switch to a complete “layer” ration.
2. Feed may be placed in chick box lids, shoe box lids, paper plates, egg flats or chick-size feeders for the first ten days. It is not necessary to purchase chick-size feeders since chicks will outgrow them in a very short time. It is better to use the box lids or paper plates and then change to the intermediate-size feeder.
3. Your chicks should have enough feeder space so that all can eat at the same time. Lack of feeder space causes stunted and non-uniform pullets. Provide the following amount of feeding space:

1st week	–	Two or three shoe box lids filled with feed in addition to the regular feeders will help to get your chicks off to a good start.
2nd - 3rd week	–	One 4-foot feeder per 50 pullets
3rd - 6th week	–	Two 4-foot feeders per 50 pullets
6th - 9th week	–	Three 4-foot feeders per 50 pullets
9th - 20th week	–	Four 4-foot feeders per 50 pullets
4. After the chicks learn to eat from the feeders, do not fill feeders over half full. This will cut down on feed wastage.

## Waterers

1. Water is very important to the baby chick. Provide clean, fresh water daily. Wash the waterers each day. Do not try to water chicks in an open pan or container.
2. Start your chicks with chick waterers. Provide the one-gallon waterer or two half-gallon fruit jars with the water adapter for each 50 chicks. Vitamins and electrolytes for poultry may be added to the water to aid in getting your chicks off to a good start and keeping them healthy.
3. You may change to the 3-gallon metal waterer when the chicks are 2-3 weeks of age.

## Vaccination

1. Chicks should be vaccinated against poultry diseases common to the area. In most areas Newcastle, bronchitis and fowl pox are diseases usually vaccinated against.
2. There are a number of recommendations on kinds of vaccines to use and the timing of vaccinations. The following vaccination program is the one being used by most 4-H Poultry Chain projects.

Age	Type	Method of Vaccination
10-14 days of age	Combination Newcastle and Bronchitis	In the drinking water
4 weeks	Combination Newcastle and Bronchitis (booster)	In the drinking water
10-12 weeks	Fowl Pox	Wing web
14-16 weeks	Combination Newcastle and Bronchitis (booster)	In the drinking water

Birds must be confined when using the water method of vaccination. Do not vaccinate birds that are sick. Follow the directions of the vaccine manufacturer carefully. Make the vaccine available to the chicks as soon as possible after the vaccine is mixed.

## Internal Health

1. Roundworms may sometimes be a problem during the growing period.
2. If roundworms are present, use a dewormer in the water to get rid of them when the birds are about 6 weeks of age.
3. If you want to worm on a regular schedule, start by deworming the birds at 5-6 weeks of age and once every 4 weeks afterwards.

## General

1. Keep old birds away from your pullets. The older birds may be carriers of disease. Do not introduce birds from an outside source into your flock to prevent bringing in disease.
2. If you have a poultry disease problem, contact your county Extension agent immediately for assistance in getting a diagnosis and recommendation on treatment. Many times the diagnosis must be done in a laboratory, but your county Extension agent will know where these laboratories are located.

3. Do not hesitate to contact your county Extension agent or leader for advice on any problem which may come up.
4. The success of the 4-H Poultry Chain depends on you. If you do a good job in growing out your pullets, other 4-H members will be able to participate in this project next year.
5. Practice good biosecurity, and keep your birds healthy. Poultry diseases are easily spread by people's clothing and shoes. Wild birds and rodents also spread disease.

<b>Approximate Feed Consumption of Confinement-Reared Pullets (Commercial Egg-Type Pullets)*</b>		
<b>Weeks of Age</b>	<b>Pounds of Feed Per Bird Per Week</b>	<b>Accumulative Feed Consumption (lbs) Per Bird</b>
1	.18	---
2	.25	.43
3	.36	.79
4	.50	1.29
5	.55	1.84
6	.60	2.44
7	.68	3.12
8	.76	3.88
9	.82	4.70
10	.88	5.58
11	.95	6.53
12	1.05	7.58
13	1.11	8.69
14	1.14	9.83
15	1.20	11.03
16	1.20	12.23
17	1.21	13.44
18	1.22	14.66
19	1.23	15.89
20	1.28	17.17

\* A complete feed should be fed at all times. Use "starter" feed to 6 weeks, then switch to "grower" feed. At 14 weeks of age, switch to a "developer" ration. If "developer" ration is not available, continue feeding "grower" to start of egg production, then switch to a complete "layer" ration. Scratch grains are not recommended, but if they are to be used, you can start at about 6 weeks if you continue using "starter." If scratch grains are to be used, start using in small amount and increase gradually – they should never be more than one-half of the total ration. Mash feed is recommended instead of pellets because there is less tendency for cannibalism to develop. (Be sure to use a feed that has a recommended coccidiostat through at least the first 6 weeks.)

**Memorandum of Agreement**  
**Between**  
**4-H Member and 4-H Poultry Chain Sponsor**

I received \_\_\_\_\_ 4-H chicks, and I agree to return \_\_\_\_\_ pullets to \_\_\_\_\_ to be exhibited and sold at the 4-H Pullet Show and Sale with all sale proceeds going to the \_\_\_\_\_ County 4-H Foundation for the continuation of the poultry chain.

Location of Show and Sale

County Name

In the event I fail to return and show the required number of pullets, prize money provided by the sponsor will be forfeited. I also agree to pay the poultry chain the amount of money necessary to replace the number of chicks I received or the average county sale price for each pullet I did not return.

I agree to follow the Cooperative Extension agent's management recommendations in growing my pullets. These recommendations involve brooding, rearing, feeding and vaccinating.

In the event that the chicks are lost as a result of fire, tornado, wind or flood, I (the 4-H member) will be released from the above agreement.

\_\_\_\_\_  
4-H Member

\_\_\_\_\_  
Parent

\_\_\_\_\_  
Date

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