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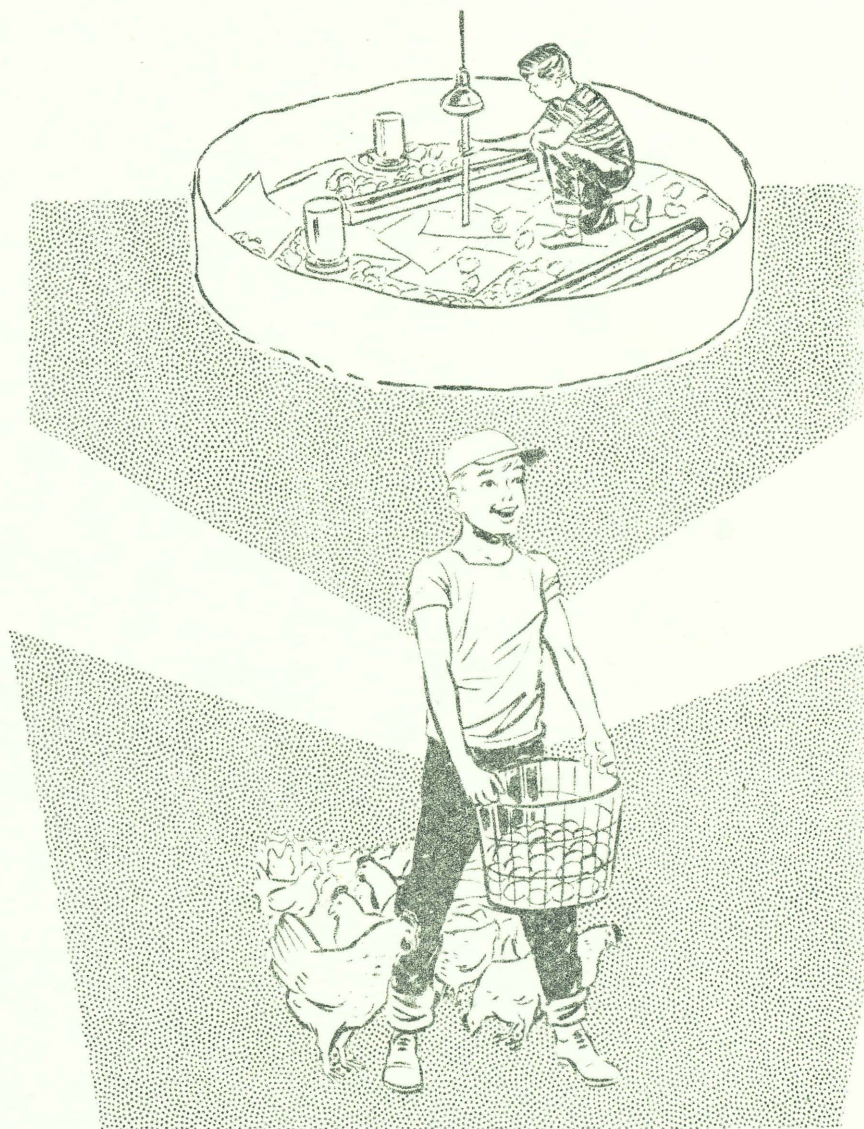
PULLET RAISING II

**Suggested
Experiments
For
4-H'ers**

12-14

30¢

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INTRODUCTION

Poultrymen often ask the question, "Will layers be profitable this coming year?" According to farm management studies, 1/3 of the egg producers make a profit year in and year out, 1/3 make a profit in good years only and 1/3 lose money.

Management is the answer to why some poultrymen are able to make money while their neighbors with the same kind of chickens lose money. Good management starts long before the birds begin to lay. Thus, profitable egg production depends very much on the selection, rearing, growing and management of the replacement pullet flock.

The replacement pullet grower has become one of the most important segments of the egg production area. In most instances the egg producer is unable to care for and operate a replacement pullet and egg laying enterprise. This is particularly evident when one realizes that today's laying flocks are of the 3,000, 5,000, 10,000, 50,000 and even 100,000 bird size units.

Since the egg laying performance of a hen depends so greatly on her care and management during the growing period, it is necessary that the replacement pullet grower be able to rear good pullets. Experiment suggestions in this 4-H Bulletin are designed to better acquaint 4-H members with the factors involved in pullet raising.

These experiments are designed for members enrolled in Pullet Raising II, or ages 12-14. You are free to choose experiments according to your age and likes. 4-H Bulletin 187.1C suggests some experiments that are more difficult and are designed for members 14 and over.

GROWTH PATTERN OF PULLETS
Suggested for age group 12-14

OBJECTIVE: Knowledge of weights and growth patterns of replacement pullets is very beneficial in knowing how well your flock is doing. Knowing this growth pattern can help you in knowing the age and development of the bird when buying replacement pullets.

MATERIALS: Egg type chickens 1 day of age (20-25 in number).
Brooding and rearing facilities for 20-25 chicks.

PROCEDURE:

- A. Purchase day-old chicks and weigh them before placing in the brooder house.
- B. Weigh the birds weekly (on the same day each week) for 16 weeks.
- C. Record feed consumption.
- D. Report your results.
 1. Average weekly gain.
 2. Week that the most gain was made.
 3. Feed efficiency (lbs of feed per lb of gain).
 4. Graph the weekly average body weight.

GROWTH PATTERN OF PULLETS

Name _____

WEIGHT BY WEEK

Bird No	1 day	2 wk	3 wk	4 wk	5 wk	6 wk	7 wk	8 wk	9 wk	10 wk	11 wk	12 wk	13 wk	14 wk	15 wk	16 wk
1																
2																
3																
4																
5																
6																
7																
8																
9																
10																
11																
12																
13																
14																
15																
16																
17																
18																
19																
20																
21																
22																
23																
24																
25																
TOTAL																(A)

GROWTH PATTERN OF PULLETS

Name _____

Week	Feed Consumption (lbs)
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
TOTAL	(B)

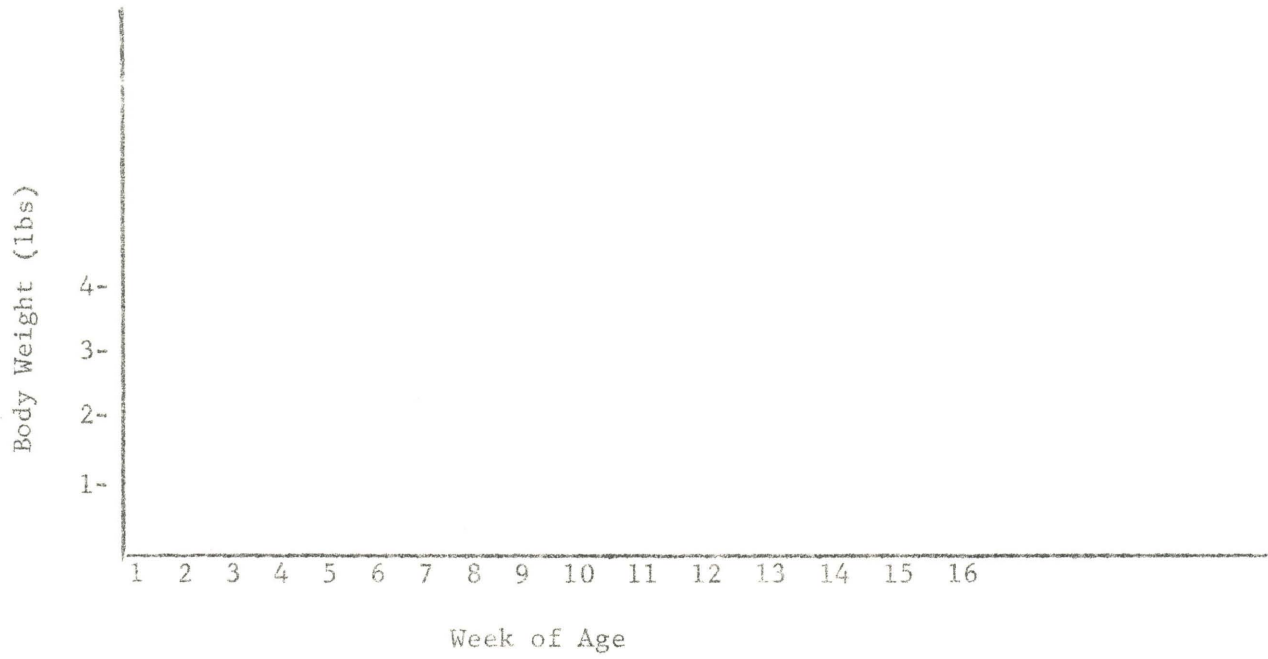
Feed Efficiency $\frac{B \times 100}{A} =$

PELLETS vs. MASH
Suggested for age group 12-14

- OBJECTIVE: Since feed is the major cost item in any poultry operation, ways to prevent wastage or increase efficiency are very important in order to have a profit making enterprise. The type of feed used very often will determine whether the feed is used more efficiently.
- MATERIALS: Egg-type pullets either grown to or purchased by the member at 8 weeks of age (40-50 birds).
Growing facilities for two groups of birds (20-25 per group).
- PROCEDURE:
- A. Feed two groups of birds, Pen #1, pellets and Pen #2, mash, from 8 to 16 weeks of age.
 - B. Place the feeders over wire covered boxes. This box can be used to determine the wastage.
 - C. Keep weekly the feed consumption and feed wastage.
 - D. Record the beginning and ending body weight.
 - E. Report your results.
 1. Feed fed Pen #1 & #2.
 2. Feed wasted Pen #1 & #2.
 3. Feed consumed Pen #1 & #2.
 4. Pounds of feed wasted Pen #1 & #2.
 5. Feed efficiency Pen #1 & #2 (lbs. of feed per lb. of gain).

GROWTH PATTERN OF PULLETS

Name _____



PELLETS VS. MASH

Name _____

Week	Feed Fed Pen #1	Feed Wasted Pen #1	Feed Fed Pen #2	Feed Wasted Pen #2
1				
2				
3				
4				
5				
6				
7				
8				
TOTAL	(A)	(B)	(C)	(D)

Feed consumed Pen #1, $A - B =$ _____

Feed consumed Pen #2, $C - D =$ _____

% Wasted Pen #1, $\frac{B}{A} \times 100 =$ _____

% Wasted Pen #2, $D \times 100 =$ _____

Feed efficiency Pen #1 $\frac{A - B}{E} \times 100 =$ _____

Feed efficiency Pen #2, $\frac{C - B}{F} \times 100 =$ _____

PELLETS VS. MASH

Name _____

Bird Number	Beginning Weight		Ending Weight		Gain	
	(G) Pen #1	(H) Pen #2	(I) Pen #1	(J) Pen #2	(I-G) Pen #1	(J-H) Pen #2
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
ave.						

(E)

(F)

DEBEAKING

Suggested for age group 12-14

- OBJECTIVE:** Cannibalism often results in heavy death losses as well as to lowered market value of pullets. The causes of cannibalism are not well understood but faulty breeding, improper nutrition, overcrowding, overheating and too much light are some of the factors involved.
Debeaking is one method of control.
- MATERIALS:** Egg type chicks - one day of age (40-50 chicks)
Brooding and growing facilities for two groups of chicks.
- PROCEDURE:**
- A. Divide the chicks into two equal groups, debeak one group and place each group in separate pens (20-25 chicks per pen). Place the debeaked group in Pen #1 and the non-debeaked in Pen #2.
 - B. Rear these birds to at least 16 weeks of age and keep records of feed consumption (weekly - lbs), body weight (16 week) and mortality (daily). Record whether the mortality was due to cannibalism.
 - C. Report your results.
 1. Feed fed Pen #1 & 2.
 2. Average body weight Pen 1 & 2.
 3. Mortality % for Pen #1 & 2.
 4. Feed efficiency for Pen #1 & 2.

DEBEAKING

Name _____

Weeks	Feed Fed Pen #1	Mortality* Pen #1	Feed Fed Pen #2	Mortality* Pen #2
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
Total	(A)	(B)	(C)	(D)

*Record what percent of the mortality was due to cannibalism in parenthesis ().

Feed efficiency

$$\text{Pen \#1 } \frac{A}{E} = \underline{\hspace{2cm}}$$

$$\text{Pen \#2 } \frac{C}{F} = \underline{\hspace{2cm}}$$

DEBEAKING

Name _____

Bird	Body Weight 16 wks. Pen #1	Body Weight 16 wks. Pen #2
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		
Total		

FEED WASTAGE

Suggested for age group 12-14

- OBJECTIVE:** The major cost item in the production of poultry meat is feed. This single item accounts for 55-60% of the total cost in raising a pullet. Therefore, any saving of feed will greatly enhance the profit margin of the replacement pullet operation.
- MATERIALS:** Egg type chicks grown to 8 weeks of age by the member or purchase at 8 weeks of age (40-50 chicks).
Growing facilities for two groups of chicks.
- PROCEDURE:**
- A. When the chicks are 8 weeks of age divide them into two equal groups, 20-25 chicks in each group (separate pens) and feed for 6 weeks.
 - B. Place the feeders over wire covered boxes; but don't make the wire covered boxes so high that the chicks can't eat. This box can be used to determine the wastage.
 - C. Fill the feeders in Pen #1 25% full and in Pen #2 100% full.
 - D. Feed these birds at least twice daily.
 - E. Record weekly the feed fed (lbs) and the feed wasted (lbs) for an 8 week period (8 to 16 weeks of age).
 - F. Report your results.
 1. Feed fed Pen #1 & 2.
 2. Feed wasted Pen #1 & 2.
 3. Feed consumed Pen #1 & 2.
 4. Pounds of feed wasted due to different feeder management.

FEED WASTAGE

Name _____

Weeks	Feed Fed Pen #1	Feed Wasted Pen #1	Feed Fed Pen #2	Feed Wasted Pen #2
1				
2				
3				
4				
5				
6				
7				
8				
Total	(A)	(B)	(C)	(D)

Feed consumed Pen #1, $A - B =$ _____

Feed consumed Pen #2, $C - D =$ _____

% Wasted Pen #1, $\frac{B}{A} \times 100 =$ _____

% Wasted Pen #2, $\frac{D}{C} \times 100 =$ _____