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Institution: Oklahoma State University Location: Stillwater, Oklahoma

Title of Study: THE PROBLEMS AND PRACTICES OF THE COMMERCIAL EGG PRODUCERS OF CLEVELAND COUNTY

Pages in Study: 31 Candidate for Degree of Master of Science

Major Field: Rural Adult Education

Statement of Problem: To investigate and evaluate the problems and practices of the commercial egg producers of Cleveland County and especially the Norman area. To assist producers in making adjustments where necessary.

Method and Procedure: A study of the situation was made from January, 1960 to August, 1960. Visits to poultry establishments were made and information was collected by personal interview method.

Findings: The three types of poultry operations with 200 birds or more in the county were investigated. They are the Individual Cage, the Colony Cage, and the Floor Plan type of operation. The initial cost of getting started seems to have a direct bearing on the type of system a producer will employ. The average cost of the individual cage system is approximately $6.00 per bird housed, the colony cage system approximately $4.00 per bird housed, and the floor plan cost is approximately $3.00-$3.50 per bird housed. There has been an increase in the number of commercial operations in the county the past ten years but an overall decrease in total number of hens on farms. Flock size ranged from 200 to 4000 birds. The most popular system of management at the present time seems to be the floor plan. The average number of years in the commercial egg business per farmer interviewed was 4.35 years. Market conditions were also investigated, and because of our location, are ideal. Producers have no trouble selling their product either in Norman or Oklahoma City.

Adviser's Approval George W. Newell

THE PROBLEMS AND PRACTICES OF THE COMMERCIAL EGG PRODUCERS OF CLEVELAND COUNTY

BY

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Bachelor of Science

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THE PROBLEMS AND PRACTICES

OF THE COMMERCIAL EGG

PRODUCERS OF CLEVELAND

COUNTY

Report Approved:

George W. Newell

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PREFACE

An evaluation of the problems and practices of the commercial egg producers in Cleveland County and especially the Norman area is the intention of this thesis study. It is also intended, where possible, to identify the problem to the producer and to assist him in making adjustments for the future.

The material for this study was collected while working with area egg producers and feed dealers and was obtained mostly by the personal interview method. A copy of the questionnaire used is enclosed in the body of the report. It should be pointed out that this study was made during a period when many of the smaller producers were going out of business and even the most efficient operations were suffering from depressed egg prices. This fact may have had a bearing on the type of answer given by some of the egg producers.

Indebtedness is acknowledged to the egg producers of the area who were very cooperative in answering the questions; to the feed dealers for their assistance in securing names, addresses, and other information on certain producers; also to Dr. George Newell, Dr. John West, Professor Don Orr and Extension Poultry Specialists Alex Warren, Delbert Black and Sewell Skelton for their valuable guidance and assistance in preparing this report.

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THE PROBLEMS AND PRACTICES OF THE COMMERCIAL EGG PRODUCERS OF CLEVELAND COUNTY

The production of quality eggs for the commercial market has increased tremendously in Cleveland County in recent years. There has been a gradual buildup of large producers and a decrease in the number of small producers or home flocks. This change in the poultry business has resulted from the following conditions:

1. An expanding consumer market - Norman, the county seat of Cleveland County, is now listed as the 7th largest city in Oklahoma and has had a population increase of 11,500 between the 1950 and 1960 census. It is also located 20 miles south of Oklahoma City, the state's largest city which also is expanding rather rapidly in size. The geographic location and the availability of a large consumer market, has made the commercial egg production business as a whole rather attractive.
2. The passage of the Oklahoma Graded Egg Law has eliminated some of the small "current receipt" producers and decreased the import of low quality eggs from other areas.
3. New techniques of production management, and a need for additional income by farmers and part time workers has also had its bearing on poultry business.
4. Contract operation between feed companies and producers which has meant additional financing has also increased activity in the egg producing

field.

5. An expanded consumer education program carried on by the County and State Agricultural Extension Offices and the Oklahoma State University Poultry Department. This has had some effect in educating the consumer to the advantages of purchasing a quality product.

Of course during this period of change-over to larger flocks there have been problems such as low egg prices, interpretation and application of the compulsory egg grading law and others that affected the producer in the shift of his operation. These will be discussed later in the report.

At present time there are three types of poultry operations being carried out in the Norman area. They are the:

1. Individual Cage
2. Colony Cage
3. Floor Plan

These three systems of management are somewhat different in their operation. Each system has its merits and each system has definite disadvantages that must be coped with.

THE INDIVIDUAL CAGE

The individual cage type of operation is a relatively new method of handling layers in this area, having been started in the past ten years. This method, however has been used successfully in California and the Gulf Coast for a number of years.

The individual cage system received its initial impetus because it was being pushed by certain commercial interests and a slight premium was being paid for caged eggs produced on certain feeds. This system has not been entirely satisfactory. Some of the original cage operators have gone out of business completely, while others have switched to the other two types of management.

The individual cages in use at present time vary in size but the average seems to be 10 inches wide by 15 inches high by 18 inches long. The cages are constructed of welded wire with the bottoms slanted so the eggs roll out as they are laid. The cages are in rows in the house and are suspended approximately 30 inches above the ground.

Figure 1. Inside view of a typical individual cage operation.

After working with poultry producers in the county for several years, and personal study of experimental results and interviews made during this study, it has been concluded that the individual cage system has definite advantages and disadvantages that should be considered in this report. The main advantages of cage systems are:

Higher egg production - slightly higher production may be obtained from caged birds; (Zeman -Poultry Digest 1959). Experiments show that caged birds are not influenced or dominated by other birds as they are on the floor.

Greater feed efficiency - less feed is required per dozen eggs than for floor reared chickens. Research results indicate that less feed is wasted and due to restricted activity by each bird, less feed is necessary for body maintenance. (Warren, Skelton. Caged Layers in Oklahoma)

Easier and more accurate culling - The removal of non-laying birds is much easier and more accurate in caged operations since individual records may be kept on each bird. Each bird may be observed more closely, making it easier to remove sick, weak or crippled birds.

Reduces cannabalism - Feather picking and cannabalism are not problems with cage birds since they are not in contact with each other.

Premium price on eggs - There was a definite price advantage and incentive early in the program. This advantage may be one of merchandizing rather than production. Usually cage produced eggs are so marked on the carton, with some consumers preference being shown.

More uniform production - Cage operators who are constantly culling and replacing have a definite advantage in being able to maintain more uniform' production all year, providing replacement pullets can be secured.

As well as the above mentioned advantages there are several disadvantages to the cage system that should be mentioned. Unfortunately some producers in this area did not bother to check into the disadvantages of this system and have suffered for this lack of foresight. The principal disadvantages are:

Higher initial cost of getting started - The higher capital investment required to get into the cage business is a definite disadvantage. Better housing for cage birds is a necessity and more expense is involved in equipping the house. The average per bird housed in this area was around $6.00. This included house, cages and cost of hen. This is considerably higher than other types of operation.

Fly control - Fly control continues to be a problem with colony cage and individual cage operators. Good sanitation and recommended chemicals should be used.

More labor required per hen - This is considered a disadvantage with individual cage programs. Operators will spend more time per hen in cages than he will with the same number of hens on the floor. (Zeman, Poultry Digest, 1959). Also daily production records are usually kept which is time consuming. A poultryman spends an average of 45 minutes per year per bird on the floor and 75 minutes per bird per year in cages.

Wire marked eggs - Dirt rings and wire marks are a problem with most cage producers in certain kinds of weather, such as dusty and damp days. Cleaning these eggs is also time consuming.

THE COLONY CAGE

The colony cage type of poultry management has come into use recently and seems to be a modified version of the individual cage. In the colony cage, which is also referred to as the community cage, there are from 10 to 20 hens kept per cage which varies in size from 3 feet X 5 feet to 4 feet X 4 feet. At present time there are five poultrymen operating in the county with the colony cage system. They range in size from 1500 birds to 4000 birds. All five of these are operating under contracts with feed companies and market their eggs in Oklahoma City. The colony cage system seems to have advantages and disadvantages that the individual cage and floor plan systems do not have. The main advantages are:

Figure II. Inside view of typical colony cage system.

1. Lower initial cost per hen housed than the individual cage. Less material was used for the construction of the houses presently being occupied. The sides are so constructed that they can be left open in the summer with some type of roll down material used for winterizing. The average cost per bird housed averaged approximately $3.50 - $4.00.

Figure III. Outside view of colony cage house showing type of construction.

2. High egg quality can be maintained with the colony cage and the eggs can be merchandized as cage eggs.

3. Culling is easier and more effective with colony cages than with the floor plan. Although individual records can not be used, the restricted area occupied by the hens facilitates observation and handling.

4. These houses are built in such a way that they can be expanded or can be easily converted to other purposes if one desires to get out of the poultry business.

The disadvantages of the colony cage program are:

1. Cannabalism - All hens must be debeaked at least once and sometimes twice during their life time to prevent featherpicking. The number of blow outs and pick outs are greater with this type of operation.

2. The parasite problem seems to be greater than in the individual cage system.

3. It is absolutely essential that some means of winterizing houses be provided either at the time of construction or later. This is especially true with the type of houses being used in this area at present.

4. The fly problem is also a disadvantage with the colony cage as it is with the individual cage.

Even though this system of operation has some disadvantages it appears that with its low initial cost it may replace the individual cage system as far as cage systems are concerned.

THE FLOOR PLAN

The floor plan type of operation is not new to this area, however it has been revised somewhat in recent years. Revisions have been for the most part in type of construction and size of operation. Buildings in this area now range in size from 200 to 4000 bird capacities.

With this particular system of management, as the name implies, the birds are kept on the floor. Dry litter of many types, 6 to 8 inches deep is used. Sufficient ventilation by windows or ridge ventilation to maintain dry litter is essential. Ample feeder, water space, and roosting space as well as sufficient nests must be provided.

Figure IV. Inside view of typical floor plan operation.

The main advantages of the floor plan system in comparison to the two systems discussed earlier are:

1. Lower initial cost of getting started. The elimination of cages reduces the cost somewhat. Other buildings can often be converted to poultry houses. The approximate cost per bird housed is $3.00-$3.50.

2. Less labor is involved when hens are placed on the floor. One person can care for more birds on the floor than in cages.

3. The fly problem is lessened when hens are kept on the floor.

4. No wire marked eggs-however, additional broken eggs may occur as a result of several hens using the same nest, unless frequency of gathering is increased.

5. High quality eggs can be produced with hens on the floor as well as in cages. Egg quality is dependent on factors other than type of housing system used.

The most important disadvantages of the floor plan type of operation are:

1. The disease, parasite and wet litter problems are certainly disadvantages. However, with good management practices particularly in regard to waterers, and a strict vaccination program for all hens, this can and is being reduced to a minimum.

2. Cannibalism - Featherpicking and cannibalism are problems with hens which are kept on the floor. This problem is usually minimized by debeaking and by the isolation of domineering hens. Sufficient floor space per bird also tends to decrease this problem.

3. Culling - Culling is more of a problem with hens kept on the floor, since all birds must be handled in order to accomplish this properly.

4. Feed Conversion - Experimental tests indicate that birds on the floor do not make as efficient use of their feed as do hens kept in cages. (Zeman, Poultry Digest, March, 1959.) This is probably due to the fact that floor housed birds use more feed for body maintenance and waste than caged birds.

Despite the disadvantages discussed here, the floor plan system may well prove to be the best operation for this area. There seems to be less interest in the cage programs now than in the past few years.

RESULTS OF STUDY

This study was made during the spring and summer of 1960, under the immediate supervision of Dr. George Newell of the Oklahoma State University Poultry Department and was aimed at the poultryman with 200 hens or more in Cleveland County. The personal interview-questionnaire method was used to secure the information. No particular difficulty was encountered in securing the information since a large number of the producers are known personally. Some producers were not shown the questionnaire but were asked the questions as part of a routine farm visit. Others were shown the questionnaire and were very eager to talk poultry. A copy of the questionnaire which was designed to cover as much of their operation as possible is presented in Appendix-A.

A total of twenty-six poultrymen were interviewed with data being recorded on them during the course of this study. This includes the individual cage operators, colony cage operators and the floor plan type of operations. The length of time in the commercial egg producing business varied from one to fifteen years. The average tenure of the producers interviewed was 4.35 years. A summary on the number of different operations by systems and by flock size is recorded in the following table:

SIZE OF FLOCK

TABLE I. NUMBER OF BIRDS IN FLOCK BY SYSTEMS.

System	Up to 500	500-1000	1000-3000	3000 & Up	Total
Cage (Ind.)		2	2		4
Colony Cage			3	2	5
Floor Plan	10	4	2	1	17

Of the total interviewed, there were ten producers in the 500 and under group, six in the 500-1000 group, seven in the 1000-3000 group and three producers in the 3000 and up group.

The under 500 group are all floor plan operations. In the 500-1000 group there are two individual cage and four floor plan operations; in the 1000-3000 group there are two individual, three colony cage and two floor plan operations; in the 3000 and up group there are two colony cage and one floor plan operations.

A sampling of opinion as to future plans was obtained from the poultrymen. Egg prices were depressed at the time the study was being made and undoubtedly had some bearing on the answers which some of the producers gave in regards to their future plans in the poultry business.

TABLE II. FUTURE PLANS OF EGG PRODUCERS

Systems	Expand	Cutdown	Quit	Don't Know	Same
Cage (Ind)	2			2	
Colony Cage				3	2
Floor Plan	3	1	3	5	5

Of the twenty-six producers interviewed in the study, five said they had plans to expand soon if egg prices were favorable. Two of these five are individual cage operators and three are floor plan operations. One producer indicated he would cut down his operation, three intend to quit the poultry business entirely, seven will remain the same, and ten are undecided now as to what they will do. Market conditions will have a bearing on their future in the egg producing business.

Of the total number of egg producers interviewed, only two used labor other than family help. This pointed out the fact that the average egg producer is in business to utilize family labor and to supplement farm income. In some cases the wife handles the entire operation while the husband works away from the farm and some have high school age children who help with the operation. The two operators in the county requiring outside help are the feed dealer in Purcell and a feed dealer in Norman. Both have large poultry operations that require additional help.

A check on the types of equipment in use by egg producers indicated that it varied somewhat depending upon the type and size of operation and how and where the eggs were marketed. Standard equipment with most producers was an egg cooler of some type. This varied from the walk in type of cooler with the large operators, to a used refrigerator with the small poultryman. Practically all producers have some type of candling device, whether they are candling their own or not. All the colony cage operators are using egg washers and usually automatic waterers, but not automatic feeders.

Each producer interviewed was asked the multiple choice question of

where he secured information regarding his poultry program. Six sources were listed and more than one could be checked. The results of this question are summarized in the following table:

TABLE III. POULTRYMAN'S SOURCE OF INFORMATION

Feed and Poultry Dealer	26
Oklahoma State University	7
Extension Agents Office	19
Television	0
Radio	0
Other	3

The fact that several operators are under contract or connected with a feed dealer some way accounts for the fact that a large number of them now are securing their information, or at least a part of it from them. Also at least one feed company and one hatchery now has one field man each that spends some time in the county.

Producers interviewed were asked to list their most serious housing problems. The type of answer, of course varied according to the type of operation he was carrying on. With the floor plan operator the big problem was damp litter. Disease and parasite problems usually were intensified where wet litter was tolerated. Most producers are now using some type of racks or other equipment around waters to prevent wet litter. Inadequate space per bird was not mentioned frequently, but seemed to be an unrecognized problem with most producers. This was evidenced by the fact that most floor operators have

trouble with feather picking and cannibalism, which is aggravated by overcrowded conditions. A lack of proper ventilation is also somewhat of a problem with most floor plan operators.

The five large colony cage producers in the county listed provisions for closing the house as their major housing problem. These houses which were constructed under the supervision of commercial concerns were left with both sides open.

Only roll down material of some type was installed for winterizing the house. This of course proved inadequate for the area. Most colony producers have corrected this situation. The individual cage operator has less housing trouble than with the other systems of operation. Provisions for closing and winterizing the house is the big problem. Fortunately, most cage houses now in use were constructed with this problem in mind. Some of the earlier cage houses were not well enough constructed to care for this problem, however. With birds suspended in the air, as cages are, tighter construction is necessary.

Labor is not a problem with the average egg producer in the area. Of the twenty-six interviewed, only two are using labor other than family labor. This can be explained by the fact that most operations are set up with the idea of utilizing family labor as a source of additional income. The size of operation in most cases depends on the amount of family labor that is available. All twenty-six producers interviewed stated that labor was not a problem and that most labor was self-educated or self-trained.

The problem of disease in laying flocks is not as great as it once was. The most important diseases that bother poultrymen of the area are Newcastle,

Fowl Pox, Bronchitis, Cronic Respiratory Disease and Leukosis. The majority of the egg producers either vaccinate their own birds or buy replacement pullets at four to five months of age that have already been vaccinated.

TABLE IV. NUMBER OF PRODUCERS WHO HAVE HAD DISEASE PROBLEMS THE PAST YEAR * VACCINATION PROGRAM VS-NON VACCINATION

Disease Problems the Past Year	3
No Disease Problems the Past Year	21
Vaccinate Chicks	23
Do not Vaccinate Chicks	2

The above table shows that most producers are carrying on a disease control program through vaccination and are having good results. Chicks are usually vaccinated for Fowl Pox and Newcastle disease at around eight to ten weeks of age with Bronchitis vaccine given later. Bronchitis vaccination is usually considered a must with cage and colony cage operators. Leukosis or Range Paralysis is a continuous threat to young pullets. Isolation rearing or brooding chicks away from old hens is usually the best safeguard against this disease. (Hall, 1953)

During the course of the interviews with producers, the problem of poor production was discussed. If poor production had been a recent problem an effort was made to find the cause. Two of the twenty-six mentioned poor stock or a poor strain of chicks as the reasons for poor production and one listed disease as the reason for poor production. With the majority of the producers this was not considered a problem.

Methods and frequency of culling depends entirely upon the system of

operation being carried on. Individual cage and colony cage operators as a rule indicated they culled constantly since individual birds can be observed daily and in some cases individual records are kept. Floor plan producers and colony operators cull on the average of two to three times yearly. Most producers are constantly culling weak, diseased and unthrifty birds, but indications are that most producers could cull closer from a production standpoint.

Cannibalism and featherpicking is a serious problem in the Norman area with both the colony cage operators and floor plan types of operation. With the individual cage plan this is not a problem. Debeaking of birds is the most successful solution to the problem. The five large colony cage producers debeak the birds as chicks and again just before they are put in the cages. This is done by the commercial concern involved in the contract operation. The larger floor plan producers are also using the debeaking method of preventing featherpicking and cannibalism. The smaller producers use a variety of methods to prevent cannibalism but none have proved as successful as debeaking. The debeaking operation is done with an electrically heated blade in which one-half or more of the upper beak is removed. This has become a widely accepted practice in the poultry industry. It does not prevent the birds from eating, but does render them unable to pick feathers from other birds.

Mites and lice are the two most frequently mentioned external parasites bothering the commercial egg producer. A summary of the survey results are included in the following table.

TABLE V. NUMBER OF PRODUCERS BOTHERED BY PARASITES BY SYSTEMS OF OPERATION

	Mites	Lice
Individual Cage	4	
Colony Cage	4	
Floor Plan	14	8

Of the twenty-six interviewed, twenty-five said they had a parasite problem. Both the Northern Mite and Lice give trouble. Sparrows were blamed for spreading mites along the laying houses, this was especially true with the colony cage operators and was due to the type of construction used in building the houses. Malathion and Carbolinium are being used in all three types of operations in keeping the parasite infestations down.

The high initial cost of getting started was listed as a problem with a majority of the producers. Labor and material costs are high in the Norman area and is definitely a factor to be considered in building new houses. Financing poultry operations is another problem. No bank loans are available for this type of farm enterprise in the county and as a result, a good number of producers are producing under contract operations with local feed dealers where partial financing of the operation is done by the company. Most producers list this as the only advantage of the vertical integration operations.

Most producers, the past year have had a low net return due to low egg prices. The net return question got a variety of answers that ranged from a minus $. 25 to a plus $. 75 per bird the past year. This has resulted in a lot of the producers being discouraged and some have gotten out of the business at

least temporarily.

To secure information that could be used by the Extension Service and Oklahoma State University Poultry Department, the question of how these two departments could be of more help was asked. The answers varied from:

1. Provide information when needed.
2. Be ready with technical assistance when called upon.
3. Help the egg producers get better organized.
4. Educate the consumer on quality eggs.
5. Market research.
6. Provide more outlook information.

Some producers did not have an answer for this question and apparently did not know they could receive help from these sources. Some indicated they planned to use these sources more in their future poultry operations.

MARKETING INFORMATION

No poultry program can be completely succesful without proper marketing facilities and outlets for eggs produced. Most producers in the area have a variety of market sources available to them. Among them are the cafe and restaurant trade, local grocery establishments, commercial egg processors and distributors in Oklahoma City. Hatchery contracts are available to some producers as well as local individual customers. Some have more than one outlet for their eggs, but usually marketing arrangements are worked out by the individual producer himself.

Several pertinent questions were asked each producer during the course of study in regards to his marketing arrangement. Of the twenty-six interviewed, twenty-six said they had a year around market for their entire production, with ten of them having written contracts, and eight having a verbal arrangement. Fourteen of the producers candle, grade, carton and market their product, six sell to a dealer who grades, three sell eggs to a hatchery, and three market their eggs at the door. Seventeen out of twenty-six producers indicated they had more than one outlet for their eggs.

Marketing of quality eggs generally has been no problem in the Norman area. In the past the area producers have been able to dispose of a large volume of eggs in both Norman and Oklahoma City. With population increases around the large metropolitan areas this market will continue to be good and possibly the demand for quality eggs will increase.

SUMMARY AND CONCLUSIONS

Because of its geographical location, commercial egg production has increased as a farm enterprise in Cleveland County the past ten years even though production has declined somewhat the past year due to low egg prices. The overall number of hens on all farms in the county has also decreased.

The trend is toward larger commercial size units and fewer farm flocks, even though several units of around 300 birds still operate. As market conditions improve this trend can be expected to continue. The units surveyed ranged in size from 200 to 4000 birds. The average number of years in egg producing business by operators was 4.35 years.

The popularity of the cage systems of operation apparently are on the decline. The larger units in the future will be mainly floor plan operations. This is due to the high initial cost of getting started in the cage system, and a discontinuation of the premiums paid on cage eggs.

Commercial concerns and feed companies are over-selling the commercial egg production enterprise, in some cases, especially with certain types of operations.

Contract operations are becoming more common since bank financing is not available to producers. Generally speaking, most producers with this type of program become dissatisfied with the tie up, but consider it a means of financing their operation.

Producers are getting a lot of their information concerning their poultry operation from commercial concerns. Vertically integrated programs are usually supervised by commercial companies.

Most producers would like to have more help from Oklahoma State University Extension Service and the Poultry Department regarding their operation. Information is especially needed on market conditions and educating the public on the values of a quality product.

Producers are carrying on a complete parasite and disease control program. Most producers consider this a necessity in this highly competitive business.

BIBLIOGRAPHY

Froning, Glen W. and E. M. Funk. Poultry Science. Volume 37, 1958. Quality of Eggs Laid By Caged Layers and Their Sisters on the Floor. pp. 215-223.

Hall, Walter J. Diseases and Parasites of Poultry. 1953. USDA Farmers Bulletin Number 1652. pp. 26-31.

Hartman, Roland C. Keeping Chickens in Cages. 1950 Pacific Poultryman, Palo Alto, California. pp. 12-21.

Stafseth, H. J. Poultry Science. Volume 37, 1958. Advances in Knowledge of Poultry Diseases Over the Past 50 Years. pp. 741-775.

Ware, H. G. and Alex Warren. Poultry Parasites. Oklahoma State University, Extension Circular 417, Stillwater, Oklahoma. pp. 2-8.

Warren, Alex and Sewell Skelton. Caged Layers in Oklahoma. Oklahoma State University, Extension Service, Circular 656, Stillwater, Oklahoma. pp. 4-9.

Zeman, Lloyd. Poultry Digest. March, 1959. Are Caged Layers for You? pp. 136.

APPENDIX-A

CLEVELAND COUNTY

COMMERCIAL EGG PRODUCERS

SURVEY

Name_____ Address_____

Location of Farm_____

Number of Years in Poultry Business_____

Type of Poultry Operation you now Operate. (Check One)

Individual Cage System_____

Colony Cage System_____

Floor Plan_____

Are you satisfied with your present type of operation? _____
Yes or No

If no, why?_____

Average size of flock_____
number of birds

Your future plans are to:

Expand_____

Cut Down_____

Quit_____

Don't Know____

Other_____
Change type of operation

Number of people required to run your present operation_____

List the equipment now in use (Check one or more)

Automatic Feeders_____

Automatic Waters_____

Egg Washer_____

Automatic Candler_____

Egg Cooler_____

Check your source when seeking information regarding your poultry program-

Feed & Poultry Dealer _____

Oklahoma State University _____

Extension Agents Office_____

T. V._____

Radio_____

Other_____

Your most serious problems encountered are-

HOUSING-

Inadequate space per bird _____

Lack of proper ventilation _____

Inadequate feeder-water space_____

Damp Litter_____

Provision for Closing _____

Orientation of house _____

Other housing information_____

_____

LABOR -

Is labor other than family labor used_____

Do you have any labor problems_____

If so, what_____

Who trains laborer_____

Other labor information_____

_____

DISEASE -

Have you had any disease problems the past year?_____
Yes or No

If so, which diseases_____

Do you have a vaccination program for your chicks_____

Other_____

_____

POOR PRODUCTION -

If this was a problem the past year, check the cause below.

Poor stock_____

Disease_____

Parasites_____

Housing (Poor)_____

Didn't cull_____

Other_____

_____

CULLING -

What methods of culling do you use_____

_____

How often do you cull_____

Other information_____

CANNIBALISM -

Have you had this problem the past year_____

What seemed to you to be the cause_____

What did you do to correct the situation_____

Other information_____

PARASITES -

Have you had a parasite problem in the past year?_____

If so, which parasite?_____

What did you do to correct the situation_____

_____

Other_____

_____

HIGH INITIAL COST OF GETTING STARTED -

Do you consider this a problem in your type of poultry operation?

_____

If so, how could this be corrected?_____

What was your approximate net income per bird last year?_____

How can the Agricultural Extension Service or Oklahoma State University Poultry Department help you more?_____

_____

OBSERVATIONS:

MARKETING INFORMATION

Do you have a year around market for your entire production?_____
Yes or No

Do you sell your production in:

Norman_____

Oklahoma City_____

Neighbors_____

Other_____

Do you have a guarantee or contract for your eggs?_____
Yes or No

If yes - is it a verbal or written contract?_____

Do you:

Candle, grade and carton_____

Sell to dealer, who grades_____

Sell to Hatchery_____

Other_____

_____

Do you have more than one outlet for your eggs? _____
Yes or No

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