How to Begin and Survive A Commercial Gamebird Farm

by

Leland B. Hayes, Ph.D.

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Prepared Especially for

"Those Who Want to Make Money Raising Gamebirds"

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HOW TO BEGIN

WHICH COMMERCIAL SPECIES SHOULD I RAISE?

HOW TO SURVIVE

MARKETING COMMERCIAL GAMEBIRD PRODUCTS

HOW TO BEGIN A COMMERCIAL GAME BIRD FARM

In many ways "**commercial**" game bird breeding is identical to raising the ornamental species of game birds. There is a difference. Housing, management techniques, and even differences in the birds themselves contribute to some confusion as to what **"commercial"** as opposed to **"ornamental"** game bird breeding really is. However, at the root of the difference is the **motivation of the game bird breeder**.

Most "**ornamental**" species are raised by hobby aviculturists which do not have "profits" as a motive. These dedicated men and women usually do not even make enough "profit" to pay for the feed each year much less the cost of the pens, equipment, and labor. They are glad to donate their time and other costs of raising their favorite species. It can safely be said that few, if any, hobby aviculturists make any profit.

I am **not** suggesting that "profit" is a bad motive. The sheer **love of aviculture** can be found in both the hobbyist **and** the commercial breeder. By no stretch of the imagination can criticism be laid on the game bird producer that has as his goal (or one of his goals) the making of a profit. To gain a profit is a real accomplishment during these days of economic uncertainty. Our hats must go off in a salute to the management of a game farm that is a success as there are many hazards which must be overcome to reach success. There are some considerations which should be taken seriously by the prospective commercial game bird breeder.

Another important consideration is whether or not you have “scruples” about raising gamebirds which will be killed as part of their use. For many people this is a very important matter. I, for one, (believe it or not) am not comfortable raising gamebirds for the market. I know they are just a “product” and their purpose for being on this earth is to fulfill their destiny – but I still am uncomfortable with this. I suppose my main problem is that I get too attached to the little rascals. They become my friends and who wants to sacrifice a friend to the preserve shooter or for the dining table?

I must quickly say that I do not have any objection with the general commercial gamebird industry. It is just not for me. I will not criticize you if you want to do this – but I will not do it personally. Now, having said that - let’s get on with our discussion.

The dollar investment that is required for commercial production of game birds and their products is probably the first consideration one should make. In a Commercial Game Bird Project there will be considerable investment required. There must be the cost of land. If one goes out and buys land for the enterprise the costs could be as high as $50,000 for an acre of suitable land. The land should be in an area where it is legal to raise birds and also located close to an airport with

suitable access. Besides land, there is the investment of pens and equipment which will be high at first, but can be spread over several years. Finally, an up-front investment will be for the birds whether one starts with hatching eggs, started chicks, or breeders.

It has been suggested by those with experience that to be assured of an income the person starting off in the game bird business should have enough money set aside to live on in case unforseen circumstances make it necessary.

The size of the operation will be a major consideration. This will be determined to a great extent by the amount of available financial capital. The size will also be determined by the type of bird(s) raised. More space is needed for Ringneck Pheasants than for Pharaoh Quail. The size, type and number of pens; the number of incubators; even the number and size of shipping containers will need to be determined to get a handle on the project.

How many birds or eggs should we produce to make a profit? This is a very good question and one that must be answered. It is hoped that after you read and do the worksheets of this booklet you will know what numbers are needed. It is probably fair to say that one must produce commercial gamebirds in the thousands to realize a profit. Since the income of the unit is comparatively small, many units must be produced to have any sizable income.

Time investment should also be a consideration. How much labor will be "volunteered" by the immediate family and how much will need to be paid for from the farm's income.

The species of birds which are to be raised needs some consideration. Basically, there are four general species of "upland" game birds that are raised commercially today. These are the **Pharaoh Quail** (Coturnix coturnix), the **Bobwhite Quail** (Colinus virginianus) the **Chuker Partridge** (Alectoris chukker), the **Ringneck Pheasant** (Phasianus colchicus), the **Northern Mallard Duck** (Anas platyrlhynchos). The **Hungarian Partridge** (Perdix perdix) and some of the more ornamental species are being raised more and more in large numbers and could be counted as commercial prospects. Obviously, the beginning breeder should choose a species that he has had some basic experience with.

The local climate will determine somewhat the species of birds the beginning game bird breeder raises. Most of the commercial species of game birds are tough enough that they can handle most any climate. These species are tough or they would not be candidates for mass production. However, if the breeder can do without heating houses and pens, his chance of success is greatly raised without the high cost of energy.

The available market should be considered very carefully. Who will buy the product? Will the sale price be enough to make a decent profit? Should eggs, chicks, young birds, or breeders be produced for the market? This should be carefully thought through and analyzed by the prospective game bird breeder. The market will determine to a great extent the type of birds that are raised. Of course, the gamebird breeder should consider carefully what he likes. It makes a real difference in

motivation and attitude if we do things that we like to do. This is very true when it comes to choosing the species to produce commercially. Some people just don't like ducks, therefore they should consider another type of bird to raise. The same can be said about the upland species. Raise the birds that you like, your chance of success will be raised dramatically - if you like it!

Using successful management practices in game bird husbandry is essential. This area will separate the men from the boys. If all else goes well and one fails to produce the marketable product then all is lost. Most game bird producers develop their own methods of production. There is no **right** or **wrong** way to raise game birds commercially (if you get the job done). No two operations are alike. However, there are some proven ideas that have worked for others and could work for most anyone. These proven ideas will need to be adapted for use, but should prove to be good solid foundations on which to build a successful business. There are some obvious mistakes to avoid. The wise man or woman will take the mistakes of others and avoid them in his or her operation. It has been said that there are no failures in the game bird business if we learn from the experience. To **fail** in a real sense is **success** if one learns a lesson.

Do not go out and make a large investment without some kind of experience in dealing with the birds of your interest. To do this is folly! I know of several people that have done this very thing. On the whole, most of them have not made a success of it, but have failed and lost a lot of money. However, the new business may fare well for a year or two before serious trouble occurs due to bad luck or inexperience. Of course when you have a large investment hanging by a thread at best, you become a fast learner. Play with several hundred birds for a year or two to get the hang of how it is done. This will introduce you to the problems you can expect and it will also give you the good feeling of accomplishment when you succeed.

There are many people that feel that they cannot produce game birds on a commercial basis. Their arguments are varied and all contain some truth. The fact is, it is not easy to make a success of such an operation. However, if the breeder has an understanding of some basics, his task will be easier not only on him, but on his birds. It can be honestly said that if a breeder can successfully produce Bobwhite Quail in small numbers, he can raise any species of game bird on a large scale. If the basic needs of the birds are met in an efficient and economical way there will be success in at least producing the birds. All captive birds need 1) proper environmental conditions, 2) proper nutrition, 3) proper shelter, 4) and proper protection from diseases. When these conditions are met, the birds will "do their thing" and reproduce themselves.

To raise Bobwhite and Coturnix Quail, Chukers, Ringnecks or Mallards on a commercial basis, the breeder will simply use the **basic principles** on a larger scale. These basic principles are given in detain in my book, Upland Game Birds, Their Breeding and Care. I do not discuss waterfowl specifically in the aforementioned book, but the basics still will apply. Each species has **different characteristics** that will dictate how they are handled. It will be a matter of keeping the characteristics in mind when dealing with each of the species.

CHECK THE LAW

The very first thing a prospective commercial game bird producer should do is **check the law** in the state domiciled. Most states have laws governing the keeping of native (and some foreign) game birds in captivity. The regulations vary with each state so be sure and check before ordering eggs, chicks, or stock.

All aviculturists should operate within the law. For the sake of the whole fancy, we should not only obey the law ourselves, but encourage others to do the same. When only a few violations occur then broad regulations are imposed on us.

SOME BASIC EQUIPMENT

To produce game birds on a commercial basis there are some items that will be needed such as feeders, waterers, nest boxes, dust boxes, breeding coops, brooders, heating elements, growing pens and some miscellaneous items.

Most of the equipment can be home-made when only a few birds are raised. However, we would strongly recommend that the commercially produced battery brooder units and growing units be considered by the potential breeder. At first, these may appear too expensive, but in the long run they will actually save money as they are more sanitary, easier to clean, and cut down on labor and maintenance.

Requirements of any breeding unit include:

1) **Size**- breeder pens for pairs can be as small as one foot square. Keeping birds in this small space brings on the threat of feather picking, cannibalism, and spread of disease. We prefer more space for our quail breeders and as a result can expect more egg production. Since most strains of Bobwhite, Coturnix, and Chukker Partridge have much of the wildness bred out of them they do quite well in the smaller cages. I have found that the Ringneck Pheasant stock never seems to calm down. However, when you get your breeding stock be sure that you are getting this "gentle" strain if this is what you want. The strains of Mallard Ducks that are commercially raised are the smaller good-flying birds. If the market requires "wild natured" birds for release then consideration should be made concerning the size of the breeder pens.

2) **Wire**- all wire should be small enough to prevent the birds from getting their heads caught in the openings. The floor wire should be smooth 1/4 inch hardware cloth. Larger wire floors should be used for keeping birds off of the ground. Some duck producers keep young growing ducklings up on wire the first few weeks. Also, some duck breeders have a ramp that the ducklings can climb up into a pan of water to bathe in. Remember, a duckling does not float and will drown until he is three weeks old if he does not have a mother duck to transfer her feather oils to him.

3) **Roof**- there should be a waterproof roof on pens that are kept outside to protect the feed and water from the rain. In hot climates, the birds need shelter from the hot sun also. The dark area under the roof gives security by providing a place for the birds to hide. When we raised Ringneck Pheasants in large outside pens, a shelter was placed in one end. They refused to roost in it even on nights that got below zero. At first we were concerned, but then relaxed over the situation and never lost a bird from the weather.

4) **Nest and dust boxes**- for quail, a good size for the nest box is 6 X 6 inches and about 5 inches high. The nest box can be open-topped or closed-topped with an entrance. Fill the box with straw. Years ago we used coffee cans for nests quite successfully which proves that the birds are not particular.

For pheasants, we have used bales of wheat straw and even garbage cans placed in strategic places. Wooden boxes can easily be made and most of the time the birds will use them with the exception of a few hens that seem to drop their eggs when they get the urge.

Mallards will lay eggs about anywhere. However, to make the birds more comfortable and to keep the eggs as clean as possible I provide some hiding places for them to use. Bales of hay make good places for nests and hides.

Dust boxes for small wire bottomed cages (quail and chukars) can be made from wood or metal. I like dust boxes to be about 6 X 6 X 5 inches. Place them away from the feed and water to cut down dust contamination. Of course Mallards do not use dust boxes, they prefer a good bath.

INDOOR V.S. OUTDOOR PRODUCTION

The breeder will have to make the decision as to which method he wants to use. His decision will be based upon one or all of the following criteria.

1) The cost that is involved in a particular method of propagation. The cost of pens and other special equipment should be considered. Carefully consider the long range costs, as many times better birds can be produced by spending a little more "up front".

2) It would not do to try to brood very young chicks outdoors in a very hot or cold climate. Some sort of compromise will have to be made if this is necessary.

3) Perhaps, the best method would be a combination of both indoor and outdoor propagation. For example, start and brood the chicks inside until they feather out fairly well, then place them outside in a controlled way. Let them get out of the night air and still enjoy the warm sunshine on clear days. Actually, this method will produce much healthier and better feathered birds.

BREEDERS: MALE/FEMALE RATIOS

It costs money to have more males than really needed. Spares should be kept, but each extra mouth to feed adds to the expense of chick production. Taking into account the cost per male and the number of chicks produced, it may be wise to consider more hens (kept in breeder flocks) and fewer males (less fighting and expense). Even if a sacrifice of fertility is taken into consideration, it may be worth cutting down on the number of males.

The number of males to females should be determined by the number of chicks produced and the cost per chick. The number of fertile eggs is more important than the number of total eggs laid. A sharp pencil here could mean more profits at the end of the year.

LITTER INFORMATION

The type of litter used in floor brooding is very important. Birds raised on the ground pose a different set of manure problems than those raised on wire (Smith, 1984). They are in constant contact with the manure and subject to all of the hazards associated with it. Many different types of materials are used for litter. Many years ago when we lived in Montana we used a material that was purchased from the local feed store called "bothilumeum". It was mined from the ground and cleaned up before packaging. It was absorbent and very inexpensive and worked like a charm. I have not seen any in a number of years and fear that inflation has made the price so high it is no longer economical to use the material for litter. Pine shavings is probably the best litter for general use as it is readily available and is inexpensive, while having a high absorbency. Hardwood shavings is not as good as they tend to promote fungal growth which causes brooder pneumonia (Aspergillosis). Clean sand is popular, but does not absorb moisture well (it holds it between the grains) and it is hard on feet of birds as it tends to pack. Also, sand is eaten by the chicks and this can cause problems. A good litter will be as free of dust as possible.

I would recommend that the old litter be removed after each batch of chicks. Some breeders simply place a new layer over the old and it works well for them. Of course, if the litter is wet it is imperative that it be removed so as not to have any excessive dampness in the material. I would never reuse old litter. There is too great a risk of spreading disease from one group to another. The thought in using old litter is the chicks have a chance to build an immunity and thus are "vaccinated" naturally by developing an immunity to the disease present. At any rate, remove all litter at least once a year and completely disinfect the house. The better litter will absorb twice its weight in water.

When thousands of birds are raised, litter costs are very important. Litter is one of the best prevention of disease that one can invest in. Do not cut corners in keeping your birds clean.

The following chart (Smith, 1984) shows the moisture holding ability of some common litter materials (Pounds of water/pounds of litter):

LITTER MATERIAL	MOISTURE ABSORBED
Pine Straw	2.07
Peanut Hulls	2.03
Pine Shavings	1.90
Rice Hulls	1.71
Pine Bark/Chips	1.60
Corn Cobs	1.23
Pine Sawdust	1.02

The most vulnerable time of the chick's life is when it is young living under brooding conditions, so make sure that they receive the proper care with all precautions made available to them. This is the reason that I personally like to keep feed and water before my birds at all times. With some type of light they can eat all night and day and grow at a more rapid rate. I have always felt that it behooved me to get the young birds mature as soon as possible. This makes some sense too when we think of the economics of getting the birds marketed sooner. The longer you keep them the more expense they will bring and thus cut down the profit margin.

PRODUCING HATCHING EGGS

Dr. J.R. Cain from Texas A&M says that there are three goals that would make any game bird producer happy.

Goal #1. Increase the number of fertile eggs per hen per year. This would mean fewer hens to produce eggs. Attainment of this goal requires increases in both egg production and male fertility.

Goal #2. Increase in growth and feather rates. This requires a look at genetics and nutrition.

Goal #3. A bird which looks and performs on the shooting resort like a wild bird.

To attain these goals the breeder must control and use the mechanics of genetics and environment. If careful selective breeding is continued over several years, the breeder can develop the ideal bird for his particular market. The application of a genetic selection process has been over-looked by the game bird industry at large. Most operators just pick out birds that they think look good for next year's breeders without any understanding or purpose of what their breeding goals are. For example, if three lines of birds were selected for specific characteristics, the three goals mentioned earlier would be attained in about five years.

LINE A. Selected for increased egg production. This characteristic would be the chief concern in selecting the breeders for each succeeding year.

LINE B. Selected for feather quality and wildness. If birds are not produced for release on

hunting preserves, then another obvious characteristic would be chosen.

LINE C. Selected for fast growth rate, body size, and good fertility. By crossing the lines, good quality birds could be produced to meet the criteria of the breeder.

Speaking of selection to improve the birds, I read of an experiment by Nesbeth and his co-workers at the University of Florida. These men began with 400 female and 200 male Bobwhites and selected for body size and hatchability for two generations. With only these two selections the body weight was increased over 12%!

BROODING COMMERCIAL GAME BIRDS

The keeping of young chicks at the right temperature is called **brooding** and is well known to anyone who has ever seen a barnyard broody with her young chicks. Surprisingly, in most areas the job of keeping the chicks at the correct temperature is harder then one would imagine. Most would think it hard to keep the chicks warm enough, but the opposite is true in most of the cases. Many times each year I get calls from distraught breeders that cannot keep their young chicks alive. Upon questioning, I discover that they have "cooked" the chicks and dehydrated them and of course, they die. **Overheating** rather than not enough heat is prominent in the South and warmer climates during the summer months. Young Mallards are surprisingly hardy after the first three days of life. They can easily be overheated. All babies will tell you if they are comfortable by panting, piling up and chirping.

There are three basic methods of brooding chicks whether they are Pheasant, Quail, or Chukars. 1) **Spot heat brooding** which simply is giving the chicks a localized heat source in which they can come and go according to their own body temperature regulator. This is probably the most commonly used method. Many would agree that it is the safest as the chicks can regulate themselves. I have always used this method of brooding personally. The main consideration, other than being able to sleep at night and not worry about the temperature of the chicks, is the cost factor. Since a small area is heated the cost is lower. One can use one or several of the efficient heat lamps to throw an area of heat in one corner for the chicks to use. Another advantage of this system, if several heat lamps are used they can be turned on and off to keep a rather constant temperature. The use of thermostats is very easy with this method. When using the infa-red bulbs for heating they come in several sizes. Be sure and do not overheat your chicks.

2) The second method of brooding chicks is called **whole house heating**. The whole house is warmed to the correct temperature and the chicks have no choice in the matter. In colder climates this may be a problem as the area heated is on the floor and the heat naturally rises.

3) The last method is a variation of the first two and is called **partial house heating**. This simply is a system that heats only a partial area of the house and gives the chicks the option of going to the desired temperature. The area heated is just big enough to hold all of the chicks at one time

and is made larger as the chicks grow. The makes the method more economical then the second method.

BROODER ARRANGEMENT

The first priority of any brooder arrangements is to **meet the needs of the chicks**. This means that the **heat source** should be available to all of the chicks. Also, the **feeders and waterers** should be available and spaced so that each chick will have ample opportunity to eat and drink at will.

A good plan is to alternate the feed and water around the heat source so that the needs of each chick is met. Be sure and have enough feeders/waterers so that the chicks can easily eat and drink at will.

All methods of brooding require adequate **ventilation** for the chicks to grow healthy. The house brooding method especially requires good ventilation to reduce "sweating" and to get rid of all moisture possible. This cannot be emphasized too much Even in cold weather there should be adequate ventilation. This may mean that some heat is lost out of the ventilator (or windows) but that heat that goes out carries with it unwanted moisture. I found this out early when my windows and walls got covered with a sheet of ice when living in Montana and Central Oregon. I was amazed at how much moisture the chicks put into the air through their breath and droppings. It may pay you to invest in some kind of fan to move the air out of the building for proper ventilation.

A common brooder temperature chart would be as follows:

Age in Days	Brooder Temperature
1-7 Days	90-95 Degrees
8-14	85-90
15-21	80-85
22-28	75-80
29-35	70-75
36 Plus	70

The above chart will vary under certain conditions of course. It is always a good idea to let the chicks themselves tell you which temperature they prefer. You can know this by watching their actions while sleeping or resting. If they bed down in a close group next to the heat source then perhaps they are too cool. One of the signs of being too cold is the constant chirping. This can also be a sign of a disease problem. If they scatter out and are not in any apparent group then they are about right. Excessive chirping can indicate they are too cold. Panting with wings drooped indicates too much heat.

WHICH COMMERCIAL SPECIES SHOULD I RAISE?

One of the critical decisions that must be made before going into a "commercial game bird venture", is the deciding by the breeder which species he will work with. As was discussed in the previous articles on the subject, there are many things to consider when deciding to raise game birds commercially. All of these decisions will ultimately affect the species which will be raised.

Decisions concerning such things as marketing conditions, size of pens, available land, amount of investment, climate, etc., will be a determining factor in the selection of the species.

Basically, there are five general species of "upland" game birds that are raised commercially today and the one waterfowl species.

These commercial species are:

Ringneck Pheasant (Phasianus colchicus)
Chukar Partridge (Alectoris chukar)
Bobwhite Quail (Colinus virginianus)
Pharaoh Quail (Coturnix coturnix)
Hungarian Partridge (Perdix perdix)
Northern Mallard Duck (Anas platyrhynchos)

The Hungarian Partridge and some of the more ornamental species are being raised more and more in large numbers and could be counted as commercial prospects. It is hard to say which of these is the most popular in today's market as there are many breeders across America raising each very successfully. Most of the pheasant breeders are in the North, while breeders of other commercial species are in all climates. The duck breeder should make sure that he gets the wild stock that the market demands when getting breeders or hatching eggs.

I have raised all of these species in the past and must confess that I have some prejudices in the matter, but will do my best to be objective in presenting arguments for all sides. (One of the great things about aviculture is there is some species that will be ideal for every breeder.)

Again, I must emphasize that before going into any commercial venture the breeder should have had some basic experience with the raising of game birds. How can one know if he will like game bird propagation unless some kind of experience has been obtained?

It would be a good thing if the prospective breeder could visit a commercial game bird farm. I hesitate to mention this as most commercial operations discourage or forbid visitors. Their reasons are sound enough. The threat of disease being brought to a farm is a real concern. Also, many commercial breeders do not want to help someone that will become a competitor. If you can get permission to visit a game farm, by all means, do so. It will give you a very good grasp of what is involved.

Before you make a final decision as to the species of birds you will raise, you might want to consider getting into each of the four species in a small way for a year or two. With this knowledge you can go all out on the species that you really feel is the one for you.

Let us look at some of the **ADVANTAGES** and **DISADVANTAGES** of each of the four species:

BOBWHITE QUAIL

ADVANTAGES: 1) Good stock available. 2) Small pens satisfactory. 3) Shooting preserve and table market. 4) Hen lays 75 eggs per season. 5) Can be brooded in large groups. 6) Gentle temperament.

DISADVANTAGES: 1) Difficult to sex when day old. 2) Very cannibalistic. 3) Very delicate when young. 4) Susceptible to diseases. 5) Must be pair mated (requires more pens). 6) Cannot take extreme cold. 7) Must be debeaked. 8) Cannot use standard poultry equipment. 9) Cannot overcrowd. 10) Market very viable.

COTURNIX QUAIL

ADVANTAGES: 1) Very rapid life cycle. 2) Good stock available. 3) Easily managed photo-period. 4) Can be sexed at day old. 5) Hen lays 250 eggs per year. 6) Economical to maintain. 7) Ready for market at 8 weeks (meat). 8) Egg market available. 9) Resistant to diseases. 10) Females begin to lay at 35 days of age. 11) Short hatching time. 12) Can be colony bred on wire.

DISADVANTAGES: 1) Habit of flying straight up when disturbed. 2) Cannibalistic. 3) Droppings very moist. 4) Must have specialized equipment (cannot use poultry products). 5) Males aggressive during breeding season. 6) Cannot take extremely cold weather. 7) Cannot be frequently handled. 8) Easily frightened. 9) Must have adequate diet. 10) Many thin-shelled eggs.

RINGNECK PHEASANT

ADVANTAGES: 1) Good stock is readily available. 2) Market is available for meat birds and shooting preserves. 3) Can be colony bred on the ground. 4) Can be brooded, raised and maintained in large groups. 5) Chicks can be sexed on first day. 6) Take cold very well. 7) Lay 60-80 eggs per season per hen in ideal conditions. 8) Live weight at 14 weeks, 2.37 pounds. 9) Poultry equipment can be used.

DISADVANTAGES: 1) Cannot take extremely hot weather. 2) Require large incubators, pens and equipment. 3) Bad about cannibalism. 4) More expensive to ship. 5) Sometimes females hard to market. 6) Slow to mature. 7) Wild temperament. 8) Difficult to keep records of egg production in colony pens.

CHUKAR PARTRIDGE

ADVANTAGES: 1) Good market for shooting preserves and food consumption. 2) Stock easily obtainable. 3) Can be kept on wire. 4) Can be colony bred and brooded. 5) 60-100 eggs per season per hen. 6) Very little cannibalism. 7) Can take cold weather. 8) Marketable at 16-20 weeks. 9) Common poultry equipment can be used. 10) Rather disease resistant.

DISADVANTAGES: 1) Difficult to sex. 2) Males aggressive during breeding season. 3) Sometimes market becomes "flooded." 4) Must not be over-crowded.

HUNGARIAN PARTRIDGE

ADVANTAGES: 1) Good market as few breeders are into these birds. 2) Can be kept on wire. 3) 40+ eggs per season per hen can be expected. 4) Can take cold weather. 5) Common equipment can be used in hatching and breeding. 6) Good price can be obtained for birds.

DISADVANTAGES: 1) Stock is more difficult to obtain. 2)Must be kept in pairs. 3) Must not be overcrowded. 4) Market will have to be developed as not as many game preserves are using them.

MALLARD DUCK

ADVANTAGES: 1) Stock in the form of breeder birds or eggs are readily available. 2) Good market can be developed especially for aggressive salesmanship. 3) Hens lay large number of eggs. 4) Can take cold weather very well. 5) Can be colony bred and young birds can be colony brooded. 6) No cannibalism. 7) Common poultry equipment can easily be converted for use.

DISADVANTAGES: 1) Cannot take heat well. 2) Have very messy droppings which need daily care. 3) Markets need to be developed in some area of the country. 4) Susceptible to deadly virus and bacterial disease (usually not a problem).

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To summarize, there is not a perfect species to raise. It all depends on what you want to do, balanced with the demand of the market, and of course the amount of capitol that you have to invest in the project.

It will be a good idea for any breeder to take some time in making the decision as to which species he will raise commercially. He needs to keep in mind that all of these commercial breeds lay eggs in early Spring to early Summer. If the time is not considered, the slothful breeder may loose a whole year by waiting too late to book his eggs or breeders.

It is always a good idea to shop around for the best stock or eggs at the best price. It should be pointed out that the cheapest stock and eggs are not always the best buy. This is an area where the best

quality birds or eggs should be gotten even if a premium price has to be paid for them..Do not skimp on breeding stock, eggs, or quality feed. If you start out with poor birds or eggs you will end up with the same quality. Also, good birds can be pulled down with inferior feed. My policy has always been to feed the very best feed I could find. This has always produced good birds for me provided that I had good birds to work with.

A way to cut feed costs is to buy feed in bulk. Many times feed mills will give price breaks to those who buy their products in large lots. Be careful though, do not buy too much feed at one time. Feed has a way of attracting bugs and going stale if kept in storage too long. Fresh feed is the key to good feed.

Store feed in ventilated containers. If kept air tight sometimes there is moisture condensation which in turn will sour and ruin the feed. Metal storage barrels usually are not good for this reason. Keep in mind that rodents waist by eating and fouling tons and tons of feed. Someone should write a book on the control of these pesky things. I could give you lots of examples about the damage that rodents can do. This is another area of discussion but every effort should be made to keep rodent off and out of your premises.

SURVIVING A COMMERCIAL GAME BIRD FARM

COMMERCIAL GAME BIRD FINANCES

Perhaps the most difficult part of the preparation one must do before going into the game bird business on a commercial basis is counting the costs. As important as it is, few go to the trouble to think the cost through. The prospective game bird breeder knows the price of eggs or birds, but does not have any idea of what the other costs involved will be.

Hopefully, the prospective breeder will get enough ideas from the following to develop a plan to achieve his anticipated goals.

WHERE ARE THE COSTS?

Enemy number one of profit is cost. It is the goal of the game bird breeder to hold cost as low as possible while producing a quality product. Some of the costs are quite obvious, while other costs may be "hidden". The important thing is to know all of the costs of the anticipated bird project. The inexperienced breeder will not know many of these costs until he has a few years of experience under his belt. What the average cost other breeders have is really not a guide as each person will run his

operation a different way, and thus have different expenses.

1) The number one cost item according to Lee Kiefer is **FEED** (Kiefer, 1977). The actual cost will vary with the quality of feed used. Mr. Kiefer dispels a myth that homegrown grain is cheaper or even free. The cost of producing the homegrown grain may on the surface seem very cheap, but by the time everything is added into the production it may or may not be a bargain. Since grain has a sale value the dollar value should be used in tabulating the costs of the project whether the grain is homegrown or bought.

The total cost of any feed has a direct relationship to its quality. It has always been the policy of the writer to use the highest quality feed available regardless of the cost for the sake of the product quality. However, in a commercial operation this need not always be true. It must be said that it behooves the breeder to give his birds the necessary nutrients regardless of cost. There must be a balance between "cost and quality" to get the most from the feed dollar.

2) Probably, the second highest cost item on any farm is **LABOR**. Most small operations do not hire help outside the immediate family and thus may feel that labor is no cost to them. However, think of it as time being worth something, no matter whose time it may be. The time of your wife or children has a value. Most would be surprised at the number of hours that it takes to make a game bird business successful. All labor costs should be charged to the project whether or not it is paid for with actual cash. This is the fair way to evaluate the project. The reason most of us do not like to include labor costs in the project is the hard fact of putting the profit margin too low. The economics of the project looks much better if we can throw in some "volunteer labor" which is not the true costs as much as we would like for it to be (wishful thinking).

3) Another cost to consider is **ENERGY**. It is constantly going up it seems. This is an important thing to consider especially if the breeder lives in the North where he must heat his hatching rooms, brooder rooms, and other places of work. Gasoline, propane, and electricity should be considered in this figure.

4) SMALL ITEMS add up to big dollars. Nails, staples, and other maintenance items should be included.

5) REPAIR of property should also be considered. Even though the property may be depreciated over a number of years the time will come for replacement and that will be much higher than the original cost.

6) TAXES, INSURANCE, and INTEREST on borrowed money should be included. Every farm should have Liability Insurance and even Fire Insurance.

7) LAND and BUILDINGS must be considered as a cost of operation. If these two items are purchased or built especially for the game bird project the cost can be staggering. The cost of available land and buildings will likely determine the difference between a profitable or unprofitable operation.

8) Lastly, we must mention the cost of **EGGS, CHICKS, or BREEDING STOCK.** Most would agree that the highest quality stock should be used to begin an operation. Whether one starts with hatching eggs, buys young birds or breeders, is a matter of personal choice. Most experts agree that if possible it would be better to begin with hatching eggs as there is much less chance of getting a disease from outside sources. This is perhaps the most economical way of beginning a commercial operation as it cuts way down on the high cost of freight for live birds. However, there are some risks involved in getting hatching eggs. Sometimes for reasons beyond our control we get a bad hatch and thus the cost per chick goes way up. The outside temperature will affect the hatchability of the eggs so one must consider this. I personally have bought hatching eggs and fortunately have had excellent results. Some of my friends have tried it and it has been a disaster.

It may be a good idea to go pick up the eggs personally. This may mean an over night trip, but it could pay many dividends. If the egg producer agrees for you to pick up the eggs on his farm it would give you an opportunity to check out his operation as to cleanliness, crowding of breeders, and general conditions under which the eggs are produced. If you plan to pick up the eggs personally you should arrange this with the egg producer well in advance so he will be agreeable and can have the eggs ready for you.

WHY THE BIRD BUSINESS?

There are many businesses that you can go into that promise a profit. Some claim huge overnight profits. Frankly, most of these schemes to get rick quick seldom work. The 5% that do make a profit are always talked about by the promoters but the other 95% that lost are seldom mentioned.

There are some things to consider about the bird business:

1) **There is a good market for exotic or ornamental game birds and for the commercial type game birds.** All markets are governed by the "supply and demand" rule which means that if more of the product is produced than is wanted by the market, the prices go down or the product cannot be sold at any price.

As an example, some years ago I was fortunate to be one of the few people that raised Mountain quail that particular year. Even the old timers failed that year to get fertile eggs. It was thought to be the climate that caused the bird not to lay. Mountain quail in the wild do not go to nest unless there is ample food such as bugs and grasses to fee their young. Anyway, that year I raised nearly 500 Mountain quail to maturity. The normal price for these quail was $100 a pair at that time. Since none were available I got $149 a pair and sold them out within a month of advertising. Wow! I was fortunate! By the way, the following year every one got eggs and raised hundreds of birds. The price fell back below the normal price because of too many birds . This is a classic case of being able to produce q product which is in high demand. How do you know about the demand? Well, that is another story - one that is too long for this booklet.

2. Do not think that only the rare and expensive birds are the ones that sell the best. This is not the case! For example, during a depression or hard times, generally speaking, the more expensive birds do not sell well as the average person does not have extra dollars to spend on birds. That is when the market for the more common (or commercial) birds do well. That is not a hard and fast rule however, there are many people out there regardless of the times that have money to spend. In other words, the market is out there if you will find it!

3. Diversification often pays dividends. As a rule of thumb - I can say that it is best in most cases to have several breed (species or types) of birds going at the same time so when one is not producing you have another producing to pay the bills. More about this will be put in the Leland Hayes' Gamebird E-Zine if you will ask the questions.

As an example, I talked to a friend in Phoenix who is in the "parrot type" bird business (along with some gamebirds). He told me in great detail how bad the parrot market is at the present time. None were selling hardly and the prices have come way down the last several years. His main point was that he was paying the bills with the cheap birds such as finches and parakeets which he sold to the pet market. He was planning to make a shift in the species that he was breeding to move to the cheaper birds that had a better market.

The market for gamebirds usually hold pretty stable through the years. Prices have changed very little but the expense of production has gone up. This means that cuts have to be made if a profit is realized. To summarize - if you raise the wrong type of birds at the wrong time you will be stuck with them (and they keep on eating while in the holding pens). Be very careful about this point!

A SAMPLE BUSINESS PLAN

Any business plan must be an individual matter. I, therefore, cannot write one for you. The following business plan represents the best current estimate of future and potential business. It must be recognized that there is no business that is completely free of risk. The bird business is not an exception to this statement. Therefore those that read and follow this plan should be fully aware that the results may not come to expectation.

A BUSINESS PLAN WORKSHEET

When you make out a business plan for your bird projects you need to consider certain things. Here is a worksheet with some of the things that you need to think about. I have left room for you to write in some of your answers or thought. If you would do this as an exercise it will help you to begin to think in terms of successful business operation of your bird farm.

1) Objectives. What exactly do you want to accomplish? What are you reasons for going into the bird business?

2) Keys to Success. What are some of the ways that will open the doors of success in your business? Such things are good management, stock, etc. Be as specific as possible.

3) Start-up summary. What equipment will you need? What and where can stock be bought? What will all of this cost?

4) What species do you want to raise the first year? The second year, third, etc.

5) What are your long-term plans? Are you going to be doing this in 5 years?

6) Competition comparison. Who are your competitors and what are they offering the market? How successful are they?

7) Sales Strategy. How are you going to contact your customers? What publications will you advertise in?

8) Market strategy. What are you going to charge for your product to make a profit? This is largely governed by the market.

A. Target markets.

B. Promotional plan.

C. Distribution strategy.

A SAMPLE PROJECTED BUDGET

For the new-comer and even for the experienced breeder I want to throw out some ideas on figuring the actual and projected costs of a commercial game bird operation. If you have last year's cost it is a simple matter to put them down in some organized fashion to see if indeed you made a profit. This budget will also enable the breeder to get a handle on what his expenses really are and to **cut** items that may not be essential for producing the quality of birds he desires. Projected budgets are just **guides**, while actual budgets are **history** and both are important.

For me to figure the expected cost for a particular game farm is impossible. It would be difficult for anyone if they were inexperienced. There are many variables involved as there is no two operations the same. Here are some of the **expected costs** that should be taken into consideration. (Keep in mind this is only a guide and your expected costs could be very different.) Do your homework on this. I know it is very hard and in some cases impossible to know what future costs will be, but if you fail your homework on this it will come back to haunt you.

I. INVESTMENT

Land and Buildings— cost for storage buildings, brooder housing, hatchery, incubator room, growing pens, flight pens, breeder housing. **EQUIPMENT**—cost for standby generator, freezer, scalder, feather picker, sprayer, egg washer, waterers, cages, coops, brooders, incubators, hatchers, etc. **VEHICLES**— cost for truck, tractor, roto-tiller, etc.

II. FIXED COSTS

Taxes, interest on borrowed money, depreciation on buildings and equipment, insurance, license, etc.

III. VARIABLE COSTS

Loss of birds (all ages), repair of pens, repair of housing, utilities (phone, electricity, gas, water), fuel, litter, medications and disinfectants, labor (Social Security and benefits), security, bad debts, feed, postage, advertising, professional training, supplies (egg cases, shipping cartons, etc.).

IV. INCOME

Number of chicks sold @ $_____ = $_____

Number of birds sold @ $_____ = $_____

Number of eggs sold @ $_____ = $_____

TOTAL INCOME $_____

MINUS TOTAL COSTS $_____

PROFIT/LOSS $_____

To get the exact cost of producing your product for the year you simply subtract the costs from the income. The above exercise is a simple process provided that adequate records are kept for the past year. The really difficult thing to do is to anticipate actual costs before they occur. However, even if many of the cost factors are unknown it would behoove the prospective game bird producer to go over the possibilities carefully before making a large investment.

KEEPING ADEQUATE RECORDS

From the beginning the wise game bird breeder will develop a record keeping system. Not only will he save on taxes paid each year, but probably more important he can analyze these records and see exactly where he stands. It has been estimated that records when used properly can save up to 10% in waste. You soon know what feed and other items cost on a per-bird basis.

Nothing is more important and probably the easiest to do in the game bird business than **keeping accurate adequate records.** This is something that could be "hired out" if the game bird breeder is not turned to this sort of details. Regardless of who does the work — **it must be done!**

SOME GOOD SURVIVAL PRACTICES

There is information that could be applied to any of the four species of game birds that we intend to cover in this book. Most all upland game birds can be handled the same way with the exception of a few points that need to be adjusted to meet the needs of the specific species. Whether you are raising Pheasants, Chukars, Bobwhites, Coturnix Quail, Huns, or Mallards, there are some basics that can be applied to all. I cover the most basic information in detail that applies to all of the species and then give some specific **changes or adaptations** that need to be made for each of the species in my book, ***Upland Game Birds, Their Breeding and Care***. (except the Mallard duck - I do have a five part article "*How I raise Waterfowl*" which appeared in the out-of-print Gamebird Journal. Later I plan to make these articles available through my website).

SURVIVAL PROCEDURES

The success of any operation depends on good management. The following are some management suggestions for the brooding and growing period; 1) Thoroughly clean, disinfect and dry the brooder house at least one week before chicks arrive. 2) Clean all equipment and place proper litter on floor. 3) Heat the area at least two days before chicks arrive. 4) Place enough waterers and feeders for the birds to use easily. 5) Do not store feed more than three weeks. Keep it fresh and away from rodents.

AUTOMATIC WATERING SYSTEM

Many ornamental game bird breeders have installed some type of automatic watering systems. There are many systems available to choose from. For the commercial breeder some type of automatic watering system is a must for some of the pens.

There are some things that should be considered when thinking of designing a system: 1) The climate; any freezing weather?, 2) the type of pens; cage or ground, 3) the type of birds, 4) the number of birds per pen.

USING ARTIFICIAL LIGHTING

Artificial lighting should be used carefully. If the breeder does not do it right he could upset the laying cycle and loose a whole year of production. The following gives some points that should be considered. Although the practice has been around a long time – it still works.

> *"The practice of using artificial lights on pheasants is not exactly a new one. Its advantages probably couldn't be fully achieved in all parts of the country due to the cold winters where the problem of winter brooding would off-set the advantages of having early birds.*

We started experimenting with the possibilities when the demand for full flight birds came in for the early retriever trials. To do this, we would need eggs about six weeks earlier than normal. So in 1951, we brought the hens into lay on the 21st of February.

Then the market for meat birds for freezing increased so we thought if we could get eggs still earlier, we could raise these birds out and get them off to market and have our pen space for the later flying birds, thereby increasing our production and not increasing our overhead too greatly.

Last season (1952) we started the hens early enough to get eggs on the 29th of December, 1951, thus, we had prime birds for market in June, 1952.

We also had another flock begin to lay February 21, 1952, which took care of the early retriever trial birds.

Then the group picked out for the natural laying season produced their first eggs April 2, 1952. These took care of the late retriever trials and the Thanksgiving and Christmas market birds.

The following is what we have had the best results with. The cocks you select for breeders and the number, depending on the amount of the hens to be used, should be placed in fairly close confinement, say, about three cocks in a pen 12 x 12 with a sixty watt light bulb and reflector. As the cocks become more pugnacious, you should separate them. The hens are put with the cocks (we use six hens to one cock) when the cocks start to show brilliant coloring in the wattles approximately one month later. A good feeding program all the way through is imperative. Try to give the birds thirteen hours of light per day. We have found that if the lights come on early in the morning about 3:00 A. M. and then let the birds go to roost at dust, the hens will lay earlier in the day, making egg gathering more convenient. It will take about four to six weeks, depending on the weather conditions, before the first eggs are laid.

Each hen under lights laid an average of sixty-six eggs, which was as many as we could expect during the natural laying season.

Fertility on the first eggs set from the birds started at 86% and came up to 96% on the fourth batch set and held steady to the peak of their lay.

The mortality held average with the spring hatched chicks, although we had to raise the temperature of the brooders and give them access to the brooders for a longer period.

As all pheasant breeders know, there doesn't seem to be any steadfast rule to hold to. Whatever works best for you is the thing to do. However, the experience had by other farms can sometimes be adjusted to suit your requirement to an advantage" (Carlson, 1953).

The above shows that extended photoperiod works with pheasants. It will also works with other types of game birds. Allen Woodard answers questions about this interesting subject:

WHAT IS THE OPTIMUM AGE TO STIMULATE GAME BIRDS? Research indicates that Pheasants, Chukars and Bobwhites respond best when they are at least 30 weeks of age provided they have been preconditioned under short daily photoperiods of 8 hours per day for a period of 6 to 8 weeks. Males respond more slowly than females and must be given stimulatory light two weeks in advance of the hens in order that both reach sexual maturity at the same time.

HOW MUCH DAILY LIGHT IS NEEDED FOR OPTIMUM STIMULATION? A continuous period of daily light of 13 to 16 hours is generally adequate, and amounts in excess of 16 hours are a waste of energy. Presently, little information is available on the use of intermittent lighting programs for egg production in game birds. Once the birds are in lay the daily photoperiod should never be decreased for any reason.

IS THE QUALITY OF LIGHT IMPORTANT? Previous research has shown that birds are sexually stimulated by the longer wave lengths of the visible light spectrum e.g. yellow, orange and red bands. Most incandescent and the daylight or warm fluorescent lamps produce the desired color emissions needed for starting and maintaining optimum lay.

IS THE INTENSITY OF LIGHT IMPORTANT? Light intensity can be measured in either foot candle (fc) or lux. One lux equals .0929 foot candle. The optimum light intensity for laying game bird breeders has never been determined nor has the minimum level been established. Good production has been reported for pheasants and partridges given 10 foot candle, measured at bird level. It is quite possible that game birds will require a higher light intensity (at least 5 to 10 fc) to induce lay for the first cycle of egg production but a lower light intensity (2 or 3 fc) after they have experienced at least one cycle of lay.

MUST THE PERIOD OF DARKNESS GIVEN DURING THE "REST" PERIOD BE ABSOLUTE, AND HOW LONG SHOULD IT BE GIVEN? For optimum response, the room must be reasonable light tight, i.e. no light seepage around the doors, windows or ventilation system. The dark period must never be disrupted by a flash of light or the use of overhead

lights for any reason. Recent investigations have shown that refractoriness in partridges can be terminated on a light intensity of less than .1 fc (1 lux) irrespective of the day length. The usual practice is to reduce the amount of light to 8 hours per day, preferably given during the natural daylight hours, for a period of eight and ten weeks for Chukars and Pheasants, respectively.

HOW OFTEN SHOULD GAME BIRDS BE CYCLED TO LAY? Limited information shows that favorable rates of lay can be maintained in pheasants and chukars through four cycles of egg production. Thereafter, egg yield, fertility and hatchability begin to decline.

HOW SOON WILL BIRDS LAY AFTER GIVEN STIMULIGHT? For both chukars and pheasants, onset of lay requires from 18-21 days after the birds are given stimulatory light. About ten days later the flock will attain 50% rate of lay. The duration of the production will depend on the species and system of management. Favorable production can be expected from Chukars and Pheasants for about twelve and sixteen weeks, respectively.

LIGHTING PROGRAMS FOR RECYCLING AND FORCE MOLTING GAME BIRDS. A program for cycling Pheasants and Chukars for year-round production is given on the next page. Pheasants are given stimulatory light for 13 weeks followed by a rest period of 13 weeks. Whereas, partridges are given stimulight for 10 weeks of production followed by 11 weeks of rest. For year-round egg production it is necessary to alternate two flocks, one producing eggs while the second flock is rested (Woodard, 1984).

DISINFECTANTS AND THEIR USE

Sanitation in itself is one of the most important factors that contribute to disease prevention. This topic is a book in itself. To help the game bird breeder keep the disease causing organisms below the level of the resistance of the host bird, we use **disinfectants** as a tool. The greatest mistake that can be made is the dependance of these disinfectants to take the place of good sanitation.

There is no such thing as the perfect disinfectant as each one is produced to perform certain tasks. Sadly, there is not one that will do everything the game bird breeder needs done through the wise use of chemicals. There are some products on the market that have not been approved for poultry or gamebirds. The breeder should be careful to use only agents that will not contaminate the primises and thus get residue into the birds.

There are six major types of disinfectants, of which four can be combined into two classes. The major classes of disinfectants are (Smith, 1985):

1. **Halogens—**

   Two types of disinfectants (iodines and chlorines) are grouped because of similar characteristics. **Advantages** include low cost, fast action, low toxicity, they may be combined in cleaners, and are effective against fungus and molds. **Disadvantages** include a reduced effectiveness in organic matter, are corrosive, and have little residual activity. Halogens are most suited for disinfecting small instruments and equipment, water lines, and using in foot baths.

2. **Phenolic and Cresylic Acids—**

   These two types of compounds are grouped together because they are commonly combined in commercial products. **Their advantages** are that they have a good residual activity and very good effectiveness in presence of organic matter (manure). **Some disadvantages** are that they are moderately expensive and have a strong, long lasting odor that may not be desirable in all situations. These disinfectants are best suited for using as a general house disinfectant, and using in the hatchery.

3. **Quaternary Ammonias—**

   There are probably more products containing this type of disinfectant than any other class. This is because "quats" are non-irritating, non-corrosive, have low toxicity, are low in cost. **The disadvantages**, however, are that they cannot be mixed with many cleaners, effectiveness is reduced by organic matter, and residual activity can be reduced by contamination. They are best suited for hatcheries and equipment, feeders, waterers, and general house equipment.

4. **Aldehydes—**

   Formaldehyde and glutaraldehydes are usually considered as fumigation-type disinfectants. They are low in cost, non-corrosive, moderately effective in organic matter, and are effective against fungus and mold. **Disadvantages** are that they can be very toxic to use and have little residual activity. The ideal use is in fumigating hatchery equipment.

APPROVED DISINFECTANTS

Not all disinfectants are approved for use by the USDA. The game bird breeder should be aware of the approved disinfectants and be sure he follows the directions on the label.

The following disinfectants have been approved:

TEK-TROL
Bio-Tek Industries, Inc.
1212 Menlow Dr. NW
Atlanta, GA 30318
(404) 351-7048

BACTO-PHENE
Oxford Chemicals, Inc.
P.O. Box 80202
Atlanta, GA 30366
(404) 452-1100

*** ONE STROKE ENVIRON**
Vestal Labs
New Jersey
(201) 351-0251

LIFEX - 1
Whiz Chemical
Bala Cynwyd, PA
(215) 825-555

We have not had any experience with any of the above disinfectants except **One Stroke Environ***. We heard about it through the Lab at Oregon State University. Our local feed store was gracious enough to special order us a gallon. It was expensive, but it lasted for about two years which cut the cost down considerably. The thing that we like about it is the killing power on **virus** which is very important these days. The gallon bottle also has a handy pump which puts out just the right amount to dilute. It does not have an objectionable odor either.

The game bird breeder should be careful when he uses any chemical. Some of the disinfectants are poisonous to certain species. Read the label and always follow the manufacturers instructions. Some of the common drinking water sanitizers are very poisonous to waterfowl but quite effective when used with other game bird species. When using chemicals we wear rubber gloves as some of them cause skin problems which may be in the form of a rash or swelling. Watch for individual allergies that may cause reactions to chemicals.

DEBEAKING GAME BIRD CHICKS

When commercial game bird chicks are raised in limited space there is need to **debeak** to prevent picking of toes, feathers, or body. The wise breeder will use this method to help get the birds to adulthood.

Debeaking can be done most any age if done properly and with common sense. There are two basic methods and both work well.

The first is one that we practice on a regular basis. It is the searing of the "egg tooth" on newly hatched chicks before putting them into the brooder. This is not a permanent measure and must be repeated about every two weeks or so depending upon how fast the beaks grow back. The advantage of this method is that the mature birds show no sign of debeaking as their beaks are normal (if the searing is not done too severely). The great disadvantage of using this method is that it most be done so often through the growing period in the life of the chick. We, along with many others, feel that if possible the mature birds should show no signs of debeaking. This, of course, holds true if the mature birds are not in a position to be cannibalistic.

The method is simple. Hold the beak of the little chick against the hot blade for just a split second at the correct angle. Using a blade that is too hot will burn the tongue and eyes of the chick often causing shock or blindness. The tip of the beak will drop off in a few days to grow back again.

The other method is to debeak permanently. This must be done after about fourteen weeks and must be done correctly as the bird will carry the results for the rest of its life. The precision debeaking is done with a professionally made machine such as the one made by Lyon. It has an attachment that causes every chick to be debeaked uniformly and at the correct angle. The top beak is left slightly shorter than the lower thus making it difficult to cannibalize.

The blade should be kept sharp and the heat at the correct temperature. A few days before the procedure give the birds added vitamin K and electrolytes. This helps keep the bleeding down and also gives the chicks some extra stamina. We put extra feed in the pans during the recovery time. It would not be a bad idea to use a mash type feed for a week after debeaking to be sure the birds can eat properly.

Our debeaker has paid for itself a thousand times. This is the second piece of equipment that the serious game bird breeder should get. The first being a good incubator.

SELECTING NEXT YEAR'S BREEDERS

Regardless of the type of game bird that is produced, the keen breeder should have a good sound selection program in place. Here are some points that should be considered when selecting the breeders for next year. The best thing to do is to hold over some locally produced birds. Look for birds that have a good overall appearance. Avoid crooked toes, legs, and breast bones. Deformed beaks will lower the value of any bird. Evaluate the feather condition. Watch for inbreeding as much as possible by selecting breeders from different hatches (the early ones are generally the best).

Some breeders like to clear out the entire flock of breeders each year or so and start over completely. While this may be desirable, especially if there is some disease problem, I would not recommend this practice as it will involve too many unknowns. By keeping your own breeders there is no doubt of the quality, health, and blood line.

MARKETING COMMERCIAL GAME BIRD PRODUCTS

There is much more to having a prosperous commercial game bird enterprise than raising game birds. The breeder must be able to sell his product in order to make a modest profit. Nothing is more frustrating than to have a product that is ready to sell and there is no buyer. I have seen this many times, when a certain variety that was very much in demand the last breeding year suddenly becomes so available that no one wants the birds. The name of the game is **supply and demand**. The breeder must be shrewd enough to produce what the market wants. This may be hatching eggs, chicks, immature birds, meat birds, or breeders. Perhaps the safest way to go would be to **diversify** in such as way as to be able to offer at least some product that is wanted by the market.

There is more to **marketing game birds** than just **selling game birds**. Selling is just one phase

of the whole marketing process. If you market a product or service, you try to satisfy the consumer's wants while making a profit (Smith, 1982). It is not as difficult to just **sell at any price** if we are willing to take a loss. The art of marketing is to make a reasonable profit while meeting the demands of the consumer.

Some think that the **demand for the product** is the same thing as the **consumption of that product**. Just because the sale of the product increases, it does not necessarily mean that the demand has increased proportionately. The product could have been "dumped" on the market for disposal at a loss.

The consumer must **want** what the game bird breeder is selling and **have the money to pay** and be **willing to pay** for the product.

Successful marketing involves several different **functions** (Smith, 1982). These functions are:

1. **Market Research** reduces the risks in a business venture. It increases the chances of success greatly.
2. **Market testing** insures the research finding were correct and the product is what the market wants.
3. In our society, **packaging** has an equally important promotional role to play as that of product protection. An attractively packaged product assists in sales.
4. From the consumer's point of view, **price and product performance** are the main factors that determine a product's value. It is what the consumer, not the producer, thinks that matters.
5. **Distribution** can be handled in a number of ways. It is necessary that distribution be continually re-evaluated and changed is deemed desirable.
6. Through **promotion**, potential customers are made aware of the product and stimulated to try it. The three areas of concern are: a)advertising, b) merchandising or promoting the product at point of sale, and c) public relations to create a favorable image of the product or game bird farm.
7. **New product development** is essential if future sales are maintained. All products have a life cycle, whether only a few days or a few years.

MARKETING SUGGESTIONS

We would recommend that the advertising found in the Game Bird Breeders' Gazette be studied very carefully to get a grasp of what the market is wanting. This study should be done for at least six months to get the swing of the market. It would be even better to do a study for a year. Check the ads about the species that you are interested in, hatching eggs, chicks, and breeder birds. Some idea of the going market price can be gleaned from the ads. The astute breeder may want to check the ads in some of the other magazines that have advertisements. This will give a general picture over the nation.

It would be a good idea to check some of the local marketing possibilities. The more of the

product that can be sold locally, the less transportation costs to consider. A creative breeder will be able to get a **handle** on the situation in his particular area. Check out the competition to see how much activity is presently going on in the area of interest. If the competition is too great then the answer may be to go into another area of production.

Do not forget that game birds produce many products (by products) that may be in demand. I know of a breeder that sells quail eggs and went out and got a written contract to provide a certain number of quail eggs on a weekly basis. The price that he negotiated was slightly lower than what he could have gotten (maybe) on the open market on a hit and miss basis. This man felt that to have a guaranteed market (even at a lower price) would be better than having weeks that he could not move his product. Also, this guaranteed market gave him some assurance that it would be wise to build up his breeding stock to sufficient numbers to produce the needed number of eggs on a regular basis.

ADVERTISING

The small game bird breeder as well as the large one needs to advertise his product. It does not matter about the size—potential buyers must know about the producer and his product. Much has been said and printed about the advertising of products and can be researched in other books, however, it might be well to mention what we feel are the reasons that every game bird breeder should advertise.

1. Advertisement costs are the most efficient costs when taken out to the end product. This is true even in bad years.

2. It is impossible to contact every potential buyer in person, so advertising is the most effective way of getting out the word.

3. Current advertising will affect sales in future years.

4. Sales go up proportionately with advertising.

5. Use advertising media that has your potential target group as its subscribers.

6. Set aside some dollars each year in your budget for advertising, you will build business this year and in the future.

SALES AGREEMENTS (CONTRACTS)

Every sale should be accompanied by some type of agreement and receipt. The breeder can make up his own forms which can be used according to the procedures that he likes to work under.

Each agreement should have the following elements and can be arranged in any order:

1. Date, time, place should be stated.

2. Names of both parties (seller and buyer) should be clearly understood. Be sure you know who you are doing business with.

3. Statement of what product is being purchased, what quantity, what quality, age of birds (if appropriate) and a general description of the product.

4. Amount of down payment at time of order (if any).

5. Date of delivery of product—also give a statement of days allowed for late delivery.

6. No product will be delivered until full payment (or other arrangements) are made.

7. Consequences in the event that the buyer does not pay on time or at all. State clearly that the note will be entered as judgments and collected by any available legal procedure against the buyer.

8. Statement that no warranties of quality or other promises or representations will be honored other than those set forth in writing on signed agreement.

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Finally . . .

Well, I hope that some of these matters will help you make the decisions that you must make if you are going to survive the gamebird business. I have just scratched the surface and I know that your heads must be spinning around with many questions. This is good!

I invite you to ask these questions through the Leland Hayes' Gamebird E-Zine which is sent to each subscriber every week. If you do not subscribe to this FREE publication you may do so by following the link on my web page:

www.LelandHayes.com

When you become a subscriber, feel free to ask your questions. There are many out there that want to know the same thing as you do – so ask! I hope that I have helped you to not make the same mistakes that I have made. You will keep your hair longer and your birds will live a little longer if I have helped.

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Leland B. Hayes, Ph.D.
P.O. Box 1682
Valley Center, CA 92082

(760) 749-6829

E-Mail: Leland@LelandHayes.com

Farmers Duck - Displaying top 8 worksheets found for this concept. Some of the worksheets for this concept are Raising commercial ducks as a 4 h or ffa project, Kids activity book, Barter money, Lesson farm animals, How to begin and survive a commercial gamebird farm, Farm unit, , Guide to good dairy farming practice. Found worksheet you are looking for? To download/print, click on pop-out icon or print icon to worksheet to print or download. Worksheet will open in a new window. You can & download or print using the browser document reader options. Raising Commercial Ducks as a 4-H or FFA Proj Farm domes in my opinion are the most efficient way to feed your people. You can focus them on growing as much food as possible while using the water reclamation spire to save the most amount of water you can. Here are what I consider to be the optimal layouts based on vanilla buildings and early techs like farms and the water spire. When setting up your dome you need to do the following Thumbs down children and seniors. How would I know that? Because I have personally bought and started two farms from scratch, farmed them using sustainable, organic, and permaculture farming methods, and sold goods produced from the farms direct-to-consumer. I want to share everything I know with you in this one complete guide and make it easier than ever for you to buy a farm, learn how to farm it, (whether itâ€™s to provide for your family, to make a business out of it, to homestead, or just as a hobby) and to show you the tools youâ€™ll need to.Â Conventional Farm: Sometimes called industrial agriculture or commercial farming, conventional farming involves large amounts of inputs including the use of synthetic pesticides and fertilizers on both genetically modified (GMO) or non-genetically modified crops. What is the landscape approach to upland gamebird habitat management and how does it differ from more small-scale approaches. Landscapes are heterogeneous in nature and often include multiple cover types such as grassland, shrubland, woodland, and cropland. Landscapes are also often larger in area. Please explain the 'softball habitat evaluation technique ' can be used to assess bobwhite quail habitat. https://www.youtube.com/watch?v=238PRCbHR5A. How old are the earliest bobwhite quail fossils in North America? 2.5 mya. what is the average life span of a bobwhite quail.