



New York State
Department of Environmental Conservation

Cooperative Day-old Pheasant Chick Program Guide



Guide to Public Pheasant Rearing Projects
January 1982

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New York State Department of Environmental Conservation
Division of Fish, Wildlife and Marine Resources
Bureau of Wildlife

THE MISSION OF THE BUREAU OF WILDLIFE

To provide the people of New York the opportunity to enjoy all the benefits of the wildlife of the State, now and in the future. This shall be accomplished through scientifically sound management of wildlife species in a manner that is efficient, clearly described, consistent with law, and in harmony with public need.

PHEASANT PROGRAM VISION

To meet the current and future needs of people for pheasant hunting, observation, and educational opportunities within biological constraints and consistent with available funding.

ARTIFICIALLY PROPAGATED PHEASANTS GOAL

To provide artificially propagated pheasants in areas of the state where there are limited opportunities to enjoy wild pheasants within fiscal and land use constraints.

Preface

The information contained in this guide is designed to provide rearing and release guidance for individuals receiving day-old pheasant chicks from the Department of Environmental Conservation (DEC). There are two parts. Part I provides general program information including program history and requirements for participation. Part II outlines the pheasant rearing and release procedures necessary to properly care for pheasants. There are many different techniques for raising pheasants. The techniques found in this guide are demonstrated in the DEC video, "How to Raise Ring-necked Pheasants." The video is available from DEC offices (Appendix I), the DEC Richard E. Reynolds Game Farm, and Cornell Cooperative Extension offices. It was developed to complement the Day-Old Pheasant Chick Program guide.

Pheasant rearing need not be difficult and can offer a satisfying experience for program participants. Some participants enjoy watching young pheasants develop into beautiful adult birds. Others enjoy a summer sighting or cackling rooster. Hunters enjoy the opportunity that released pheasants provide in areas with few wild pheasants. Hunting released pheasants with a well-trained bird dog is encouraged. A 1995 survey of 104 responding pheasant hunters at the Cayuga/Tompkins Cooperative Hunting Area found that 102 hunters or 98 percent hunted with a dog. Hunting pheasants with a well trained bird dog is an important part of the total experience and is one reason sportsmen and sportswomen support the continued stocking of State-reared pheasants.

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Key Program Points

- ◆The DEC distributes 60,000 or more day-old chicks annually.
- ◆Anyone can apply to participate in the Day-old Pheasant Chick Program.
- ◆Participants must have the appropriate brooding facility and outdoor rearing pen.
 - ◆Release sites must be open to public pheasant hunting.
 - ◆Birds may not to be released on private shooting preserves.
 - ◆Applications for chicks must be submitted by March 15th.
- ◆Participants must become familiar with the Day-old Pheasant Chick Program guide.
- ◆Day-old pheasant chicks are provided to participants in April, May, or June.
- ◆Pheasants must be released at eight weeks of age or older, but no later than the end of the pheasant hunting season.
- ◆Pheasants provided to participants may not be bought, sold or traded.
 - ◆Habitat improvement projects on release sites are encouraged.
- ◆For more information about pheasants call the State game farm at (607) 273-2768 or email us at fwwildlf@gw.dec.state.ny.us and type the word 'pheasants' in the subject line.

PART I: GENERAL PROGRAM INFORMATION

History:

Successful releases of pheasants in New York occurred in 1892 on Gardiners Island (located off the east end of Long Island) and near Geneseo (Livingston County) in 1903. So successful were these releases, that in 1908 the first authorized hunting season for pheasants in New York was established. To further the spread of this popular game bird, the State Conservation Department (predecessor of DEC) established its first game farm in 1909. By 1910 surplus eggs were distributed to sportsmen and farmers, to be hatched and reared by broody hens. This activity first gained official recognition in 1919, when the Division of Fish and Game placed a Propagation Superintendent at the disposal of game clubs needing technical assistance. As broody hens became more difficult to secure, incubators came into use and the pheasant egg program became the day-old chick program. A Game Management Unit was formed in 1939 and the day-old chick program was expanded. In the early years, 4-H youths received \$.50 and later \$1.00 for each pheasant reared and released. Virtually everyone interested in game and hunting enthusiastically supported the day-old chick program.

Pheasant Fact: In 1909, New York's first game farm was established in Sherburne (Chenango County) and is now home to the Department's Rogers Environmental Education Center.

In the late 1960s the \$1.00 reimbursement was discontinued and the full cost of bird rearing was shouldered by the 4-H youngster or a sponsor. As a result, the 4-H and sportsmen programs became more closely related, with some sportsmen's clubs underwriting the cost of facilities and feed for pheasants reared by 4-H youths. In the 1980s participants were encouraged to release birds closer to the hunting season to increase harvest. Birds released in the summer have higher mortality, especially from predators, than those released just prior to or during the pheasant hunting season. In 1999, the DEC adopted *A Ten-Year Management Plan for Ring-necked Pheasants in New York*. The plan objectives call for the annual distribution of 60,000 day-old pheasant chicks and for improving habitat on 75 percent of the release sites. Today all pheasant propagation activities take place on the DEC Richard E. Reynolds Game Farm near Ithaca, in Tompkins County.

Objectives:

People choose to raise and release pheasants for a variety of reasons, but not everyone knows the objectives of this program. In addition, there are many misconceptions about propagated pheasants. These misconceptions make it difficult to understand why the DEC operates a pheasant propagation program and the benefits provided by propagated pheasants. The following objectives provide a clear picture of what the Day-old Pheasant Chick Program offers.

- ◆ *Distribute 60,000 or more day-old pheasant chicks to approved program cooperators - The State game farm provides day-old pheasant chicks to all approved participants. Applicants can apply for any number of chicks, as long as they have the proper facilities.*

- ◆ *Provide hunting opportunity for 40,000 pheasant hunters* - The main purpose of all the State pheasant propagation programs is to provide pheasant hunting opportunity. Since very few propagated pheasants released in the summer and fall survive until spring, these programs are not intended to restore pheasants. It's important to understand that the closer pheasants are released to the fall pheasant hunting season, the greater the potential harvest.
- Pheasant Fact: Pheasant hunters in New York harvested approximately 185,000 pheasants in 2002.**
- ◆ *Provide observational opportunities for participants, landowners and the general public* - The pheasant is a popular game bird depicted in photographs, paintings, on stamps and elsewhere. Landowners enjoy seeing and hearing pheasants on their property. Even a passing motorist that observes pheasants picking-up grit along the roadside rapidly spreads word of such a sighting.
 - ◆ *Provide educational experiences for participants* - Raising and releasing pheasants can be a very educational experience. Raising any animal, wild or domestic, is a lesson in responsibility. Participants learn the daily needs of the growing pheasants, witness the feather development from down to adult plumage, and equate pheasant propagation techniques with those used by hen pheasants caring for their newly hatched chicks. Selecting a release site also requires knowledge of what habitats pheasants prefer and which covers provide good pheasant hunting sites.
 - ◆ *Establish habitat improvement projects on or near 75 percent of the release sites* - Wild pheasant population trends are directly tied to habitat, not the number of pheasants raised and released annually. Increasing wild pheasants requires improving and expanding habitat. Participants interested in increasing wild pheasant populations can obtain information about habitat improvement projects from the Department. These habitat improvements will also provide better release sites for propagated pheasants and fun-filled days afield with a well trained bird dog.
 - ◆ *Provide public access for pheasant hunting opportunity* - An important objective of the State pheasant program is to provide public hunting opportunity. All pheasant release sites must be open to public hunting. The pheasant program is instrumental in keeping a portion of private land available for pheasant hunting opportunity.

Participation:

Day-old pheasant chicks are provided to anyone interested in raising and releasing pheasants as long as they adhere to program guidelines. Chicks must be reared in suitable facilities with the proper food, water, and care until they reach the desired age for release. Pheasants provided to participants may not be bought, sold or traded. Suitable release sites must be located and clearly described on the application. Affiliations between 4-H youth, sportsmen's groups, and landowners is encouraged. Participation requirements are as follows:

- ◆ Anyone can apply to receive, raise, and release day-old pheasant chicks.
- ◆ Participants must have the proper brooding and outdoor rearing facilities for the specific number of birds they desire to raise and release.
- ◆ Participants must have a suitable release site that is open to public pheasant hunting. Hunting by permission or ASK PERMISSION designations are acceptable, as is unposted property. Birds may be released on state lands, but a Temporary Revokable Permit must be obtained from the DEC to do so.
- ◆ Participants must submit an application to raise and release day-old pheasant chicks.
- ◆ Participants must become familiar with the Day-old Pheasant Chick Program guide. The DEC video, “How to Raise Ring-necked Pheasants” is also available and is an excellent complement to the rearing manual.

How to Apply:

Day-old Pheasant Chick Program applications can be obtained from the DEC Regional Wildlife Offices listed in Appendix I, by calling the Richard E. Reynolds Game Farm at (607) 273-2768 or by visiting the DEC website at www.dec.state.ny.us/website/dfwmr/wildlife/pheasant/index.htm.

Helpful Hint: For information about raising pheasants and other pheasant programs, call the State game farm manager at (607) 273-2768.

They must be completed and submitted to DEC regional wildlife managers by **March 15th**. All applications will be reviewed. Inspections of facilities may be conducted at the discretion of the regional wildlife manager. Applicants are notified by May 1st of acceptance or rejection of their application to receive birds. All 4-H youth apply to raise and release pheasants

through their local 4-H office. The 4-H leader is responsible for inspecting and approving 4-H youth facilities and release sites. A domestic game bird breeder license is not required to participate in the DEC Day-old Pheasant Chick Program.

Delivery:

Game farm staff notify approved applicants of the date, time, and location of the day-old pheasant chick deliveries. Pheasant chicks are delivered in April, May or June at central distribution points across the State. Be on time! Delivery personnel have other stops and appointments to make. The chicks arrive in 18"W x 7"H x 24"L cardboard shipping boxes, 120 chicks per box. The chicks need to be kept in a warm location while waiting to be picked-up, preferably at room temperature. Cooperators should transport the boxes of day-old pheasant chicks on a seat or the floor of a van, truck or car. Avoid direct heat or wind. Do not place the chicks in a car trunk or an open pick-up truck bed. Upon arriving home, place the birds in the brooding facility with fresh water, feed, and adequate heat.

PART II: PHEASANT REARING AND RELEASE PROCEDURES

The Brooder House:

Day-old pheasant chicks require the same care and attention given all young animals, especially an adequate diet and protection from the elements. Protection must be provided in the form of adequate brooding space in a structure, such as a brooder-house, barn, garage, or clean poultry house (Illustration 1). The room must be cleaned, disinfected, and well constructed to prevent drafts. It must have no cracks, holes or loose boards. Young pheasant chicks are very adept at finding ways of escaping from confinement when rearing pens are not suitably built. Pens must be constructed to prevent entrance by all types of predators which could potentially prey on the young birds.

Each chick requires one-half square foot (72 sq. in.) or more of floor space. For example, an area 10 feet x 10 feet is sufficient for 200 chicks. The floor must be covered with softwood shavings, chopped straw, dried sugarcane, or some comparable type of commercial litter. Fine particles like sawdust are not acceptable, as chicks will ingest these. Litter should never be covered with newspaper or other smooth materials. Pheasants have difficulty standing on slick surfaces and may develop “spraddle-leg” unless the appropriate precautions are taken.

Helpful Hint: You can raise 200 six-week old pheasants in a brooder house that is 10 feet square.

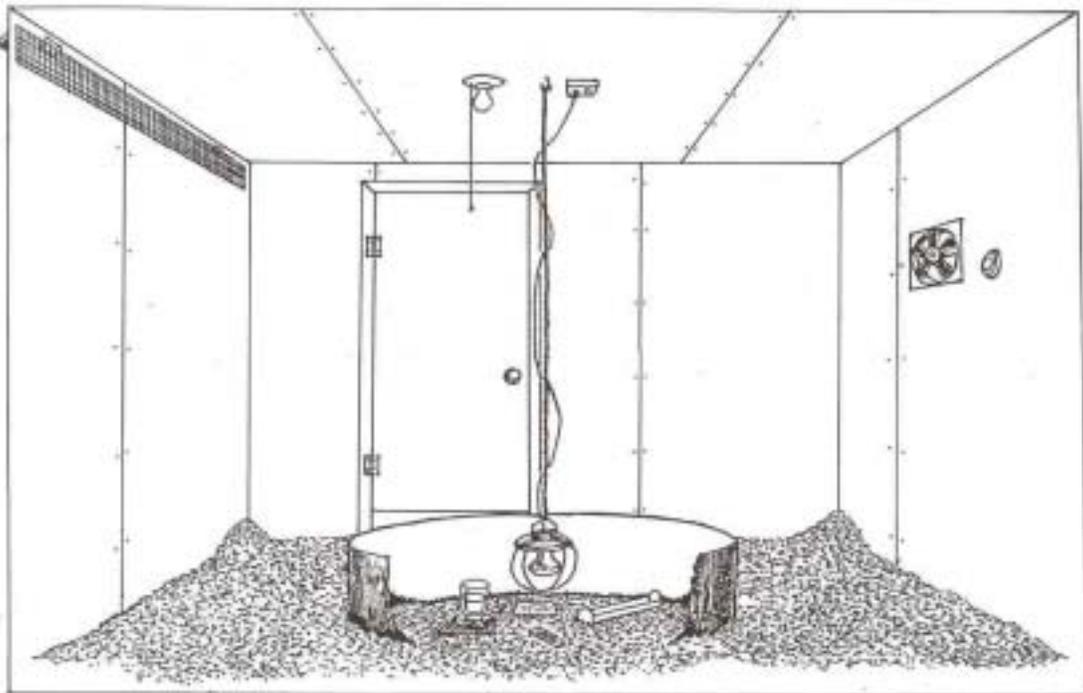


Illustration 1. Brooder House

One or more brooding units must be installed to keep the chicks warm. There are a number of different brooders for sale. Commonly used units include ruby infrared heat lamps, electric infrared radiant heaters, and pancake shaped gas brooders (Illustration 2). Most small pheasant rearing projects use the ruby infrared heat lamps suspended 15 to 18 inches above the floor to safely brood 35-50 chicks. However, the use of infrared heat lamps tends to promote feather picking problems which are more easily controlled with brooders that emit little or no light. Whichever type brooder is selected for use, be sure to follow the manufacturer's specifications. Improper installation or use of the brooding unit could result in a fire. Appendix II contains a list of vendors to help you find the proper equipment for rearing pheasants.

Please note: If you purchase a heat lamp brooding assembly, use a ruby or red colored infrared bulb. The white bulbs used for chicken brooding provide too much light which will lead to severe feather picking problems. Feed should be moved away from the area covered by the infrared heat rays after the first week to prevent the development of a riboflavin deficiency called "curled toe paralysis." Direct infrared rays will destroy the riboflavin in the feed.

Keys to Successful Brooding and Rearing:

There are a number of reasons that some game bird raisers produce high quality pheasants year after year. It's not luck! There are six "keys" to a successful pheasant brooding and rearing program. They include ventilation, temperature, water, feed, lighting, and cleanliness.

Ventilation - Pheasants require fresh air to grow properly. Venting the brooder house to maintain a room temperature between 70-80 degrees Fahrenheit will ensure a good growing environment for the chicks. Intakes and outlets should be constructed with ducts which permit good air flow and good air circulation but exclude light. Wall fans, if used, may be thermostatically controlled so that they will vent air when the room temperature rises too high. Generally, the chicks need more ventilation as they grow.

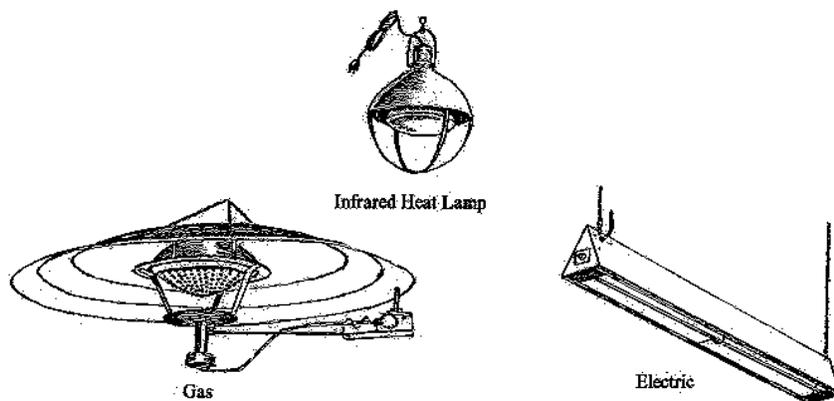


Illustration 2. Brooding Equipment

Temperature - Initially, young pheasant chicks are subject to “escape panic” and must be taught to stay close to the brooder. It is necessary, therefore, to encircle the brooder with a guard 16 to 18 inches high. The guard can be corrugated cardboard, metal flashing or any other rigid material. On day one it should be placed close enough to the brooder so that the chicks can move from the heated area to a cooler area if they desire. Each day thereafter the guard may be expanded to allow the chicks to roam over a wider area. On the sixth day, the guard is removed and the chicks allowed to roam over the entire floor area of the pen. If the chicks tend to crowd into the corners after the guard is removed, litter should be piled-up in such a way as to round off the corner. This practice will prevent crowding and smothering. The brooding temperature during the first week should be around 100 degrees Fahrenheit at floor level near the center of the brooder. The brooder should be turned on and the temperature stabilized at least 24 hours before the chicks arrive.

Watch the chicks closely, especially for the first day or so. The height of infrared heat lamps should be adjusted so that the chicks will lie in a doughnut-like pattern around the center of the heated area. If they huddle together in a tight group temperatures should be increased a few degrees. If the chicks move out and are using only the very fringe of the area, reduce the temperature a few degrees. Increasing or decreasing temperatures is accomplished by raising or lowering the infrared heat lamp.

Decrease brooding temperature by five degrees at the end of the first week and again at the end of each subsequent week until the temperature has reached 85 degrees Fahrenheit. Heat can be discontinued after the birds are four weeks old.

Water - Water is the most important requirement of young pheasants. Cool, clean water should be available at all times. Replace the water in your fountains twice daily and clean the units to help prevent disease. Begin by using at least one quart jar fountain per 50

chicks. Place the fountain on a piece of hardware cloth to help keep the wood shavings out of the water. Colored marbles or stones may be added to the water dish to prevent drowning. Stones may be removed from the water dishes after the fifth day. Place water fountains near the brooder but not directly under the heat. As the chicks grow and drink more water, replace the quart fountains with one or five gallon fountains. Provide three one gallon fountains per 100 birds. If you are monitoring the chicks twice daily you will be able to see how much water the chicks are drinking at each visit. If the water fountains are empty at either of your visits, add an additional water fountain. After two weeks of age, 200 growing pheasants will require about 5 gallons of water per day.

Helpful Hint: Feeders and water fountains should never be empty when you visit the brooder house. Add another unit if this occurs.

Feed - The feed given to pheasant chicks is extremely important. Chicken feed is not acceptable. Commercial game bird or turkey rations (Illustration 3) manufactured by several companies in New York State have been found to be satisfactory and are recommended. Buy only enough to last about

Helpful Hint: When raising pheasants it's generally best to make changes gradually. For example: mix ½ starter crumbles with ½ grower pellets before changing over to all pellets.

two weeks. The starting ration must contain 28 to 30 percent protein to meet the needs of the chicks for rapid growth and good feathering. Crumbles are satisfactory, but pheasant chicks cannot swallow pellets until they

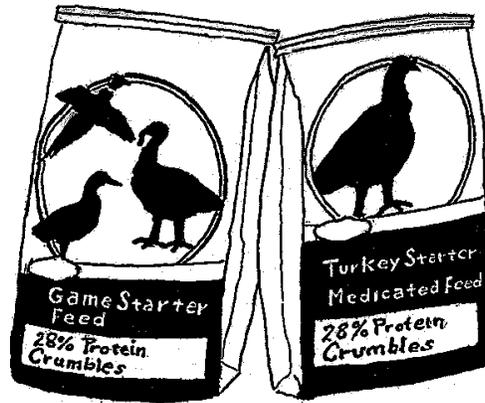


Illustration 3. Feed

are three weeks of age. The starter feed should contain a coccidiostat, a medication to protect the chicks from the disease coccidiosis while in the brooder house. At nine weeks old in the outdoor pens, the pheasants can begin eating grower feed in the form of pellets. Feed scratch grain the entire two weeks prior to releasing any pheasants. Scratch grain is cheaper than grower pellets and grains or seeds are likely to be found near release sites. Changes in diets and feed size occur gradually over a one week period by mixing the different diets or different size feeds together. See Table 1. for the recommended feeding program.

Table 1. Suggested feeding schedule

Age of Birds (weeks)	Type of Feed	Protein (Percent)
0 - 8	Game Bird or Turkey Starter Crumbles	28
9 - 16	Game Bird or Turkey Grower Pellets	22
16 - to release	Scratch grain	9

Ample feeder space must be provided so there is approximately one inch of space per bird for the first three weeks. Increase this to 2 inches per bird through 6 weeks of age and 3 inches per bird thereafter. The reels or grills sometimes found on commercial feeders should be removed during the first few days of the chicks' life and the feeders should be placed partially under the brooder close to the heat and the chicks. In addition to the commercial-type feeders, additional feeding space should be provided during the first few days by placing feed on egg case flats or rough textured paper plates distributed at three or four different locations around the edge and under the brooder. Care should be taken not to overfill the feeders at any time. Pheasants will spill large amounts of feed leading to waste, expense and the creation of a health hazard. Moist, moldy feed can cause serious harm to young pheasants and should be removed immediately.

Helpful Hint: Store feed in a metal trash can with lid to keep it dry and protect it from rodents.

An estimate of the total amount of feed needed to raise 25 pheasants can be obtained from Table 2. Generally, pheasants reach full plumage at 18 weeks just prior to or during the fall pheasant hunting season.

Table 2. Feed consumption

Age of Birds	Feed Consumed per bird	Feed to Raise 25 Pheasants
0 - 8 weeks	4 lbs. Starter Crumbles	100 lbs. Starter Crumbles
8 - 16 weeks	8 lbs. Grower Pellets	200 lbs. Grower Pellets
16 - 18 weeks	2 lbs. Scratch Grain	50 lbs. Scratch Grain
Totals	14 lbs.	350 lbs.

Lighting - Brooding is facilitated by excluding outside light and using only artificial lights for illumination. Too much light promotes feather picking. Cover all cracks and windows, but allow for ventilation. The brooder house should be illuminated with one 75-watt white incandescent light for each 150 square feet of floor space during the first week. Bulbs should be changed to 40-watt white lights for the second week. On the 15th day, the lights should all be 25-watt ceramic blue bulbs. This will furnish sufficient illumination so that the chicks can find the feed and water, yet be subdued enough to quiet the birds and discourage feather picking. Infrared heat lamps emit light of their own. If you are using more than one infrared heat lamp it may not be necessary to provide overhead lighting after the second week. Watch the birds closely for signs of feather picking.

Cleanliness - The importance of keeping the pheasant rearing facility clean cannot be over-emphasized. Unsanitary conditions can lead to disease problems. The brooder building and all the equipment should be disinfected before brooding begins. A commercial disinfectant or household bleach are suitable for use. Follow manufacturer directions for application. During the rearing process it's imperative that all wet shavings and feed be cleaned-up and any dead birds be disposed of properly. Wrap dead birds in a bag and place them in the household trash for easy disposal. The birds should be checked in the morning and at least one more time in the evening. To help cooperators monitor individual pheasant rearing projects, a checklist is included in Appendix III .

Feathering:

If the six keys to successful brooding and rearing are adhered to, the young pheasants should feather nicely. Provide the birds with good ventilation, the proper temperature, ample fresh-clean water, the proper feed, controlled lighting, and a clean growing atmosphere. In addition, when the chicks are 21 days old, they should be lightly sprayed once each day with water from a hose spray nozzle or garden sprayer set to a fine mist. This practice conditions the birds to cope with cold rains when they are released to the outdoor pen. Care must be taken to direct the spray upon the birds as much as possible so that the litter and feed do not become wet. The birds will immediately start preening. Preening is an important aspect of feather development and hygiene for pheasants. It facilitates the drying of wet feathers. Clean and properly aligned feathers help maintain the proper body temperature.

Feather Picking:

Pheasant chicks are prone to feather picking problems which commonly occur whenever birds are grown in large numbers in confinement. These problems may be intensified by lack of feed or water, nutritional deficiencies, improper temperatures, overcrowding or the use of bright lights that shine directly upon the chicks. Once feather picking begins it is difficult to control. Every effort should be made to prevent its occurrence. Make sure that the feed has the recommended amounts of protein specified in Table 1. Insufficient protein levels may be a primary cause of feather picking. Follow recommended brooder house and outdoor pen sizes for your

Helpful Hint: Do not overcrowd pheasants. Overcrowding can cause feather picking and other health problems. Give them lots of space!

number of birds. Outside, good weed and brush cover is ideal. If not available, artificial cover can be supplied by using pine boughs, piles of freshly cut brush, or similar materials. Injured or aggressive birds should be removed from the pen and either held separately or released. Remember, prevention is easier and more effective than coping with the problem after it develops. Give the birds plenty of space! If necessary, release some of the birds at 8 weeks to provide more space for the remaining birds.

Under certain circumstances debeaking procedures or attaching anti-picking devices, such as peepers or bits, will be useful in controlling feather picking. Peepers (Illustration 4) are also known as blinders or specs. If an individual or organization will be rearing a large number of birds year after year, one or more of these methods to control feather picking are recommended. However, a certain amount of experience and skill is necessary to apply them properly and neither should be attempted by a novice. Contact the Reynolds Game Farm at (607) 273-2768 for guidance.



Illustration 4. Peepers

Pens:

It is imperative that pheasant chicks be acclimated (hardened) to the out-of-doors before they are released. Most game bird breeders keep the growing pheasants in the brooder building until the fifth or sixth week. Then the birds are released to an outdoor pen for the remainder of the rearing period. Birds should be released during a long stretch of good weather. Birds should never be placed in the outdoor pens from the brooder building when inclement weather, such as cold temperatures and rain are in the forecast. It is during the sixth week that peepers are attached through the nares (nose holes). Birds can be raised in outdoor pens at higher densities when peepers are used.

Pheasants molt their juvenile plumage at seven weeks of age. Tail picking can become a problem at this time unless adequate space and cover permit the birds to escape from each other. If the birds are going to be released at 8 weeks of age only ten square feet of pen space per bird is needed. However, adequate weed and brush cover must be maintained. Be sure to feed a high protein formula at least through 8 weeks of age. The size of the pen will have a major influence on the control of feather picking. Pens providing a minimum of 40 square feet per bird, with good weed or brush cover, are recommended for all birds over 13 weeks of age if they are to be held for an in-season release. If using peepers the size of the pen can be reduced. See Table 3.

Table 3. Outdoor pen space requirements for growing pheasants

Age of birds	Pen space without anti-picking devices	Pen space with anti-picking devices
5-8 weeks	10 sq. ft.	5 sq. ft.
9-12 weeks	30 sq. ft.	15 sq. ft.
13 weeks and older	40 sq. ft.	20 sq. ft.

Pens for pheasants must be covered, usually with a polypropylene top netting. If the pen is left uncovered, escapes will be a constant problem since healthy pheasants can fly at two weeks of age. The pen should be constructed of fencing about six feet in height made of hexagonal poultry wire on the sides. The bottom one-foot of this wire should be buried in the earth or folded at a 90 degree angle and laid on top of the sod so that the pheasants cannot dig their way out of the pen and predators cannot dig their way in. One inch mesh size is suitable. The top covering for the pen is usually 2 inch polypropylene netting propped-up by eight or ten foot 2" x 4" lumber. See illustration 5 for guidance in pen construction techniques.

Helpful Hint: Outdoor pens with lots of cover such as aster, goldenrod, lambs quarter, corn or sorghum provide pheasants with shelter from rain, the sun, and aggressive birds.

In locating the pen, it is best to use a clean sod ground with a liberal stand of weeds which will furnish substantial cover for the birds. Goldenrod and aster provide great cover because of their stiff stems. Grain sorghum planted in strips is also an excellent choice for cover. Grasses are not preferred because pheasants mat grasses very quickly. Mow strips in the pen to provide a place for feeders and water fountains and to easily monitor the birds. If cover is sparse, it may be desirable to place evergreen boughs at various points throughout the pen to furnish additional refuge. See illustration 6 for an example of a pen with good cover.

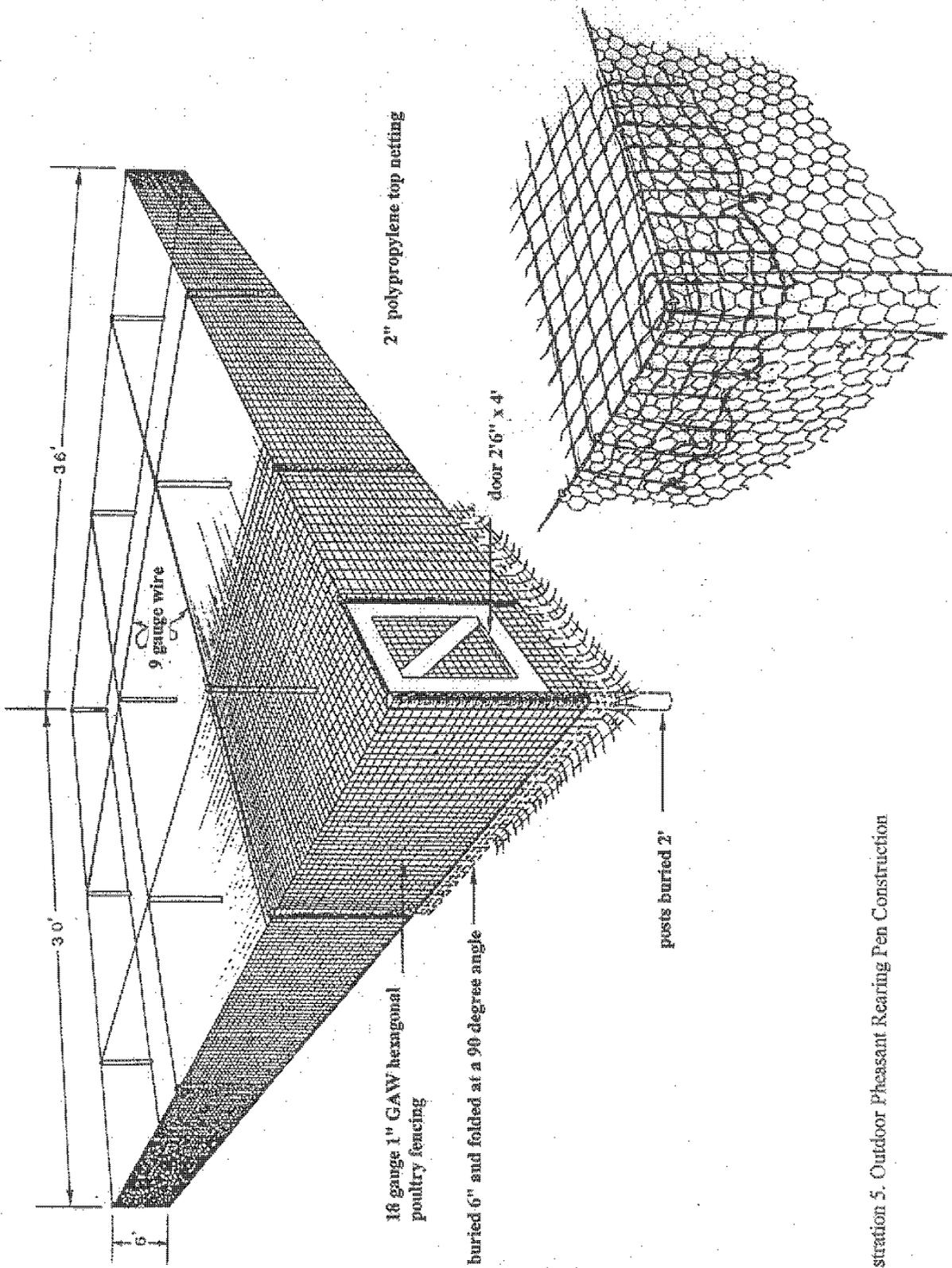


Illustration 5. Outdoor Pheasant Rearing Pen Construction

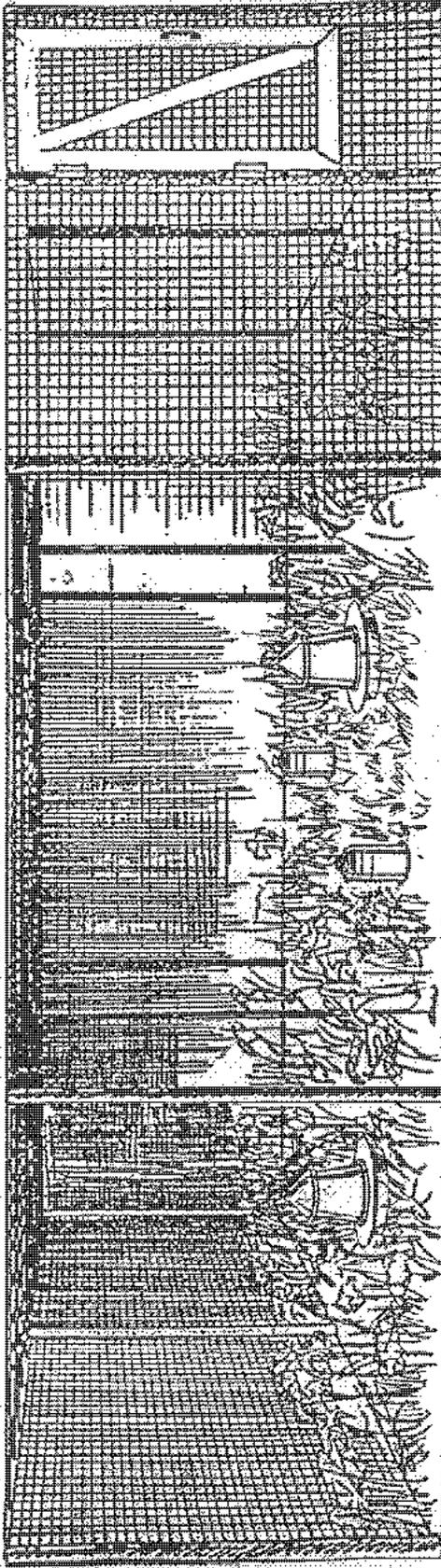


Illustration 6. Outdoor Pheasant Rearing Pen With Cover, Feeders and Watering Units

The feeding facilities in the pen should be protected from rain and should be moved frequently to insure proper sanitation. Any feed which becomes wet or moldy should be immediately discarded some distance away from the pen. Don't forget to supply plenty of watering facilities.

Selecting a Release Site:

Release sites should be selected which provide the birds adequate weed and brush cover for protection from predators and the elements. Extensively wooded areas should be avoided. Small tracts of brush, fallow fields and weedy areas near active farmland are ideal, especially where grain crops are grown. Avoid releasing birds near roads which have heavy automobile traffic.

If the number of birds to be released is small and the areas surrounding the outdoor rearing pen provide good cover a "gentle" release technique may be used. To accomplish this, the pen gate may be left open or the wire may be raised so that the birds can simply walk out at will. Food and water is left in the pen so that the birds can return to feed. In this manner, the young pheasants will become accustomed to roaming free and can develop natural feeding skills before going out completely on their own. Remove feed and water after two weeks. The "gentle" release method can also be accomplished with a portable release pen (Illustration 7) on sites located far from the outdoor rearing pen.

Another release method is to transport the birds in cardboard or wooden shipping crates to the release site. When slatted wooden crates are used it is best if cloth or paper is placed over the slats to darken the interior. Birds remain calm under darkened conditions. Be sure to allow adequate ventilation if birds are to remain in boxes for any length of time. At the release site, crates should be placed in a protected location such as near a hedgerow or weedy brushy area and left open in such a manner that the birds will be able to leave at their own pace. The shipping crate would then be picked up at a later time. In any case, the birds should not be bodily forced out of the shipping container as this will possibly cause injury, wild flushing, and disorientation.

Release sites must be listed on the Day-old Pheasant Chick Program application. The following criteria apply.

- ◆ All pheasants must be released on lands open to public pheasant hunting. HUNTING BY PERMISSION or ASK PERMISSION designations are acceptable, as is unposted land.
- ◆ No birds may be released on shooting preserves or any private lands charging a fee for hunting privileges.

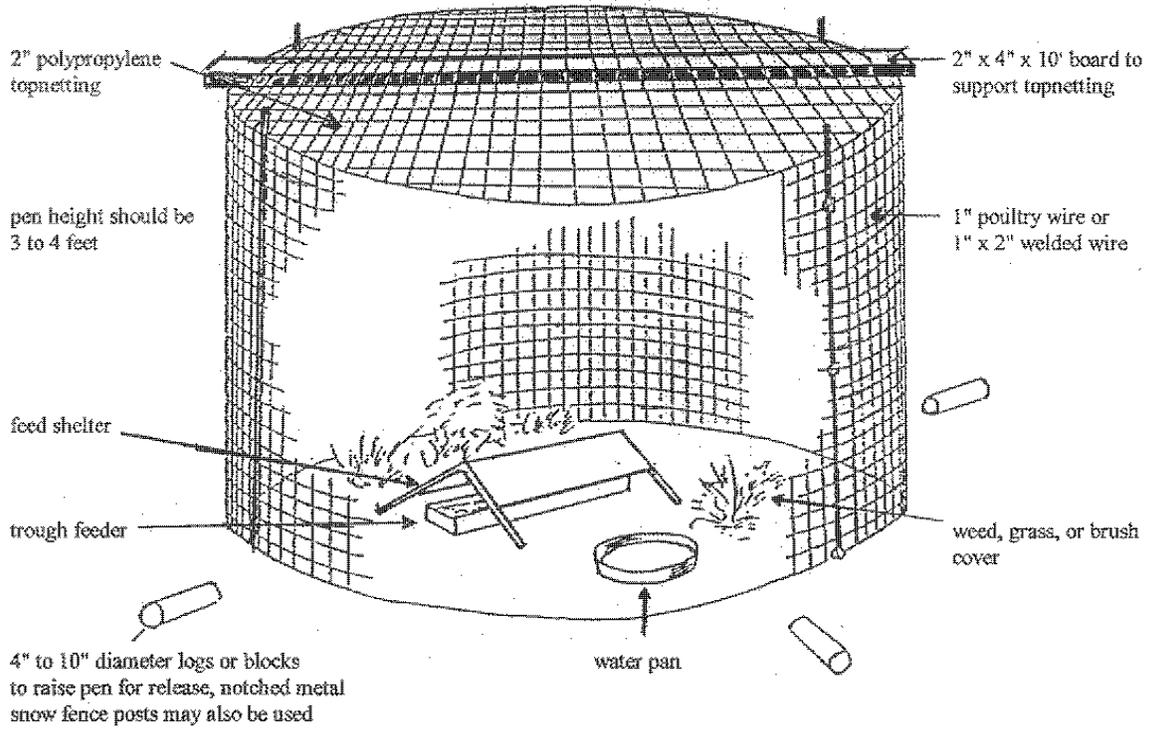
Release Guidelines:

The timing of pheasant releases will greatly affect harvest rates. Since few pheasants survive to breed the following year, cooperators are encouraged to release and hunt pheasants to

Helpful Hint: Form a partnership with a sportsman's club or friend to help reduce pheasant rearing costs.

Welded Wire Pen

Make pen 8 or 10 feet in diameter



Wood Framed Pen

Make pen 8 x 8 or 10 x 10 feet square

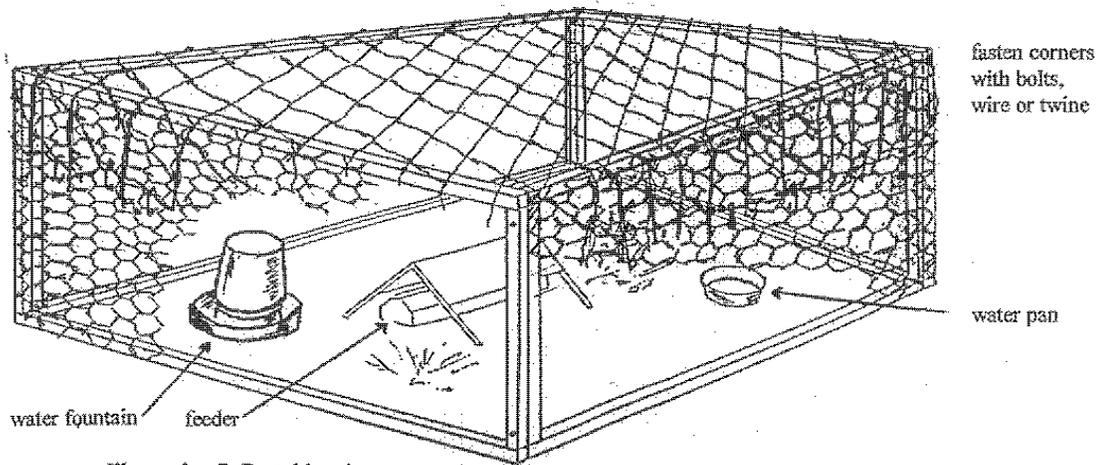


Illustration 7. Portable release pens

maximize hunting opportunity and harvest. Records show that birds released just prior to and during the pheasant hunting season provide the highest hunting returns. Birds released during the summer will provide much lower returns due to predation and other mortality factors incurred over the 2-3 month period before hunting season begins. Since pheasants become costly to raise after 8 weeks of age, a compromise might be to release some birds at eight weeks of age and raise the remaining birds to release during the hunting season when they reach full adult plumage. The following release requirements were developed to offer options that take into account facility size, rearing costs, observation opportunities, and hunting opportunity.

1. Release pheasants at eight weeks of age or older. This method allows the birds to acclimate in outdoor pens at least two weeks before release. Eight week old birds cost less than half to raise compared to adult pheasants 18 weeks old. They provide observational opportunities throughout the summer and into the fall but provide less hunting opportunity because they incur higher mortality during the three months prior to pheasant hunting season.
2. Release pheasants as 18 week old adults just prior to and during the fall pheasant hunting season. All pheasants must be released before the close of the current pheasant hunting season in your area. This option provides the best possible hunting return. The downside is that adult pheasants are more than twice as expensive to raise as eight week old pheasants. Cooperators may raise fewer birds to reduce costs. The hunter with a well trained bird dog choosing this option will have many an enjoyable day afield.

Habitat Improvement Practices:

Healthy pheasant populations are most often found in fertile agricultural areas associated with grain farming. Pheasants are not forest dwelling wildlife like turkeys, deer, and bear. That said, habitat improvement practices that benefit pheasants include the following.

- ◆ Establishment of cool and native warm-season grasses for nesting and brood-rearing cover
- ◆ Removal of trees that serve as hunting perches for hawks and owls
- ◆ Maintenance of hedgerows to provide food, travel lanes, and winter cover
- ◆ Restoration of wetlands that include cattails for winter cover
- ◆ Establishment of grasses along roadsides, drainage ditches and odd field corners
- ◆ Mowing of fields to stimulate grasses and retard trees and shrubs
- ◆ Planting food plots, such as grain sorghum, for winter food and cover

For more information on pheasant habitat improvement practices, contact your local DEC wildlife office.

Disease Control:

Continual observation of birds for evidence of health problems is essential. When birds are observed huddled together, standing with an unnatural posture or show a roughened appearance, and there has been some mortality, contact should be made with one of the poultry disease diagnostic laboratories listed on page 18. An early diagnosis may prevent high losses of birds. As is always the case, disease prevention is much more desirable than any “cure”. Avoid buildings and pens used heavily in the past for poultry production. Remove and destroy any dead or sick birds daily, keep the area clean and free from wet and moldy feed, use medicated feeds when recommended, and provide adequate cover.

There are several diseases which may infect pheasants, but only a few occur frequently enough to be of concern to the small flock grower. These include coccidiosis, gapeworm, molds and mold toxins, and botulism. Although these are described briefly below, home diagnosis should not be attempted. Contact your county 4-H agent, the DEC Richard E. Reynolds Game Farm, or a poultry disease specialist for help.

Coccidiosis - Possibly the most frequently seen of all diseases is coccidiosis. Because of its prevalence, a preventive medication program is advisable beginning with the day-old chick. Preventive medication may be discontinued by eight weeks of age. Many commercial starter feeds contain a coccidiostat.

Gapeworm - Of all the internal parasites, the gapeworm is most likely to be seen in young flocks of pheasants. The gapeworm has several intermediate hosts, most commonly, earthworms. For this reason, control of the gapeworm should begin with the use of well-drained pens to reduce access of the birds to earthworms.

If the gapeworm was a problem in past flocks, either move the pen to clean ground or plan to medicate the birds for a short period following their release to the infected pen. Preventive medication may be necessary up to ten weeks of age, depending on the severity of the infection. If birds are not released into the pen until they are 5 weeks of age, gapeworm problems can be minimized.

Molds and Mold Toxins - Litter materials that have become molded may result in an infection of the respiratory tract of birds. This condition is controlled through the use of clean, mold free litter materials. Molded feeds may produce still another problem, mold toxins. Control of this problem is a matter of preventing the feed from becoming wet, a condition which favors mold growth.

Botulism - This disease is the result of birds consuming material that has decomposed out of contact with air. For example, a dead bird that is buried in the litter when decomposing may result in toxin production. Control of this potentially serious infection depends on strict sanitation and prompt removal of all dead birds and spilled feed.

Medications - All medications used for disease control should be based on professional advice. Before a hunter eats a pheasant, it is very important that the medication be “cleaned out” from the bird. This means to stop using all medications prior to releasing the birds. It’s called a withdrawal period. Read all labels and follow the instructions exactly so that the birds are safe for consumption.

The following are Disease Diagnostic Laboratories in New York State where pheasants may be taken for examination. Contact these laboratories for instructions.

1. Avian Disease Program, College of Veterinary Medicine, Cornell University, Ithaca, New York 14853 (607) 253-4031
2. Duck Research Laboratory, P.O. Box 453, Eastport, Long Island, New York 11941 (631) 325-0600

Predators:

Predators can kill a large number of birds. Rats are not often killers but can raise havoc with a small flock of chicks. Raccoons, foxes, skunks, mink, and weasels also eat young pheasants. Don't forget that domestic cats or dogs can also be dangerous. Preventing access to the birds is the best control measure, so construct the outdoor pen and brooder house carefully. Trapping furbearers during their open seasons may help reduce local predator populations, especially around the release site. Refer to the DEC Hunting and Trapping Regulations Guide for seasons and bag limits.

Costs:

Pheasant rearing projects vary in costs. If you have an existing facility and equipment, your primary cost is feed. If you are starting from scratch, a new project is more costly. In either circumstance, Appendix IV provides a realistic example of the expenditures necessary to raise 25 pheasants to 18 weeks old. Remember that costs can be reduced by partnering with other individuals, organizations, sportsman clubs, and 4-H youth. For example, a fish and game club can provide funding for a 4-H youth project or three individuals can pool their resources to raise and release birds at various locations.

DEC Reference Materials:

The following reference materials can be obtained by calling the Richard E. Reynolds Game Farm at (607) 273-2768.

- ◆ A Ten-Year Management Plan for Ring-necked Pheasants in New York
- ◆ How to Raise Ring-necked Pheasants (video)
- ◆ Day-Old Pheasant Chick Program guide
- ◆ Young Pheasant Release Program guide
- ◆ Landowner's Manual for Ring-necked Pheasant Habitat Improvement
- ◆ In Quest of the Ringneck
- ◆ Ring-necked Pheasants in New York
- ◆ Some Recommendations for Helping Pheasants

Department of Environmental Conservation Wildlife Offices

NYSDEC, Region 1
SUNY Building 40, Loop Road
Stony Brook, NY 11790-2356
(631) 444-0310
(Includes Counties Nassau, Suffolk)

NYSDEC, Region 3
21 South Putt Corners Road
New Paltz, NY 12561
(845) 256-3098
(Includes Counties Sullivan, Ulster, Orange,
Dutchess, Putnam, Rockland, Westchester)

NYSDEC, Region 4
65561 State Hwy 10, Suite 1
Stamford, NY 12167-9503
(607) 652-7367
(Includes Counties Otsego, Montgomery,
Schenectady, Delaware, Schoharie, Albany,
Greene, Rensselaer, Columbia)

NYSDEC, Region 5
Route 86, PO Box 296
Ray Brook, NY 12977-0296
(518) 897-1291
(Includes Counties Franklin, Clinton, Essex,
Hamilton, Fulton, Warren, Saratoga,
Washington)

NYSDEC, Region 6
317 Washington Street
Watertown, NY 13601-3787
(315) 785-2261
(Includes Counties St. Lawrence, Jefferson,
Lewis, Oneida, Herkimer)

NYSDEC, Region 7
1285 Fisher Avenue
Cortland, NY 13045
(607) 753-3095 x247
(Includes Counties Oswego, Onondaga,
Cayuga, Madison, Cortland, Tompkins,
Chenango, Tioga, Broome)

NYSDEC, Region 8
6274 E. Avon-Lima Road
Avon, NY 14414-9519
(585) 226-5380
(Includes Counties Orleans, Monroe,
Wayne, Genesee, Livingston, Ontario,
Yates, Seneca, Steuben, Schuyler,
Chemung)

NYSDEC, Region 9
182 East Union Street, Suite 3
Allegany, NY 14706
(716) 372-0645
(Includes Counties Niagara, Erie, Wyoming,
Chautauqua, Cattaraugus, Allegany)

NYSDEC, Richard E. Reynolds Game Farm
81 Game Farm Road
Ithaca, New York 14850
Phone (607) 273-2768

Appendix II

Game Bird and Poultry Supply Vendors

Louis E. Page (fencing and netting)
PO Box 2405
Littleton, MA 01460
(800) 225-0508 or www.louispage.com

Endurance Net Inc. (fencing and netting)
PO Box 127
Roebing, NJ 08554
(800) 808-6387 or www.enduranceneting.com

BF Products Inc. (fencing and netting)
PO Box 61866
Harrisburg, PA 17106
(800) 255-8397 or www.bfproducts.com

J.A. Cissel Mfg. Co. (fencing and netting)
PO Box 2025,
Lakewood, NJ 08710
(800) 631-2234 or www.jacissel.net

Valentine Inc. (fencing and netting)
PO Box 639
Lemont IL 60439
(800) 438-7883 or www.valentineinc.com

Putnam Plastics (shipping boxes)
255 South Alex Road
West Carrollton, OH 45449
(800) 457-3099 www.putnamplastics.com

Frederick Packaging Inc. (shipping boxes)
11918 W. Silver Spring Drive
Milwaukee, WI 53225
(414) 438-9600

Ziggity Systems. Inc. (watering units)
12456 Industrial Parkway East
PO Box 1169
Middlebury IN 46540
(219) 825-5849 or www.ziggity.com

Farmer Boy Ag Supply (general supplies)
PO Box 435, 410 East Lincoln Avenue
Myerstown, PA 17067
(800) 845-3374 or www.farmerboyag.com

King Kohl (general supplies)
1514 Mattingly Road
Hinckley, OH 44233
(216) 278-2550 or www.kingkohl.com

Cutler's Supply (general supplies)
1940 Old 51
Applegate, MI 48401
(810) 633-9450 or cutlersupply.com

Kuhl Corp. (general supplies)
PO Box 26, Kuhl Road
Flemington, NJ 08822
(908) 782-5696 or www.kuhlcorp.com

Lyon Electric Co. Inc. (general supplies)
1690 Brandywine Ave.
Chula Vista, CA 91911
(619) 216-3400 www.lyonelectric.com

Brower (general supplies)
PO Box 2000
Houghton, IA 52631
(319) 469-4141 or www.browerequip.com

Stromberg's (general supplies)
PO Box 400
Pine River MN 56474
(800) 720-1134 or www.strombergschickens.com

NatureForm (incubators and hatchers)
925 North Ocean Street
Jacksonville, FL 32202
(904) 354-7400 or www.natureform.com

National Band and Tag Co. (bands)
PO Box 72430, 721 York Street
Newport KY 41072
(859) 261-2035 or www.nationalband.com

Kalglo Electronics Co. Inc. (brooders)
5911 Colony Drive
Bethlehem, PA 18017
(610) 837-0700 www.kalglo.com

Appendix III

Brooding and Rearing Instructions Checklist

Week 1

- Infrared Brooder Temperature 100 degrees at floor level
- Game Bird Starter Feed crumbles 28 percent protein
- Fresh cold water twice daily
- Grit on day four
- One 75 watt white light for every 150 square feet of floor space

Week 2

- Infrared Brooder Temperature 95 degrees at floor level
- Game Bird Starter Feed crumbles 28 percent protein
- Fresh cold water twice daily
- One 40 watt white light for every 150 square feet of floor space

Week 3

- Infrared Brooder Temperature 90 degrees at floor level
- Game Bird Starter Feed crumbles 28 percent protein
- Fresh cold twice water daily
- One 25 watt ceramic blue light for every 150 square feet of floor space

Week 4

- Infrared Brooder Temperature 85 degrees at floor level
- Game Bird Starter Feed crumbles 28 percent protein
- Fresh cold twice water daily
- Spray birds daily with a garden hose set on fine mist

Week 5

- Turn off Infrared Brooder
- Game Bird Starter Feed crumbles 28 percent protein
- Fresh cold water twice daily
- Spray birds daily with a garden hose set on fine mist

Week 6

- Attach anti-picking devices such as “peepers”
- Move birds to an outdoor pen
- Game Bird Starter Feed crumbles 28 percent protein
- Fresh cold water twice daily

Week 7-8

- Game Bird Starter Feed crumbles 28 percent protein
- Fresh cold water twice daily
- Remove dead birds daily

Week 9-18

- Game Bird Grower Feed pellets 22 percent protein, scratch grain last two weeks
- Fresh cold water twice daily
- Remove dead birds daily
- Release pheasants by the close of hunting season on lands open to public hunting

Appendix IV

Estimated Program Expenditures

<u>Brooding House Equipment and Materials:</u>	<u>Dollars</u>
wood shavings, 2 bales @ \$4.85/bale	9.70
16"-18"metal flashing chick guard, 20'	20.00
infrared brooder light holder	9.25
infrared lamp	7.50
quart water fountain	2.48
1 gallon water fountain	4.38
5 gallon water fountain (if needed)	29.99
trough feeder, 24", (2) @ \$5.99 ea.	11.98
tank feeder, 12 lb. with 12" pan	15.99
grit, 50 lb.	6.99
light bulbs, 75 watt (1), 40 watt (1)	2.39
light bulbs, 25 watt ceramic blue (1)	7.39
brooder thermometer	3.95
 <u>Feed:</u>	
game bird starter crumbles, 50 lb. bags, need 100 lbs	\$8.49/50 lb. Bag 16.98
game bird grower pellets, 50 lb. bags, need 200 lbs	\$7.29/50 lb. Bag 29.16
scratch grain 50 lb. bags, need 50 lbs	\$6.29/50 lb. Bag 6.29
 <u>Outdoor Pen Equipment and Materials 25' x 40' (1,000 sq. ft.):</u>	
(12) treated wooden posts 4" x 4" x 8' (\$6.00 ea.)	72.00
polypropylene top netting (2" mesh) 25' x 50'	80.00
hexagonal poultry wire fencing, 1" x 150' x 36", 18 gauge GAW	149.00
hexagonal poultry wire fencing, 1½ " x 150' x 48", 18 gauge GAW	127.00
#9 wire, 150'	21.57
hog rings 1 lb.	2.00
hog ring pliers	11.00
staples 1 lb.	2.00
tank feeders, 300 lbs (1)	136.00
5 gallon waters (2) @ 29.99 ea.	59.98
grit, 50 lb.	6.99
perfect peepers with pins (25)	4.75
 <u>Total Cost*</u>	 \$858.71

* This is the approximate cost to purchase all the materials, equipment, and feed needed to raise 25 pheasants to 18 weeks old the first year of the pheasant rearing and release program. Costs are much less if the cooperator has access to materials and equipment or shares the costs with a friend. The pen should last at least 10 years and the equipment much longer further reducing annual costs.