



July 18, 2022

Dear Montana Fish, Wildlife and Parks Commissioners,

The following letter represents Pheasants Forever's formal position regarding Montana Fish, Wildlife, and Parks' (MTFWP) proposed programmatic pheasant release program. As the nation's largest upland habitat conservation organization whose mission is grounded in science, we believe (1) the pheasant stocking effort is a detriment to the incredible wild bird hunting opportunities in the state of Montana and (2) the program lacks meaningful steps to track recruitment, retention, and reactivation (R3) of Big Sky hunters.

Pheasant Stocking is Futile

Stocking of pen-raised pheasants is not an efficient means to increase wild bird populations, as shown by numerous studies over the past 40 years (see attachment). Additionally, genetic dilution of wild bird stocks and the potential of disease transmission is a real threat. Developing and enhancing habitat, on the other hand, has proven to help increase ring-necked numbers along with other iconic Montana wildlife species.

R3 Efforts Deserve Evaluation

Under the context of the North American Model of Wildlife Conservation, of which hunters have led, Pheasants Forever has made R3 activities a priority. We acknowledge that MTFWP's proposed pheasant release program may contribute to hunter recruitment and retention efforts. However, we believe any R3 benefits of released birds are dependent upon MTFWP strategically coordinating and promoting new hunter opportunities, rather than intending releases to augment wild bird populations. To that end, we strongly encourage the commission to only approve the pheasant release program intended to promote youth hunter recruitment activities once a monitoring mechanism has been identified.

Recommended Next Steps

- *Metrics and Evaluation:* As suggested above, R3 program monitoring should be identified to assess return-on-investment for taxpayers.
- *Funding Considerations:* Pheasants Forever recommends one year of R3 program funding, followed by a reassessment of the program's effectiveness in achieving the state's R3 goals.
- *Habitat Management:* Instead of propagating pen-raised birds at Deer Lodge State Prison, task inmates with habitat improvement projects through the state nursery, or meaningful work on public lands that can contribute to a brighter future.

In closing, Pheasants Forever vehemently opposes the use of funds for the purpose of stocking pheasants for establishing or supplementing existing wild pheasant populations. We also see shortcomings in the proposed release program for R3 purposes and strongly encourage further development of the MTFWP's plan for this intent. Instead, Pheasants Forever would welcome the opportunity to work with MTFWP and the legislature to develop a solution directing these funds toward habitat efforts that would provide more benefits to upland birds, iconic wildlife, and a wider array of Montanans.

If you have any follow-up questions, please do not hesitate to contact me at my email below.

Sincerely,

Al Eiden
Director of Field Operations- West Region
PHEASANTS FOREVER, INC.
email: aeiden@pheasantsforever.org

Literature on Survival of Pen-reared Game Birds Released into the Wild

Idaho (2009). Compared vital rates of two different (pen-reared and wild) ring-necked pheasant stocks and assessed effects of predator control on these pheasants released into current range. Wild (31 males and 112 females) and pen-reared (230 males and 1,059 females) ring-necked pheasants were released in spring into two areas in southern Idaho during 2000–2001 to augment low resident populations. **Wild female survival from March to October was significantly greater than that of pen-reared females in both 2000 (40% vs 4%) and 2001 (43% vs 8%).** During 2001, predators were removed within our study areas. Survival did not increase for either stock of female pheasants after predator removal. **Predator control did not increase the number of hens surviving to reach the nesting season (1 May), nesting rate or nest success.** Wild female pheasants were seven times more likely to survive translocation to 1 October, ten times more likely to survive to the nesting season, eight times more productive, and one-third as expensive per egg hatched than pen-reared females. **Low survival, poor productivity and higher costs of spring-released pen-reared female pheasants strongly suggest that this is an inappropriate management tool for increasing pheasant numbers** (Wildl. Biol. 15:80-88).

Nebraska (2008). The Surrogator™ captive propagation system is purported to significantly increase populations of northern bobwhite and ring-necked pheasants. The units provide food, water, heat, and shelter for chicks until they are released. Releasing pheasant chicks at 4-5 weeks and limiting contact with humans while they are in the Surrogator unit is purported to allow the chicks to retain the survival instincts of wild birds. We evaluated the efficacy of the Surrogator system by evaluating the survival and return-to-bag of pheasant chicks raised in the units placed on 2 shooting preserves and 2 public WMAs. **Survival from release until the start of the pheasant hunting season was low (12%) and annual survival was less than 1%. Of the 170 pheasant chicks placed in the unit at the beginning of the study, 6 (3.5%) were returned to bag** (NE Game & Parks Special Report).

Georgia (2005). Private managed hunting plantation. A total of 1,641 five-week-old wing-tagged pen-reared bobwhites were released using the Surrogate Propagation™ system during June, August and September; and 1,000 12-16 week old leg-banded bobwhites were “dump released” during November. Birds were liberated into intensively managed pine savanna habitat that included supplemental feeding and predator control. A total of 93 birds were harvested of which only 13 were wing banded Surrogator birds. **In this study the Surrogate Propagation™ release system alone did not result in the establishment of a sufficient number of “coveys” to meet the shooting objectives of the landowner. In fact, when the land manager conducted an informal bird dog census during early November, after the Surrogate Propagation™ releases, only five “coveys” were located. At that point the decision was made by the landowner prior to hunting to supplement the population with more dump-released birds than originally planned** (Georgia DNR Special Study).

Kentucky (2007-2009). Study conducted by the Kentucky Department of Fish and Wildlife Resources. In 2007, 294 birds were released using the Surrogate Propagation™ system at a research farm. **The farm was hunted gaggessively during the 2008-09 season, with no birds flushed or harvested. In 2009, KDW released 277 birds at the same site. Covey call counts were conducted on the property during October; with 1 covey detected. In mid-November, 5 hunters using 5 dogs hunted 2 hours with no birds flushed or harvested. At a second release site where no hunting was allowed, no birds were detected during Oct covey call counts, flush counts, or in call back pens.**

South Dakota (1990-92). Released 44 wild and 159 pen-reared hens on public lands with excellent habitat during April to augment natural reproduction. Hens were followed for 181 days, through the nesting season, by radio telemetry. **Only 8% of pen-reared hens survived the nesting season verses 55% of the wild hens. Predation accounted for 90% of pen-reared hen losses.** Pen-reared hens contributed little to nesting, because few lived long enough to hatch a nest. **On average 100 wild hens produced 34 broods, 100 pen reared hens produced 3 broods** (J. Wildl. Manage. 58:501-6).

England (1982-85). Large releases of pen-reared hens in the fall of each year showed that **pen-reared hens were 3x more vulnerable to predation than wild hens, and that wild hens were 4x more productive then pen-reared hens** (J. Wildl. Manage. 52:446-450).

Iowa (1977-79). Released 2,510 hens on 3 study areas to increase populations. Subsequent analysis by winter flush, roadside, and crowing counts showed no increase in local populations. **Populations on the 3 study areas fluctuated similar to populations on nearby areas that received no stocking** (IA P-R Comp. Rpt. 16pp).

Oregon (1972-73). Released 335 pen-reared hens on public land in early April. Nearly all had disappeared within 40-50 days of release. **Only 17 known young were produced from 335 pen-reared hens released. Wild hens (61) on the area produced 378 young during the same time period** (Northwest Sci. 50:222-230).

Nevada (1972-73). Released 60 birds in April to augment natural reproduction followed by radio telemetry for 80 days. Recorded 63% mortality, 30% which occurred in the week following release. Most of the mortality 63% was due to predators. **None of the hens successfully hatched a nest.**

Minnesota (1967). Released 74 hens and cocks in August and followed movements for 28 days by radio telemetry. Sixty birds or **81% died by day 28.** Mortality was mostly predation (55%) (J. Wildl. Manage. 34:267-274).

Illinois (1983-85). Wild bobwhite quail were shown by electrophoresis of blood samples to have greater genetic variability than game farm stock. The lower genetic variability among game farm birds is likely related to inbreeding and make-up of the founding game farm stock. **Low survival and poor fitness of game farm quail may be partially attributed to the loss of genetic diversity.**

Tennessee (2002-03). Genetic assessment of pen-reared Northern Bobwhite releases on Ames Plantation. K. O. Evans, M. D. Smith, L. W. Burger Jr., R. Chambers, and A. E. Houston, and R. Carlisle. In response to low encounter rates with wild northern bobwhites (*Colinus virginianus*; hereafter, bobwhites) during bird dog field trials at Ames Plantation in Tennessee, a large-scale release program of pen-reared bobwhites was implemented in the fall of 2002. To evaluate potential genetic effects of pen-reared releases on wild populations, we monitored survival of pen-reared and wild bobwhites from fall release of pen-reared bobwhites through the breeding season. We used genotypes from 6 polymorphic microsatellite loci to measure genetic diversity and conduct population assignment tests. Genetic diversity, number of alleles, and allelic richness were greatest in the wild, intermediate in the F1 generation, and lowest in the pen-reared populations. In some years, some pen-reared birds will survive to the breeding season and successfully reproduce with wild birds. **Given that pen-reared and pen-reared x wild birds have reduced genetic variability relative to locally adapted wild birds, large-scale releases of pen-reared bobwhites may result in negative impacts on the genetic integrity of resident wild populations.**

Texas (2009-10) Evaluating the use of Surrogators for raising Northern Bobwhites. Dean Ransom, Jr., Research Scientist, Rolling Plains Quail Research Ranch (abstract from RPQRR newsletter (www.quailresearch.org)). In 2009, RPQRR began a study to determine post-release survival of Surrogated bobwhites at two sites in Texas (Palo Pinto and Clay County). We radio-tagged and leg banded approximately 80 5-week old chicks at the Palo Pinto site and approximately 40 chicks at the Clay County site. Most of the tagged birds were dead or lost by the second week post release. In 2010, we tagged 27 birds at a third site in Palo Pinto County, and found similar results, that being extremely high mortality of tagged birds within 2 weeks post-release. Visual observations of bobwhites without transmitters suggest that similar mortality was occurring. **Based on our results to date, landowners utilizing Surrogators to enhance the existing bobwhite population or re-establishing populations in unoccupied ranges should expect poor survival and low success in achieving their goals.**

Compiled by the Iowa Department of Natural Resources and Pheasants Forever – 2010 and 2011.

Further Abstracts of Stocking Studies

Baxter, W. 1984. Nebraska Dept. Game, Fish & Parks. Personal communication. The recovery rate from banded game-farm pheasants released in Nebraska was about 5%.

Berner, A. 1974. Evaluation of F₁ pheasant stocking for repopulation purposes. Minnesota Dept. Nat. Resour. Wildl. Res. Quarterly Rpt. 33:268-274. Two years after being stocked with pheasant chicks at a rate of 36 hens and 6 cocks per section, both treatment and control areas were not significantly different from each other in numbers of pheasants present (as was the case before stocking). Chicks were 8-week-old progeny of wild birds trapped the preceding winter. Four township sized areas were stocked, and a total of 3,000 birds were liberated.

Berner, A. 1975. Evaluation of efforts to increase pheasant numbers in Douglas County by the Viking Sportsmen's Club. Minn. Wildl. Res. Quarterly Rpt. 35:5-14. Roadside counts in 1973 and 1974 show that pheasant populations along stocked treatment routes (Douglas County) are significantly greater than along the control routes (Pope and Grant Counties) both in spring and fall. Significantly more pheasants are released along treatment routes than along controls. The difference has a significant effect on the fall population but not on the breeding population of the treatment area. About 8,000 pheasants were released in fall 1973.

- Besadny, D. C. and F. H. Wagner. 1963.** An evaluation of pheasant stocking through the day-old chick program in Wisconsin. Wisconsin Cons. Dept. Tech. Bull. 28. 84pp. Average production was calculated to be 0.2 to 0.4 young cocks/hen stocked under the day-old-chick program. This low production figure resulted because few hens survived to the breeding season. Thus, there was no long-term benefit to the wild pheasant population from stocked hens. Hens were stocked the previous fall at about 12 weeks of age.
- Burger, G. V. 1964.** Survival of ring-necked pheasants on a Wisconsin shooting preserve. *J. Wildl. Manage.* 28:711-721. Burger released 5,441 ring-necked pheasants over a three year period; of these, 50 percent were harvested, 13 percent were found dead and 8 percent were estimated to have survived until the following spring.
- Cary, D. C. 1983.** The adaptability of Iowa ring-necked pheasants to northern Missouri. Final Rpt., Fed. Aid Proj. W-13-R-36 (1982). Missouri Dept. Cons., Jefferson City. Iowa F₁ ring-necked pheasants have been used successfully to populate areas of favorable habitat in northern Missouri.
- Ellis, J. A. and W. L. Anderson. 1963.** Attempts to establish pheasants in southern Illinois. *J. Wildl. Manage.* 27:225-239. Limiting factors to released pheasants revolved around survival rather than reproduction. Survival of trapped and released wild pheasants was greater than game-farm birds, but less than resident wildlife populations.
- Farris, A., E. Klonghan and R. Nomsen. 1977.** The ring-necked pheasant in Iowa. Iowa Cons. Comm., Des Moines. 147pp. "[From pen-reared, stocked birds] it is not uncommon to find return rates of only 1 or 2% and 10% is about the maximum to be expected under the best conditions." Stocking in southeast Iowa with standard, pen-reared game-farm stock (680 birds) released near Packwood indicated a nearly complete loss by the second year following liberation. In contrast, mass liberation (700-5,000/site) of F₁ stock was successful where adequate habitat existed, but no resident populations were present.
- Feldt, R. D. 1965.** A study to determine the reproductive, longevity, and survival characteristics of mass released ring-necked pheasants in areas without a native population. Indiana Dept. Cons. Wildl. Res. Dept. 26(1):81-94. Feldt released 1,000 to 1,500 game-farm pheasants on each of 4 study areas, largely uninhabited by ring-necks during the spring of Year 1. They reproduced, to what extent is unknown, and a recognizable population was present for the next 2 years of the reporting period. However, these efforts did not produce self-sustaining populations.
- Hartman, F. and W. Shope. 1981.** Mass release of game-farm pheasants into second-class range in Pennsylvania. *Trans. NE Sect. Wildl. Soc.* 38:144-150. Three areas in Pennsylvania's second class pheasant range received stockings of banded and backtagged game-farm pheasants for 2 consecutive years. The stocking rate each year was 25 cocks and 250 hens in the Washington and Drums study areas and 50 cocks and 500 hens in the Sugarloaf study area. Mortality of game-farm pheasants was high, especially the first 2 months after release. Pheasant population levels did not increase, and the contribution of these spring stockings to fall hunting was insignificant. Game farm pheasant mortality exceeded 67% on all areas by 1 month following release, and stockings were not successful.
- Hessler, E., J. R. Tester, D. B. Siniff and M. M. Nelson. 1970.** A biotelemetry study of survival of pen-reared pheasants released in selected habitats. *J. Wildl. Manage.* 34:267-274. Eighty-one percent of 74 radio-equipped pen-reared pheasants released in Minnesota died within 28 days of release (predation was a main limiting factor).
- Jarvis, R. L. and J. Engbring. 1976.** Survival and reproduction of wild and game-farm pheasants in western Oregon. *Northwest Sci.* 50:222-230. Released Oregon game-farm pheasants contributed little to wild populations. Nearly all game-farm hens released in the Willamette Valley disappeared within 40 days following release. Further, only 17 young were known to have been produced by 335 females released during the two year study. Wild hens for the same period (61 birds) produced 378 young.
- Kabat, E., F. M. Kolik, D. R. Thompson and F. F. Wagner. 1955.** Evaluation of stocking breeding hen and immature cock pheasants on Wisconsin public hunting grounds. Wisconsin Cons. Dept. Tech. Wildl. Bull. 11. 58pp. The production estimates show that each spring-released hen pheasant contributed on the average less than one young bird to the fall population on each of the study areas, and only a half a cock or less. About two-thirds of the spring-released hens, therefore, failed to survive to the time when the summer observations were made.
- MacNamara, L. G. and E. L. Kozicky. 1949.** Band returns from male ring-necked pheasants in New Jersey. *J. Wildl. Manage.* 13:286-294. MacNamara and Kozicky found less than one percent return on pen-reared pheasants from the first to the second hunting season, based on band returns of 27,592 birds in New Jersey.

- May, J. F. 1973.** Survival of pen-reared ring-necked pheasants released in southeast Iowa. M.S. Thesis, Iowa State Univ., Ames. 121pp. Fall release of 2,465 F₁ generation pheasants was made in September and October 1970. Birds were concentrated within 2 miles of the release site, but ranged up to 21 miles away. The stocking resulted in a good population within 3 miles of the release site the first year with slight expansion the next year. (Habitat condition on the areas was somewhat favorable – 70% rowcrops, 8% pasture, 6% hay, 16% idle and other uses).
- Morse, W. B. 1951.** Summary of pheasant survival studies. Oregon State Game Comm. Bull. 6(10):4 & 6. “Game farm breeding stock liberated late in the laying season will nest and rear some young, but production is low. (6.5 eggs and .4 young per hen surviving through October.)
- Pheasant Stocking Study Committee. 1961.** An evaluation of and recommendations for ring-necked pheasant artificial stocking programs in Ohio. Ohio Div. Wildl. “Evaluations of spring stocking done in New York state showed that only about one of five spring released hens produced a brood. Over a two-year period 140 hens contributed an estimate 162 young to the fall population, or just slightly more than one young per hen released. It appears that Ohio also realized about one young bird in the fall population for every hen released in the spring.”
- Rybarczyk, W. and J. B. Wooley, Jr. 1983.** Evaluation of supplemental pheasant stocking in three isolated areas of potential habitat. Comp. Rpt., Proj. No. W-115-R, Study No. 1. 16pp. Over 2,500 female F₁ generation pheasants were released at three sites in northern Iowa in October, 1978 and 1979. Winter flush counts, spring crowing and roadside counts, and summer roadside counts were utilized as indices to the pheasant populations at the release sites. Stocking of female F₁ generation progeny did not significantly increase the populations on any of the three release sites. Populations on the release sites fluctuated in the same pattern that occurred with pheasants on surrounding private land where no birds were stocked. August roadside counts on all three study areas were significantly correlated with August roadside routes from the entire Cash Grain Region. Wild cocks were present in sufficient numbers for reproduction without stocking. Pheasant stocking in Iowa is not recommended in the future unless sufficient vacant habitat exists that is spatially removed from existing populations. Possible alternatives to increase pheasant numbers in northern Iowa are proposed.
- Solomon, K. 1984.** South Dakota Dept. Game, Fish & Parks. Personal communication. First winter survival of pen-reared, game-farm pheasants in South Dakota calculated from band returns ranged from 6.4-10%.
- Tripp, L. 1984.** North Dakota Game & Fish Dept. Personal communication. The recovery rate from banded, game-farm pheasants released in North Dakota was about 4%.
- Wilcomb, M. S. 1956.** Studies in wildlife management: Fox populations and food habits in relation to game bird survival, Willamette Valley, Oregon. Agr. Exp. Sta., Oregon State Coll., Tech. Bull. No. 38. 16 pp. Wilcomb, in his study of fox predation on ring-necked pheasants released 95 game-farm birds in 2 releases. The last known survivor of the first release (50 birds) was recovered after 59 days and the last survivor of the second release (45 birds) survived 120 days. The behavior of these birds indicated that they were less fit to survive than pheasants reared in the wild.