

SUMMARY

Tests to determine the production and utilization of various domestic forage crops by deer and wild turkeys were conducted during 1959-60 and 1960-61. The study also included the sampling of insect populations that inhabited these crops during the summer months when plots were being utilized as a source for insect material by the young turkeys.

Results of the study showed the clovers were more productive and were more utilized than were the grasses. The annual grasses were more costly to produce than the perennial grasses.

An analysis of the total digestible proteins and the total digestible nutrients within each forage crop indicated that they were not entirely related to the amounts utilized. The percent dry matter, however, which is often considered as an index to palatability, was closely associated with the amounts consumed. Consequently, it is believed that the differences in the utilization of these plants by deer and wild turkey is due to a combination of factors, which includes the moisture content and perhaps some minerals, as well as the total digestible nutrients available.

A production-cost analysis showed that the annual cost of maintaining clover plots was much less than that required for the production of grasses. Ryegrass, rescue grass, and oats were the most costly of the plants to produce when compared to the amount of forage produced on these plots. The production on these plots, however, was believed to be a little below normal.

Insect population studies indicated that the two white clovers harbored the most insects during the summer months. This is due in part to the large number of aphids, etc., found on the succulent vegetation. Fescue grass, however, was found to support more grasshoppers during August and September.

AN ANALYSIS OF THE DEER-BEAR DAMAGE STAMP FUNDS IN VIRGINIA

BY

JAMES W. ENGLE, JR., *Game Commission Forester,
Virginia Commission of Game and Inland Fisheries*

Wildlife literature is filled with reports of the many problems brought about by the increase in the deer herds in the past 20-30 years. One of these problems is the damage caused by deer and inconvenience caused to man as a result of the increasing damage.

With the exception of those special areas where the purpose is the production of wildlife, most of our wildlife is a by-product of the land. Elk and buffalo which once inhabited our eastern states are practically gone — they would not, or do not fit into our land use in these eastern states today. Deer on the other hand, and bear to a lesser degree, have adapted themselves to our changing environment.

As an outgrowth of our adoption of English common law (1), it is accepted that "wild game is owned by the State in its sovereign capacity in 'trust' for the people of the State." As such the State's ownership is not that of a proprietor, but of a trustee for the benefit of all the people in common. The State's right of trust is to regulate and control the harvests and preservation of game; and the State is not responsible for damages caused by game.

McDowell and Pillsbury (2) collected data from all States in 1957 on those paying costs for crop damage. Those ten states reportedly making payments are shown in Table No. 1.

It is noted in Table 1, that Virginia is one of the ten states paying for wildlife damages. In the case of Virginia, damage payments are made for deer, bear and elk and are administered by the counties.

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TABLE 1
STATES PAYING COSTS FOR CROP DAMAGE
CAUSED BY GAME SPECIES (2)

<i>State</i>	<i>Source of Funds</i>	<i>Remarks</i>
Colorado	State Game Agency	Game only
Massachusetts	State Game Agency	Deer only
New Hampshire	State Game Agency	Game only
Pennsylvania	State Game Agency	Bear only
Utah	State Game Agency	Big game and upland birds
Vermont	State Game Agency	Deer and bear
Virginia	County funds (in some counties)	Deer and bear
Washington	State Game Agency	Game animals
Wisconsin	Legislative appropriation	Deer and bear
Wyoming	State Game Agency	Game only

“Virginia counties (3) act under powers delegated by the State. Counties serve a dual role; they serve as agents of the State and as units of local legislative and administrative bodies enjoying a degree of autonomy. . . . As legislative and administrative bodies, they pass and enforce ordinances.”

The enabling Act of the 1956 and 1960 General Assemblies that at present permits 33 of our 96 counties the privilege of having a “deer-bear damage stamp” is presented in the appendix (4). Once permission is granted by the General Assembly the County Board of Supervisors must adopt an ordinance requiring all hunters of deer and bear to purchase the stamp *if the county* wants the law to be in effect in its County. Those counties having this permission are shown in Figure 1. Those counties that have adopted the ordinance are shown in Figure 2.

The damage stamp is similar to the “Migratory Bird Hunting Stamp” and is used and enforced by game wardens in a similar manner.

The earliest of these “damage stamps” was authorized in 1942 when Bath, Rockbridge and Highland counties began to pay landowners and farmers for the damage to crops and livestock caused by deer and bear. The stamp is required of the landowner hunting on his own land, even though in Virginia the landowner is not required to have a hunting license on his own land.

Following the lead of these counties, others followed suit until 14 counties required a damage stamp by 1961. The damage stamps were valid only in the county issued, and could be purchased only from the Clerk of the Court in that county.

By 1961, the situation was briefly this:

Fourteen counties required the one dollar (\$1.00) damage stamp of all deer and bear hunters in the county and two of the 14 counties included elk. Each county had its individual county stamp. Stamps were sold only by the Clerks of the Circuit Court. In 13 counties, the Clerk was entitled to keep a fee of ten cents from each stamp sold. In one county the Clerk could not receive any fee. The 14 counties, paid for damages caused by deer and bear to crops or livestock. Two counties paid for damages caused by elk. In most cases, the damages had to exceed \$10.00 to be a claim. Two counties would pay for damages to livestock caused by hunters. Three counties required non-residents of the State to pay \$5.00 for the stamp. The counties have paid for deer damages to corn, wheat, rye, clover, alfalfa, peach orchards, soybeans, gardens and pasture. It is interesting to note that one county refused to pay for damages to apple orchards because the apples are the crop — not the trees. Payments have been made for bear damage to sheep, cattle, hogs and bee hives.

The total amount that could be paid out in one year was generally limited to the net amount accrued in the special fund from the sale of such stamps in the county during the license year in which the damage occurred.

The value of the damages is determined by the game warden and the landowners. In event they cannot agree, an arbitration board of three appointed in the usual fashion determines the amount of damages, and their decision is final and binding.

for winter feeding, employment of part-time wardens in the fall months, purchase of stationery for use of the game wardens, expenses in connection with establishing and planting game food plots by 4-H and F.F.A. Club members, to construct hunter access roads on National Forest lands, to purchase raccoons, rabbits and quail for restocking. Other uses included the purchase of Chinese Chestnut seedlings, purchase of portable radios for game warden use, telephone line construction to Warden's Lodge, purchase of a forest fire warden's truck, to pay clerical help at big game checking stations and tuition for teachers to Conservation Workshop. One county has been authorized to spend up to \$5,000.00 from its fund to purchase up to 100 acres of land for a fish pond site. To date this has not been done.

The sale of damage stamps has increased every year until 1962, when a decrease was noted. (See Table No. 2.)

It might be worth while to note the importance of deer hunting on the economic and social aspect of some of these western counties. Bath County sold 9,069 stamps in 1962; the total population in the County is less than 5,000.

In the 1962 session of the Virginia General Assembly, all except one of the previous acts in connection with the damage stamps were repealed and a new act passed to combine all counties, except two, under one act. The two acts now in existence are practically identical. The 33 counties permitted to have a damage stamp are shown in Figure 1. Those 14 counties adopting the required ordinances are shown in Figure 2.

Basically, the requirements of the new act are the same as all the old ones, with the following exceptions: Damage claims may be applied against the past three years' accumulation of funds. All Clerks are entitled to a fee of ten cents for each stamp sold. The money in the fund will be used for "payment of damages to crops, fruit trees, livestock or farm equipment by deer, bear or big game hunters (4)." Surplus money "shall be earmarked for conservation, restoration, protection of wildlife and preventing damage by wildlife to property in said County under the direction of the Board of Supervisors and in cooperation with the Commission of Game and Inland Fisheries (4)." One new phase was added that has been received with mixed feelings. It is: "No claim for damages shall be paid to any person who shall prohibit hunting on his land by the general public." Three counties still require \$5.00 for non-residents.

In discussing this problem with the Game Commission's Wardens, the following points of interest were observed.

One county has not adopted the new ordinance and still is acting under the old one. That portion of the act wherein no such claim for damages shall be paid to any person who shall prohibit hunting on his land by the general public has resulted in some counties not adopting the ordinance. The amount of opposition to this varies with the counties; there are some that like it, yet in one county the Farm Bureau is actively protesting it. One county makes payments for damages on land that is signed with posters, contending that if the hunter requests permission from the landowner to hunt on his land (which he is required to do by law) and the landowner gives permission, he can have his land "posted" against hunting but at the same time allow "public hunting." This same county published in its ordinance, "Nor shall any claim be paid for crop damage on public owned land," yet, they paid a tenant for deer damage on Game Commission owned land. The law requires game wardens to enforce the law, and administer payments, yet the Game Commission does not receive any revenue from the stamp sales. Some counties sell stamps for other counties, but this is a matter of convenience the clerks render for their constituents. The fact that landowners are required to have a stamp when hunting on their lands has kept some counties from adopting the ordinance.

Some benefits to wildlife management have been derived. An accurate count on the number of deer hunters can be obtained and this information has *been of much value over the years*. For example, in one county a deer hunter success of 21% has been observed. Money has been spent for habitat improvement on National Forest lands, young people have received assistance in making wildlife plantings or

TABLE 2
VIRGINIA'S DEER-BEAR-DAMAGE STAMP FUND F.Y. 1961 AND 1962

County	Damage Payments		Stamp Sales		Deer Kill		Balance on Hand June 30, 1963
	1961	1962 ¹	1961	1962	1961	1962	
Bath	\$ 1,135.00	\$1,115.00	\$ 8,335.00	\$ 9,069.00	1,671	1,185	\$ 19,798.73
Bland ^a	775.00	732.50	1,700.00	2,711.00	84	307	535.07
Botetourt ^a	402.50	1,833.03	4,656.00	4,974.00	593	470	23,422.93
Craig	632.00	55.00	5,778.00	5,676.00	973	497	6,842.75
Giles	492.00 ^b	492.00	3,460.00	3,855.00	550	474	3,101.47
Grayson	3,150.11	517.90	4,789.00	4,558.00	739	378	4,300.55
Highland	1,359.00	421.00	3,208.00	3,512.00	668	510	1,976.75
Patrick ^d		499.00 ^b		2,110.00	112	258	1,360.00
Rockbridge ^a	578.00	330.00	4,398.00	4,433.00	584	448	17,669.00
Smyth ^a	5,331.00	1,079.00	8,329.00	7,079.00	1,089	417	6,371.80
Tazewell	694.00	198.00	1,196.00	1,905.00	39	165	3,714.35
Warren ^{a, c}	667.60		2,722.00		488	275	3,537.08
Washington ^a	518.00	181.40	2,660.00	2,322.00	110	171	5,375.98
Wise	105.00	None	2,494.00	1,596.00	176	67	2,174.34
Wythe ^a	705.00	295.00	3,252.00	3,526.00	504	290	3,667.19
	\$16,544.21	\$7,249.83	\$62,633.00	\$57,316.00	8,380	5,912	\$108,848.98

¹ All 1962 damage claims not yet paid.

^a Gross sales estimated from net sale figures.

^b Estimated.

^c Dropped after 1961 season.

^d First required 1962.

J. W. Engle, Jr.
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prizes have been provided for their planting contests. Teachers have been provided with tuition grants to attend Conservation Workshops. Game Wardens have been able to obtain extra help during their busy seasons of the year and have been aided by communications in areas where none existed. These activities appear to be good.

Some aspects of the damage stamp fund are not so creditable. The purchasing of quail, rabbits and raccoons for restocking is not an accepted modern-day wildlife management practice. The inconvenience of the hunter in purchasing the required stamp is regrettable, yet is doubtful if that reduces hunting in the county. By its very nature, the administration of the fund could be subject to abuse, although there is no evidence of this to date.

The payment of damages is not an accepted practice of wildlife management. The sum of \$103,848.98 in surplus funds that has accumulated in the past 21 years in fifteen counties may in itself be the best proof that payment of damages is not necessary. It may be the biggest hazard to the continuance of the practice!

LITERATURE CITED

- (1) ——— Wild Game — its legal status. Du Pont publication 50 pp.
- (2) McDowell, Robert D. and Pillsbury, Harold W. 1949. Wildlife Damage to Crops in the United States. J. Wildl. Mgmt. 23(2): 240-141.
- (3) ——— 1955. Virginia's Government, Virginia State Chamber of Commerce, Richmond, Virginia, 148 pp.
- (4) ——— 1963. Virginia Game, Inland Fish and Boat Laws, Commission of Game and Inland Fisheries, Richmond, Virginia, 134 pp.

APPENDIX

Local Legislative Acts Part 3

Special Stamps to Hunt Bear and Deer

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| <p>Sec.
L3-1. Stamps for bear and deer in certain counties.</p> | <p>Sec.
L3-2. Special stamps to hunt deer in Charles City and New Kent Counties.</p> |
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- P L3-1. Stamps for bear and deer in certain counties.

1. Certain counties authorized to adopt provisions of act.—The governing body of any of the following counties may by appropriate ordinance enact and adopt for such county the provisions of this act and at any time subsequent thereto may repeal any such ordinance so passed: Albemarle, Amherst, Bath, Bedford, Bland, Botetourt, Carroll, Clarke, Craig, Floyd, Franklin, Frederick, Giles, Grayson, Highland, Loudoun, Madison, Nelson, Page, Patrick, Rappahannock, Rockbridge, Rockingham, Roanoke, Shenandoah, Smyth, Tazewell, Warren, Washington, Wise and Wythe; but this act shall not be effective in any county unless and until such an ordinance is passed.

2. Stamps required; fee; affixing stamps and cancelling; use and disposition of funds.—It shall be unlawful for any person to hunt bear and deer in any such county without first having obtained a special stamp the fee for which shall be one dollar annually, provided that ordinances adopted pursuant to this act by the counties of Grayson Smyth and Wythe may prescribe any fee for such special stamp for non-residents of the Commonwealth not to exceed five dollars. The stamp shall be adhesively affixed to the back of the current season's hunting license issued such person who shall cancel the same with his initials in ink. The money received from the sale of such special stamps shall be paid into the county treasury to the credit of a special fund and identified by the year collected, and the net amount thereof, or so much as is necessary, shall be used for the payment of damages to crops, fruit trees, livestock or farm equipment by deer, bear or big game hunters in the county whenever such damage amounts to ten dollars or more, provided, however, that in any case in which such damage was caused by hunters, and the hunter be known, the claimant shall

have first proceeded in a civil action against such hunter. Upon payment of any such claim, the county shall be subrogated to the rights of the claimant against such hunter. Any payment under the provisions of this act shall be limited to the net amount accruing in the special fund from sales of such stamps for the county during the three preceding years in which the damage occurs. Any surplus remaining in the fund, which surplus has been in the fund more than three years, shall be earmarked for conservation, restoration, protection of wildlife and preventing damage by wildlife to property in said county under the direction of the board of supervisors and in cooperation with the Commission of Game and Inland Fisheries. Provided, however, that any county board of supervisors may transfer funds from such special fund before the end of three years for the purposes set forth above, so long as such board of supervisors appropriates sufficient money to satisfy claims which cannot be met by reason of such transferral. Moneys heretofore accumulated in such special fund prior to the effective date of this act may be transferred at any time for the purposes set forth hereinabove. Any person suffering such damage shall report the same to the game warden of the county whose duty it shall be to investigate the same at once. The claim for damage shall be filed in duplicate, under oath, on forms furnished by the clerk of the county. If the claimant and game warden agree as to the amount of damage, the game warden shall approve the claim and forward it to the county board of supervisors, who may approve same and order payment thereof. If no such agreement is reached between them, by and with the approval of the board of supervisors, the claim may be submitted to the arbitration of three persons in the customary manner and the award of the arbitrators shall be final and binding. Provided, however, that no such claim for damages shall be paid to any person who shall prohibit hunting on his land by the general public.

Provided, however, in Grayson and Smyth counties if the claimant and the game warden agree as to the amount of damage and such amount does not exceed three hundred dollars, the game warden shall approve the claim and forward it to the treasurer of the county for payment with the approval of the board of supervisors, and if such amount agreed upon exceeds three hundred dollars, or if no such agreement can be reached between them, and the claimant makes application to the circuit court of the county in which the damage occurred, the judge of such court shall appoint a committee of three qualified, disinterested persons, who shall fix the damages in the customary manner, and the award of the committee shall be final and binding.

3. Stamps obtained from circuit court clerks; fee for issuing.—The special stamps herein provided for may be obtained from the clerks of the circuit courts of the counties listed in P1 of this act who shall receive a fee of ten cents for each stamp issued.

4. Supplying stamps to clerks of court; return of unsold stamps; remission of money collected.—The clerk of the circuit court of each of the counties listed in P1 of this act may supply the clerk of the circuit court of each other such county, prior to July one of each year, with a supply of stamps for his county. Each such clerk shall annually after the close of the season for hunting deer or bear but not later than June thirty, return the unsold stamps to the clerks from whom received, and remit to each such clerk all moneys collected for sale of stamps for hunting in his county, less the fee of ten cents each for selling the same. The clerk may designate persons in his county as agents for the purpose of selling such stamps.

5. Penalty.—Any person violating the provisions of this act shall be guilty of a misdemeanor and upon conviction punished accordingly. (1942, cc. 462, 472; 1944, c. 357; 1946, c. 32; 1948, cc. 294, 307; 1950, cc. 87, 208, 484; 1952, cc. 86, 105, 138, 356, 361, 600; 1954, cc. 28, 121; 1956, cc. 50, 174, 291; 1958, c. 311; 1962, c. 420.)
P L3-2. Special stamps to hunt deer in Charles City and New Kent Counties.

1. Special stamps required; fee; affixing and cancelling stamps.—It shall be unlawful for any person to hunt deer in the counties of New Kent and Charles City without first having obtained a special stamp as

herein provided, the fee therefor being one dollar annually. The stamp shall be adhesively affixed to the back of the current season's hunting license issued such person who shall cancel the same with his initials in ink.

2. Receipts credited to special fund; use and disposition of fund.—The money received from the sale of such special stamp shall be paid to the county treasurer to the credit of a special fund, and the net amount thereof, or so much as is necessary, shall be used for the payment of damages to crops by deer, whenever the damage amounts to ten dollars or more. Any person suffering such damage shall report it promptly to the game warden of the county, whose duty it is to investigate the same at once. The governing body of the county is authorized to provide for the ascertainment of damages in such manner as it deems proper. All claims are to be paid at the regular December meeting of the Board of Supervisors, in the event there are not sufficient funds in said special fund, then all claims will be paid pro rata. Any funds remaining in the treasury, shall remain in the special fund to be used for the conservation of wild life under direction of the governing body.

3.8 Stamps obtained from clerk of court; fee for issuing; penalty; effect on other laws.—The special stamp herein provided for shall be obtained from the clerk of the circuit court of the county or his representative who shall receive from the special fund a fee of ten cents for each stamp so issued. Any person violating the provisions of this act shall be guilty of a misdemeanor and upon conviction punished accordingly. The provisions of this act shall supersede any other provision of law imposing similar license requirements insofar as the same shall be applicable to such counties.

4. Adoption of act by county.—This act shall not take effect and until it shall have been adopted and made effective by the governing body of the county. (1956, c. 288.)

STATUS OF THE RED JUNGLEFOWL IN THE SOUTHEASTERN STATES

BY

JAMES E. KEELER

Alabama Department of Conservation

The first Red Junglefowl imported from India as a part of the Foreign Game Introduction Program were received by the states of Alabama, Oklahoma, and Virginia in 1960. Since that time, four other states, Florida, Kentucky, South Carolina, and Tennessee, have initiated work with this species in the Southeastern States.

Data received from these states indicates that success in rearing young junglefowl at the various game farms varies from poor to excellent. Undoubtedly, we in Alabama have had the worst success in trying to raise junglefowl than any of the other states in the past two years. In 1962, only 62 birds were raised in Alabama from 362 birds hatched while in 1963, approximately 75 were reared from 523 birds hatched. This loss was attributed to the fungal disease "Thrush." Most of the birds died when from one to two weeks of age. On the other hand, Oklahoma reports that "egg production for the species is excellent and survival high." Oklahoma raised 762 Junglefowl this year. It is now suspected that the high mortality rate in Alabama junglefowl may stem from some disease originating in the breeding stock. This is being investigated by the Purina Pathology Laboratory, St. Louis, Missouri.

Over 1,000 junglefowl have been raised in the Southeastern States since 1961, with Oklahoma being the most successful. Four states have made trial liberations. Alabama has made two small releases and Oklahoma has made six. Only one large release has been made and this was made in McCurtain County, Oklahoma on February 1, 1963