

Five of the seven losses attributed to unknown causes may have been to exposure since they occurred within a day after the young left the nest.

The cost per rabbit over the two (2) year period was estimated from Pen 1 in 1955 and Pen 6 in 1956. These pens had one (1) male and three (3) females, and one (1) male and four (4) females respectively.

<i>1955 Costs</i>	<i>1956 Costs</i>
Fencing\$ 39.75	Pellets\$ 8.68
Construction 22.50	Removal and feeding.... 50.00
Pellets 6.50	\$58.68
Removal, checking feed 100.00	\$168.73 Young removed 134
<u> </u>	58.68 Cost per rabbit \$1.70
\$168.73	<u> </u>
	\$227.41

The 50' x 50' size pen will be used exclusively in 1957 since after two years experiments it is considered the best pen size. The least expense is involved in this size and more rabbits per unit space can be produced. Sex ratios planned are one (1) male to three (3), four (4) and five (5) females. One (1) male was capable of mating four (4) females in 1956, and 1957 will prove if five (5) females can be serviced for an entire season.

If no disease losses occur in 1957 after using a pen for three years, the cost per rabbit should be somewhat less than \$1.00.

PANEL DISCUSSION—PROBLEMS IN DOVE MANAGEMENT

Chairman: HAROLD S. PETERS, *U. S. Fish and Wildlife Service*; ROLLAND HANDLEY, *Mississippi Game and Fish Commission*; JOHN NEWSOM, *Louisiana Wild Life and Fisheries Commission*; SCOTT OVERTON, *Florida Game and Fresh Water Fish Commission*; and LEONARD E. FOOTE, *Wildlife Management Institute*.

The Chairman opened the panel with a general statement of present status of Mourning Dove investigations in the United States and mention of the need for continuation of four major phases of the program: annual call count, random road counts in late summer and fall for production and migrations information, nationwide dove nestling banding program, and hunter bag checks to determine success, percentage of juveniles, and number of adults feeding dependent nestlings. The widespread nestling banding program, combined with other banding, has resulted in the largest number of doves being banded in one year, an expected total of 40,000. Further studies of dove breeding population and production are needed in the important vegetative habitats and land use types throughout the country. These should be tied in with call count stations, as Lowe (*Jour. Wildl. Mgt.*, 20(4) :428-433, 1956) has done in northern Georgia.

Handley reported on the nestling banding programs in Mississippi where 1,493 were banded this summer. An intensive program of banding was conducted in the Parchman area where 745 nestlings were banded on about 160 acres of peach orchards.

Newsom spoke on the expanded banding program of Louisiana during the past three years, and of plans for experimental banding in coastal Louisiana. His State may be leading in total number of doves banded, with Texas and Florida also in the 20,000 to 25,000 class.

Overton spoke on Florida's post-season mail questionnaire on hunter kill and of the possibility of setting up a region-wide program to secure comparable information of the kill in each state.

Foote gave a summary of the Comprehensive Dove Report just completed for the Southeastern directors. It analyzes results of all dove studies from 1948 to 1956, with particular emphasis on the results of the Southeastern Coopera-

tive Dove Study from 1948 to 1952. The report will be published for the use of administrators and technicians after a review by a committee of the South-eastern Association with Foote and Peters. The need for additional data on breeding populations and production in distinct vegetative habitats was emphasized.

GENERAL GAME SESSION

GAME MANAGEMENT PRACTICES ON STRIP MINED LAND

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INTRODUCTION

This paper is being presented with the hope that some of the ideas and theories set forth will act as a guide to game technicians who will be confronted with wildlife management on strip mined lands. Several states throughout the southeast have areas that are being affected by strip mining operations, and it is believed that much of this so-called "waste" land can be utilized by game management personnel.

The statistics used in this paper are based almost entirely on conditions that exist in Kentucky coal fields. However, the basic problem of reclaiming this land for wildlife is considered to be universal in nature. The data used in this paper were obtained by the author during the period 1952-1956. This material should be classified as independent investigations, since no formal project or study was set up to gather this information. Prior to 1956 the author was employed as a wildlife biologist in the western coal fields.

For those who are not familiar with mining activities, the term strip mining refers to the recovery of a mineral from an open pit. The open pit (strip mining) method of mining consists of removal of the overlying soil and rock material, and exposing the desired mineral. The exact method in removing this overburden will vary, depending upon the mineral being removed.

The topography of the resulting spoil material is one of a series of ridges and ravines with relatively steep short slopes. The slopes will range from 10 to 60 degrees and about 50 to 80 feet in length. The height of the ridges, measured from the adjoining valleys, will vary from 20 to 50 feet in most areas.

Severity of the reclamation problem will depend upon the physical and chemical nature of the soil and rock which overlays the coal strata. The nature and properties of this spoil material will vary between coal fields. In fact, it can and does vary within a few hundred yards within the same spoil pile. Vegetation on this spoil material will generally be of two types. It will either be volunteer native vegetation, or vegetation created by seeding and planting. Reclamation of these lands by seeding and planting can be regulated to benefit wildlife, produce forest products, or provide recreational areas.

Since 1948, approximately 15,000 acres of spoil material have been formed in Kentucky coal fields. Through the progressive efforts of the strip mine operators, and the Kentucky Reclamation Association, 6,984 acres of this total have been reclaimed. (KRA was formed in 1948.) On these reclaimed acres, approximately 4,290,949 trees and shrubs have been planted and 97,524 pounds of seed sown. As would be expected, the stage of plant succession varies from one-year-old seedlings to eight-year-old trees.

The first concerted use of game food shrubs on Kentucky spoil banks began in 1953. Since that time approximately 270,000 game food and cover plants have been utilized on strip mined lands. This utilization of game food plants on spoil banks was brought about through cooperation with the Kentucky Department of Fish and Wildlife Resources.