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PROGRAM PLANNING FOR EXTENSION WILDLIFE DAMAGE CONTROL--BIRD DAMAGE

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INTRODUCTION

Bird damage problems occur throughout the Great Plains States, and these problems often confront extension personnel. Knowledge of what problems occur in the various states and how they are handled **may help** us better pool efforts toward finding solutions. Shared information may also show patterns that exist or new problems emerging that might require increased attention in the future.

A questionnaire was used to explore the program planning and other extension activities related to bird damage control. This paper reports the results of the questionnaire. As you consider this information, realize that it is based on the opinions and best judgment of respondents. These views are likely affected by the individual's extension specialty area, experiences with bird damage problems, and time spent with these problems. An individual with 25% of job time devoted to bird damage would probably view bird problems differently than an individual devoting only 5%. An extension wildlife specialist might view them differently than an extension entomologist (entomologists are often asked to handle vertebrate pest problems when a wildlife specialist is not available). Although the information represents only opinions and best judgments, it does provide useful insights into extension work with bird damage problems in the Great Plains.

THE QUESTIONNAIRE

The questionnaire was 3 pages in length and asked 11 questions. Questions 1-3 asked the proportion of job time related to various extension activities. Question 4 rated the frequency various methods were used to contact audiences about bird damage problems (1-infrequently, 2-occasionally, 3-frequently). Question 5 rated various bird species according to the amount of damage caused and the associated effort devoted to each (0-none, 1-low, 2-moderate, 3-high). **Question 6** rated the importance of various types of damage problems and audience contacts associated with starlings (*Sturnus vulgaris*), blackbirds {red-winged blackbird (*Agelaius phoeniceus*), brown-headed cowbird (*Molothrus ater*), and common grackle (*Quiscalus quiscula*)}, house sparrows (*Passer domesticus*), and pigeons (*Columba livia*). Rating categories were the same as in question 5. Questions 7-8 asked whether work plans or annual goals were used with bird damage problems; question 9 rated the importance of various techniques and information sources used in planning (0-no importance, 1-low, 2-moderate, 3-high). Question 10 related to evaluation of educational efforts in bird damage, and question 11 was blank space for comments.

The questionnaire was mailed to 17 individuals in extension in the 10 Great Plains States. The 17 individuals included all wildlife specialists; in states where a wildlife specialist was not available, the questionnaire was mailed to the state extension director.

RESULTS

Thirteen individuals from 9 states responded to the questionnaire. Of these, 9 individuals from 7 states indicated some involvement in bird damage control (Table 1).

Job Time Allocations

The proportion of job time allocated to extension averaged 96.7% with a range of 80-100%; remaining time allocations included teaching and research (Table 2). Note that teaching and research in the area of wildlife damage (includes bird damage) was minimal. Efforts in bird, damage covered a wide range of 1-25% of job activities.

Audience Contact Methods

Phone calls were the most frequently used method of contacting audiences in relation to bird damage problems (Fig. 1). Correspondence and individual contacts were the next most frequently used. The frequency of use for most contact methods covered a wide range among respondents; this reflects the fact individuals may vary considerably in the contact methods most frequently used.

Problem Species and Associated Efforts

The greatest overall damage problems and associated extension efforts were attributed to starlings, blackbirds, house sparrows, and pigeons (Fig. 2). Woodpecker damage also was rated fairly high; problems usually caused by woodpeckers were pounding or drilling on building walls. Waterfowl problems were rated somewhat higher than the associated extension efforts; this damage is apparently handled by the U.S. Fish and Wildlife Service. Damage problems associated with other bird species were not as widespread through the Great Plains; however, critical problems occurred at times in some locations.

Major Problems and Audience Contacts

Starlings and blackbirds were reported as problems primarily at confined livestock facilities and at roosts (Figs. 3 and 4). Starlings also caused problems at grain storage areas and were considered a hazard at airports. Blackbird damage included consumption of ripening or mature grain crops. Damage to sunflowers was reported as a considerable problem in North Dakota and one that may become worse as sunflower acreages increase. South Dakota data collected during 1979 showed blackbird damage to sunflowers was very small, even though sunflower acreage had increased there. Blackbird damage to small grains (milo, oats, wheat) was reported by some states, and Texas reported damage to rice crops.

Table 1. Great Plains extension personnel involved in bird damage control.

Great Plains state	No. respondents involved in bird damage
Colorado	1
Kansas	2
Montana	0
Nebraska	1
New Mexico	
North Dakota	1
Oklahoma	1
South Dakota	1
Texas	
Wyoming	0

Total involved: 7 states, 9 individuals

Table 2. Average percentage of job time in various activities
(N=9 individuals).

Job activity	Average percentage	Range
Extension	96.7	80-100
Wildlife Damage	{ Extension 46.6 Research 4.4 Teaching 1.7	4-100 2-20 0-10
Bird Damage	11.1	1-25

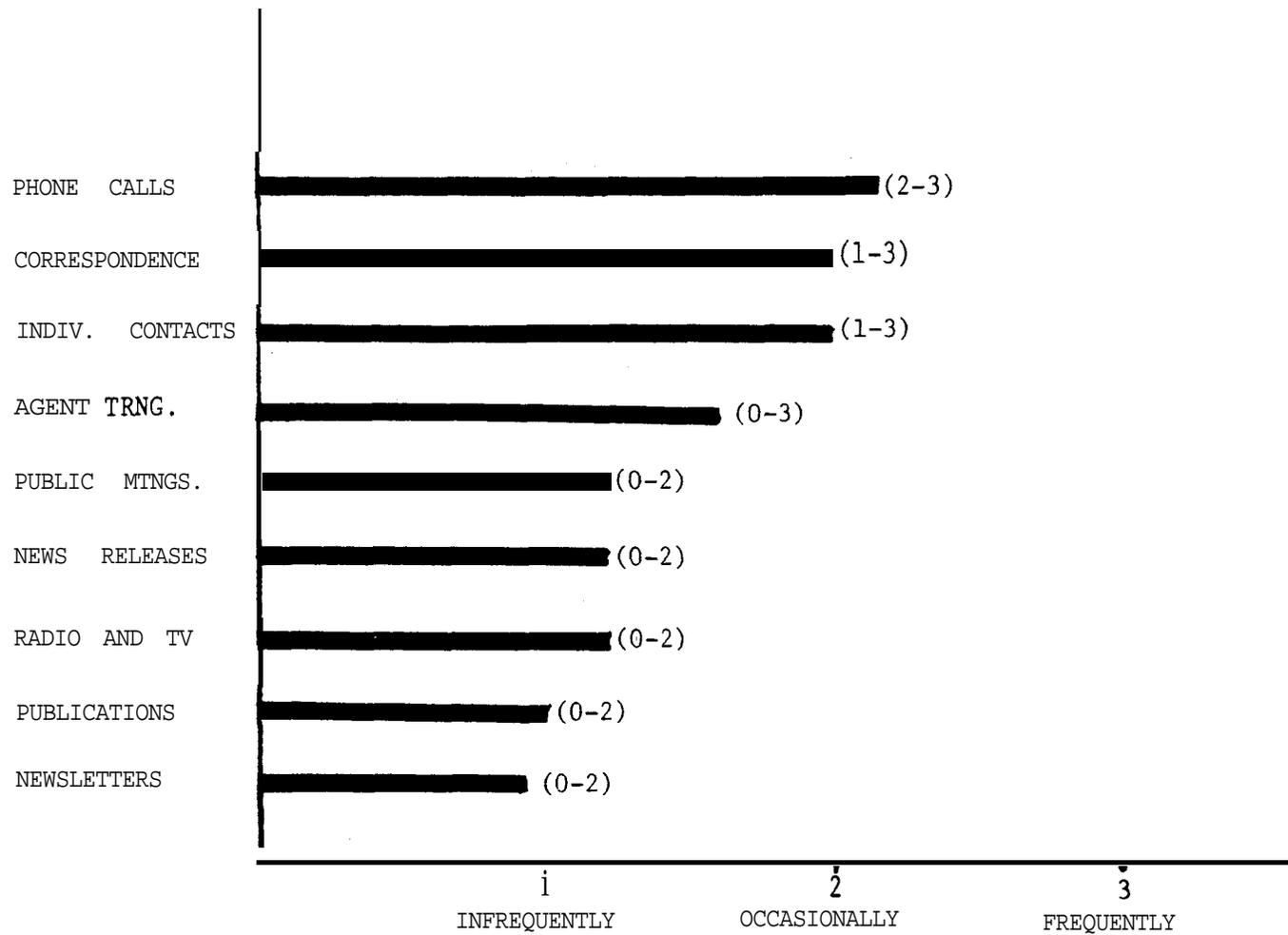


Fig. 1. Average frequency of use for various contact methods used in extension bird damage control in the Great Plains. Range in (j.

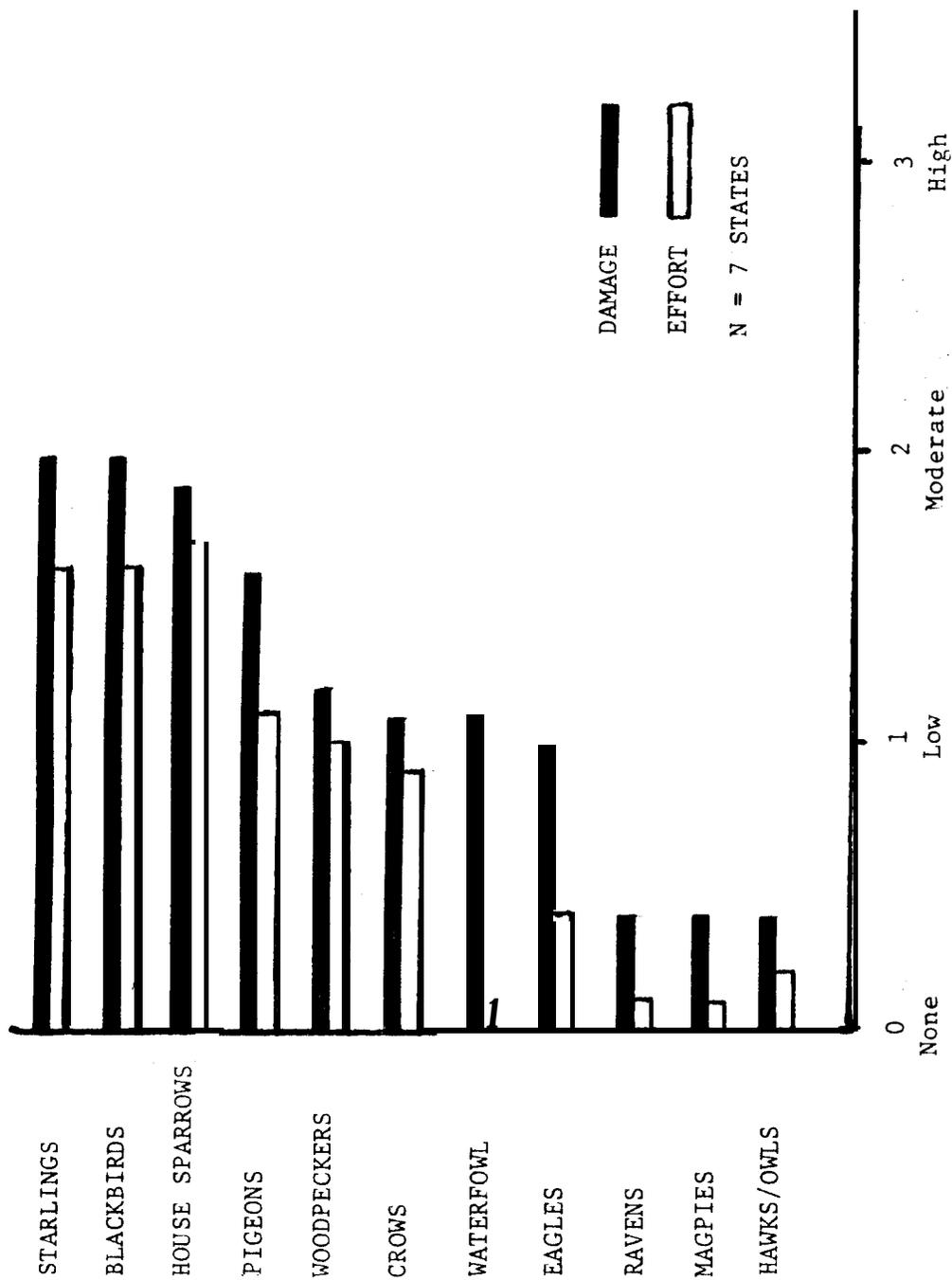


Fig. 2 Average amounts of bird damage and associated extension efforts in the Great Plains.

Primary audience contacts associated with starling and blackbird damage were county extension agents and farmers (Figs. 3 and 4). Other audiences included home owners and municipalities.

Primary damage problems reported for house sparrows were associated with roosting and activities at grain storage areas and confined livestock facilities (Fig. 5). House sparrows also consumed some **small** grain crops, particularly milo. The primary audiences involved were home owners, county extension agents, and farmers.

Pigeon problems reported were associated mainly with roosting and activities at grain storage areas (Fig. 6). In some locations, they also were encountered as a problem at confined livestock facilities and as a hazard at airports. The primary audience contacts were **county** extension agents, municipalities, and home owners.

Planning and Evaluation

Four of the 9 respondents indicated they used formal work plans or other planning materials related specifically to bird damage control. Four set annual goals in the area, and 3 evaluated their educational efforts (Table 3). Informal feedback was the primary evaluation method used, followed by interviews and surveys.

The primary information sources or techniques used in planning were county extension agent inputs and field experience. Inputs from various agencies and surveys were rated as next in importance for planning followed by other methods (Fig. 7).

One particular problem that perhaps should be considered in planning was pointed out by Bob Henderson of Kansas. Purchasing equipment for one-time use to control a wildlife damage problem is often difficult for individuals to justify financially. State cooperative extension services should consider having such equipment available for loan or rent.

DISCUSSION

There is variation in the bird damage problems confronting extension personnel in the various Great Plains States and in the way the problems are handled. Some variability in approach is necessary in order to handle different problems in different areas. However, there were some common pest birds, particularly starlings, blackbirds, house sparrows, and pigeons, that caused problems in all states which responded. The primary problems reported for these 4 bird pests were at roosting sites, confined livestock facilities, and grain storage areas.

Large starling or blackbird roosts located near people are objectionable because of noise and aesthetics as well as the odor and filth associated with bird droppings. House sparrows cause similar problems by roosting on or near residences, farm buildings or other structures. Pigeon roosting is a problem on window sills, ledges, roofs, or other parts of buildings and structures.

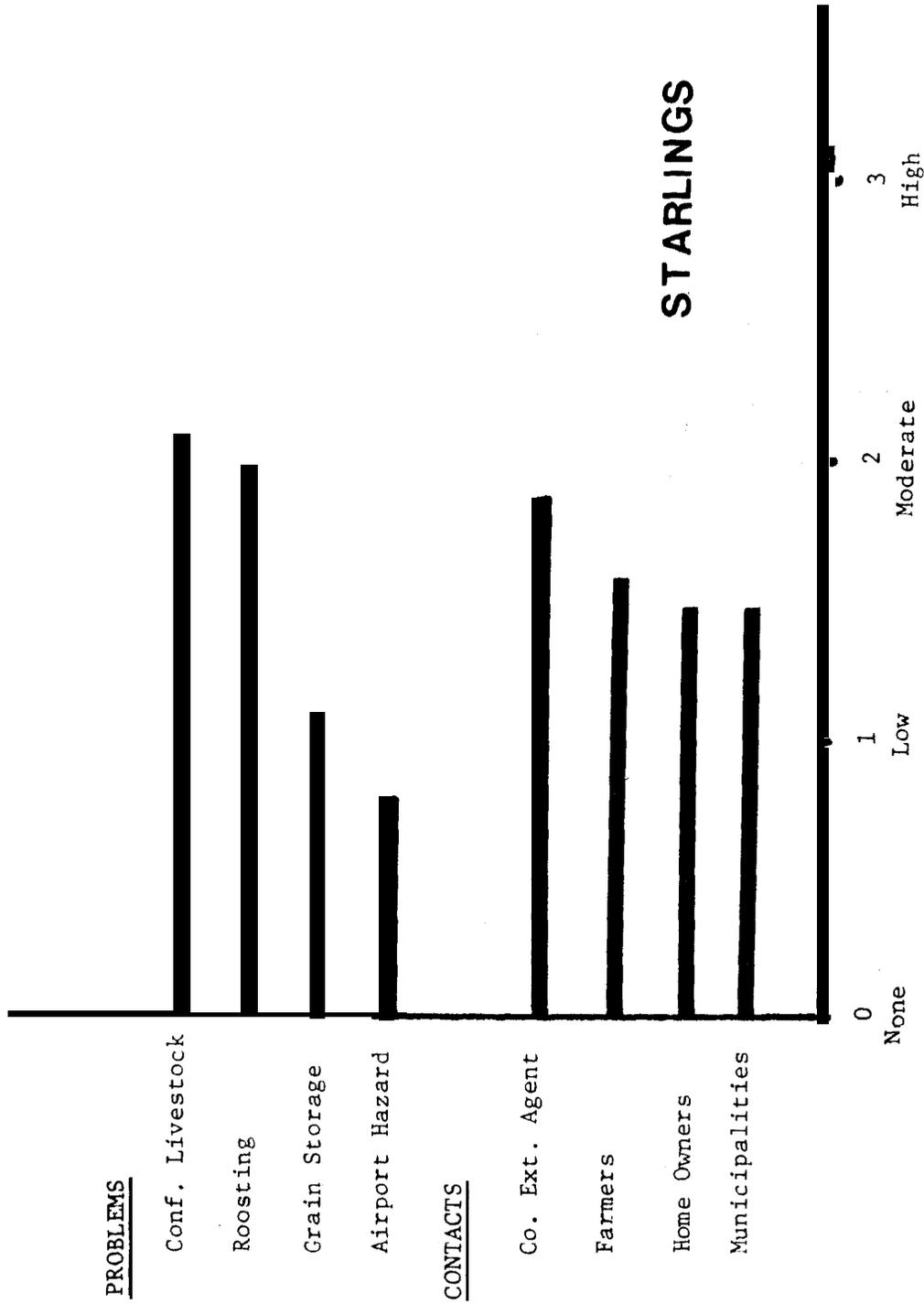


Fig. 3. Average importance of starling damage problems and associated extension audience contacts in the Great Plains.

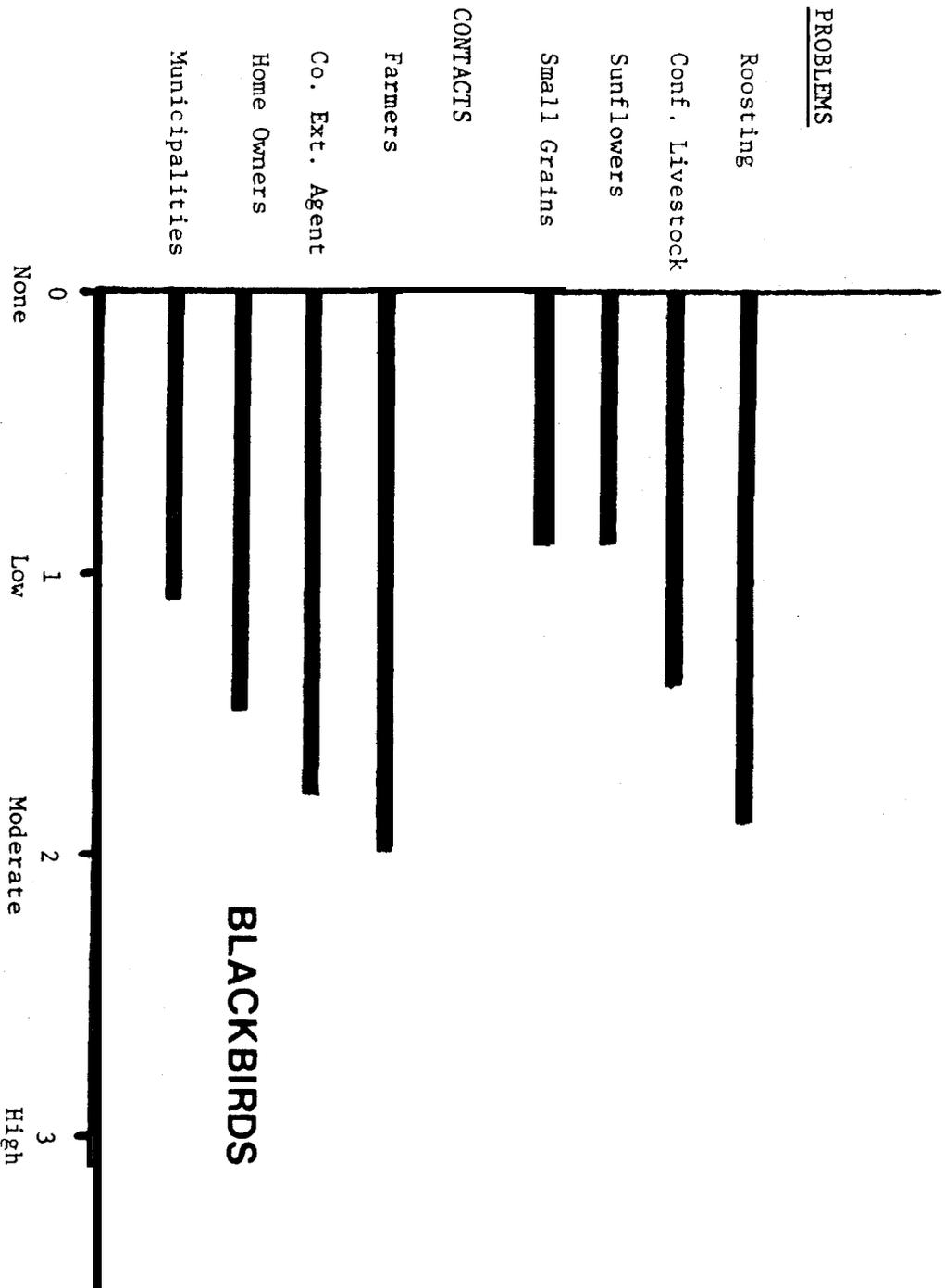


Fig. 4. Average importance of blackbird damage problems and associated extension audience contacts in the Great Plains.

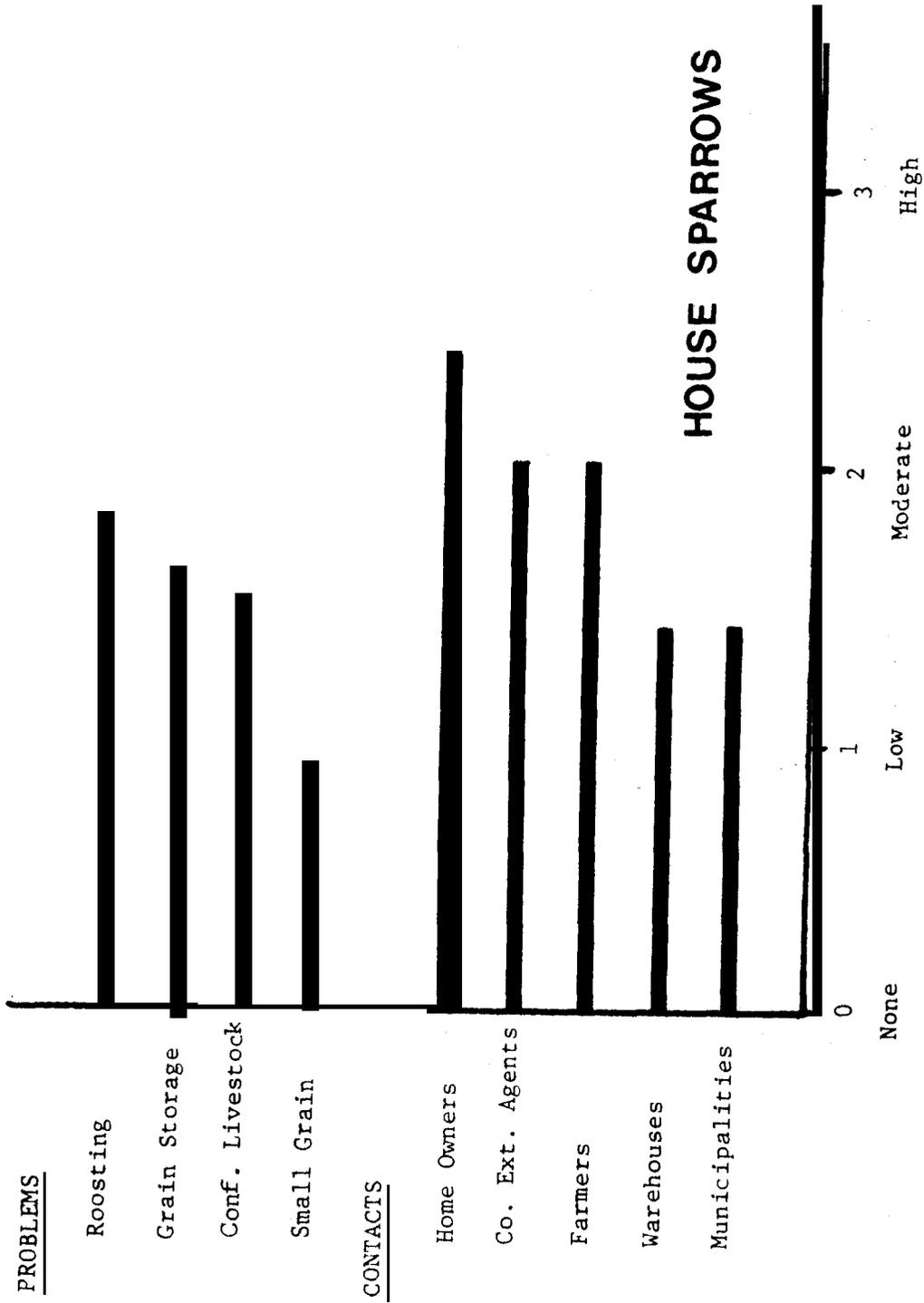


Fig. 5. Average importance of house sparrow damage problems and associated extension audience contacts in the Great Plains.

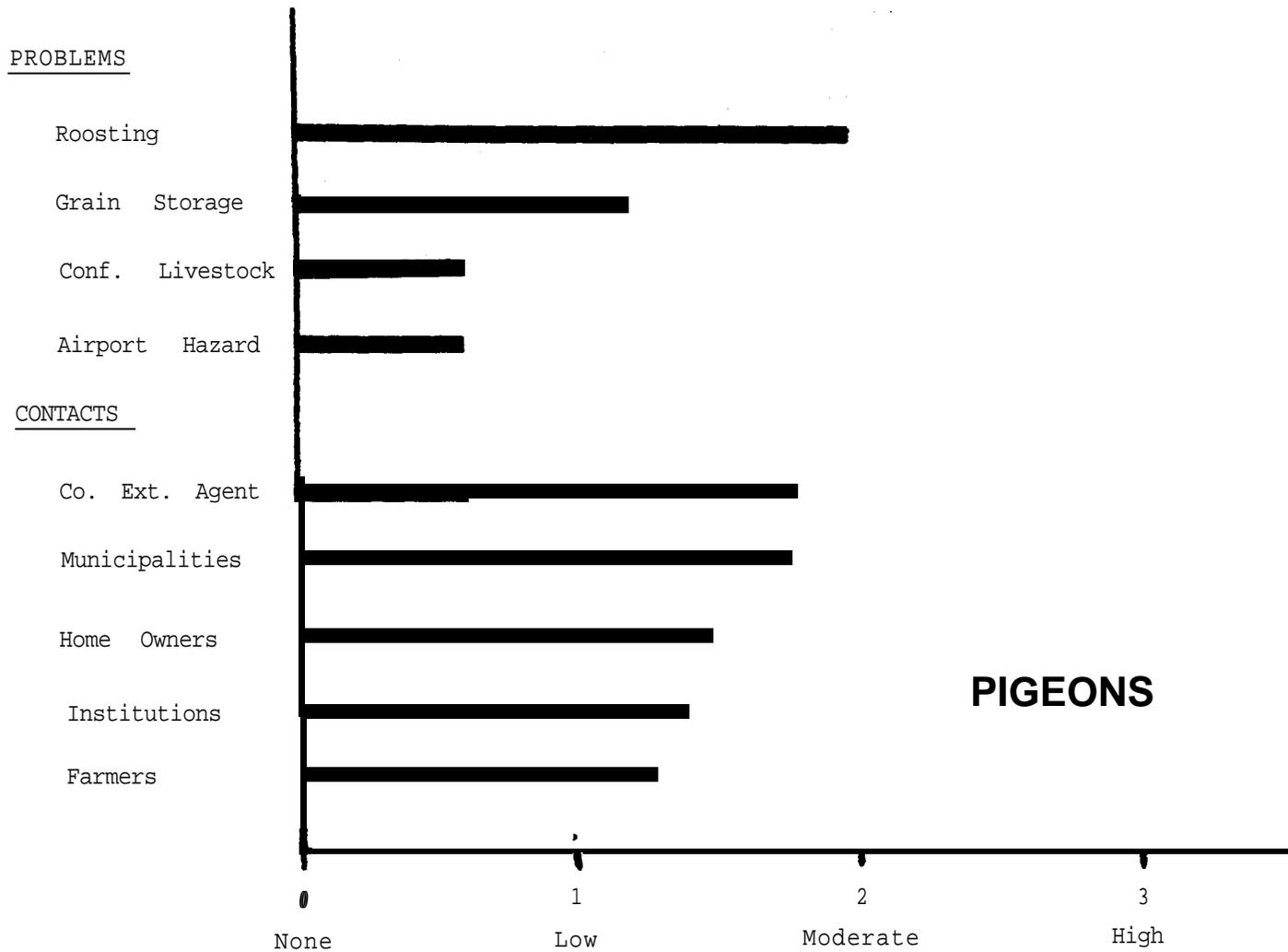


Fig. 6. Average importance of pigeon damage problems and associated extension audience contacts in the Great Plains.

Table 3. Program approaches for extension bird damage control in 9 Great Plains states.

Activity	Used	Not used
Work Plans	4	5
Annual Goals	4	5
Evaluation of Efforts	3	6

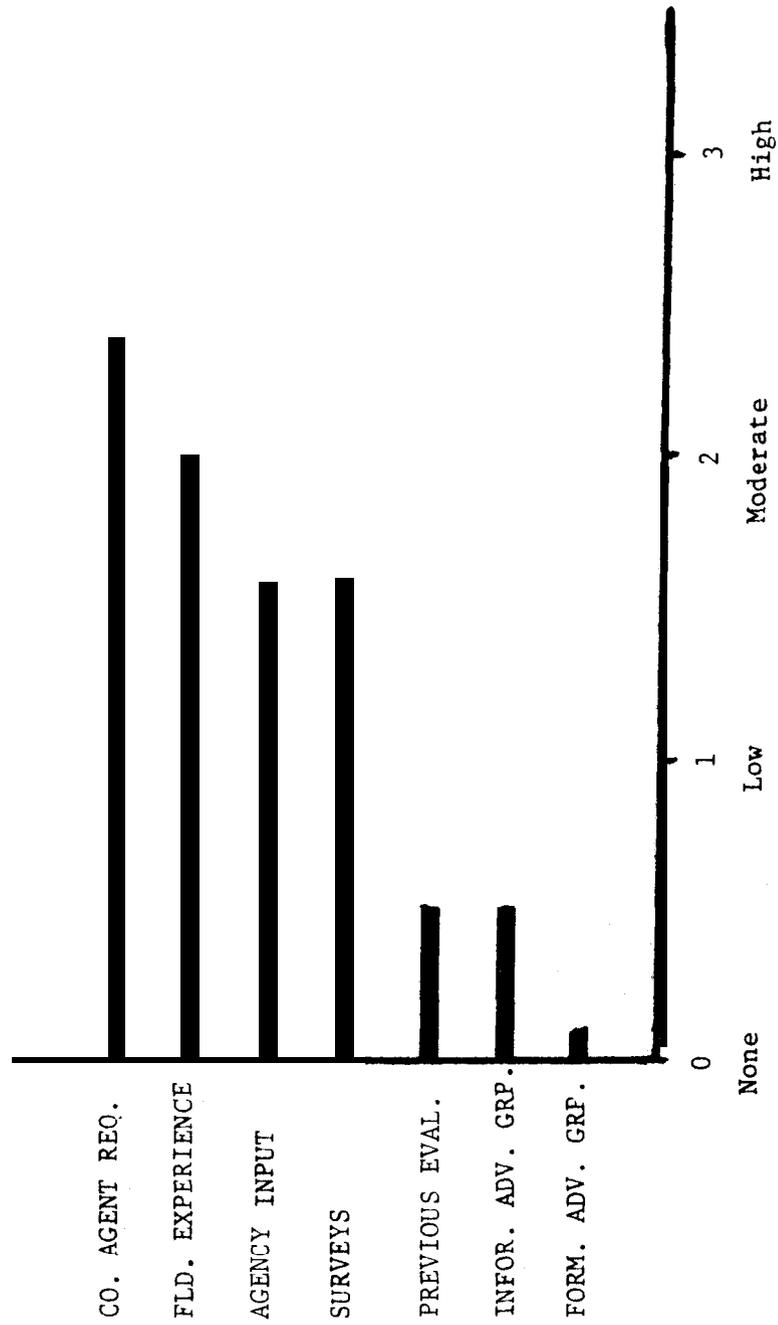


Fig. 7. Average importance of various inputs to extension planning for bird damage control in the Great Plains (N=8 individuals).

At confined livestock facilities, starlings and blackbirds consume livestock feed, contaminate additional feed and water with their droppings, and may be involved in the transmission of livestock diseases. House sparrows and, to some extent pigeons, cause similar problems.

Starlings, house sparrows, and pigeons cause problems at grain storage areas through consumption and contamination of stored grain. Such problems are often greatest at open-storage facilities or where grain spillage is common such as at grain elevators.

Starlings and pigeons were reported as an airport hazard. These birds along with several other species (e.g. gulls, blackbirds, hawks or owls) pose a hazard at airports where they might cause accidents if sucked into a jet aircraft engine (McCracken 1976, Solman 1976).

The methods by which extension specialists contact audiences may change as energy shortages continue to develop. For example, the frequency of personal contacts may be reduced and the use of mass media increased.

Questionnaire results suggest there may be a need for more program planning related to bird damage problems. Planning helps in two ways; it forces us to think about problems and prepare the best approach, and if plans are written and passed on to superiors, it provides additional exposure of our activities. Such exposure may help us gain a better understanding of our job activities and support for our programs.

Respondents' job activities included little time allocated to teaching and research. Teaching bird or other wildlife damage problems and their control to college students is an activity extension wildlife specialists should consider in program planning; often wildlife specialists may be the only individuals available with the experience needed to teach such a course. Research in wildlife damage is another area that needs increased attention. Extension efforts to discover, develop, and disseminate information will be stronger if supported by our own efforts of discovery and development through research.

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