A Comparison of South Dakota State University's Radio Tape Service with that of Other Land-Grant Institutions in the United States

Neil Stueven
A COMPARISON OF SOUTH DAKOTA STATE UNIVERSITY'S RADIO
TAPE SERVICE WITH THAT OF OTHER LAND-GRANT
INSTITUTIONS IN THE UNITED STATES

BY
NEIL STUEVEN

A thesis submitted
in partial fulfillment of the requirements for the
degree Master of Science, Major in
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State University
1963
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This thesis is approved as a creditable and independent investigation by a candidate for the degree, Master of Science, and is acceptable as meeting the thesis requirements for this degree, but without implying that the conclusions reached by the candidate are necessarily the conclusions of the major department.

Thesis Advisor

Date

Head, Printing and Journalism Department

Date
ACKNOWLEDGEMENTS

The author wishes to express his appreciation to the respondent institutional representatives whose cooperation made this study possible.

My sincere appreciation is also extended to Professor Paul Jess, Dr. George Phillips, Head of the Printing and Journalism Department at South Dakota State University, and to J. K. Hvistendahl, former staff member for their help and constructive criticism from the conception to the completion of this study.

I want to thank my wife and family, whose confidence and support have been sustaining factors during the course of this project.

NAS
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CHAPTER I

INTRODUCTION

Review of the Literature

This paper deals with the study of one segment of an organization whose responsibility is to inform and educate the public. Getting information to farmers and others is the task of the land-grant college. Extension is the information arm charged with this program.

Confidence, favorable repute and goodwill largely determine the extent to which people participate voluntarily in a university's educational activities, seek its assistance and follow its recommendations. The same elements are important also because they affect the amount of assistance which others contribute to the advancement of the programs and activities sponsored by extension workers.¹

Assistance comes from other governmental agencies, rural and urban organizations, organized groups, outstanding individuals which includes a host of voluntary local leaders and other areas. One method of disseminating information about recommended practices of extension is through the mass media—the press, radio and television. Questions in agriculture, home economics and consumer services are answered by

¹ Frank L. Ballard, Public Relations Inventory of the Cooperative Extension Service (U. S. Department of Agriculture, October 1951), p. 3.
radio. The radio has become a part of daily life. It reaches the barn, the breakfast table and living room. It rides in the car, truck and tractor. It goes to the beach. Its flexibility is hard to beat. Its influence permeates every segment of society. Broadcasting is therefore an important tool to extension workers.

Its vitality is reflected in these figures. More than 95 percent of American homes have radios. Most have more than one. Over half of our automobiles have radios. In 1957 it was estimated that there were more than 150 million radios in the United States. Since that time the transistor has been perfected. This has led to pocket-sized portable radios. The transistor radio has virtually taken over the market as far as total units produced and sold are concerned.

Radio is a mobile medium in a mobile America. Though it is a mass medium it possesses the qualities of a direct, personal touch with the spoken word conveying the message.

Radio can be used to select a certain class within society, specific audiences or as a blanketing medium. By using radio you can reach more people during one radio broadcast than you could reach if you could speak simultaneously in every public assembly hall in your community . . . . The spoken word by radio comes to the listener in

---


the privacy of his home where thoughts may be planted easily, free of
distractions and ready for discussion in the family circle. 4

Reaching both an urban and a rural audience at the same time is
da difficult task. Extension emphasis had been on reaching rural
people. But in recent years the emphasis has shifted somewhat. Urban
growth and many of the problems that have arisen make this area impor-
tant. Gardening, landscaping, floriculture, control of insects and
diseases and even 4-H are just some of the areas through which exten-
sion is trying to reach and help urban people. This is a concerted
effort.5

Little is actually known about what radio services are pro-
vided to the public by individual land-grant institutions. A search
of literature reveals that there is little concrete evidence of what
these services consist and also the mechanics behind their production.

Objectives of the Study

The purpose of this study is to gather information on the use
of radio at land-grant institutions in the United States, to assemble
this information in manageable form, to compare South Dakota State
University's tape service with those at similar institutions and to
get new ideas for further improvement of South Dakota State
University's tape service.

4 Cutlip and Center, pp. 259-60.

5 C. Herman Welch, Jr. and Meredith C. Wilson, Public Rela-
tions Inventory of the Cooperative Extension Service (U. S. Department
of Agriculture, October 1951), pp. 44-47.
The author hopes this study may aid other radio specialists in comparing their programs to recognize weaknesses and strengths.

Radio Services at South Dakota State University

The South Dakota State University radio department provides taped programs on a regular basis to commercial radio stations. The stations served include almost all those in South Dakota, plus those along the borders in neighboring states.

Nine regular programs, plus one seasonal series, make up the radio service produced on tape. Four programs include farm news. They are a 15-minute daily complete program (6 days a week); a daily 7-minute open-end interview (6 days a week); a daily 4-minute open-end interview (6 days a week); and a weekly 15-minute complete program. The two complete programs include music, an interview, news and public service spots.

Two of the remaining programs include homemaking material. They are a daily (5 days a week) 4-minute open-end interview and seven 1-minute spots per week. One 4-H program, 4 minutes in length, is produced each week. The seasonal program is on horticulture. It is 12 minutes in length and is produced from early spring until late summer or early fall.

In addition to the above programs, the radio department staff provides a number of other programs and services. Sports interviews are provided in 3-minute and 1-minute 30-second versions in season, particularly during football, basketball, wrestling and track seasons.

A program of news at South Dakota State University is produced
weekly during the regular school year. This program is 10 minutes in length.

Special tapes are made available as events occur. One example is a recording of the South Dakota State University Statesmen and the Concert Choir with Christmas music. Another example, halftime interviews are prepared for basketball games to give wider coverage to departments on campus which are not covered in other programs.

Other services include recording of events and speeches on campus for the use of faculty members and students. Copies of recordings are prepared also. In addition, the general news releases from the news bureau are rewritten for radio and television.

For the purpose of this study the agricultural tape service and the home economics programs are of primary importance. The other programs and services are important only as they relate to per cent of total time involved in their production.

The radio department has one full-time employee. The agriculture tape service takes about two-thirds of that person's available time; the remaining time is spent on the other programs and services which are offered.
CHAPTER II

METHODOLOGY

This report is based on 47 returns from the 50 land-grant institutions listed in the book, Agricultural Information Staffs in the State Land-Grant Colleges and Universities, published by the United States Department of Agriculture.

Design of the Study

This study was undertaken in an attempt to delineate, document and offer new research information concerning the agricultural news materials provided to commercial radio stations by the land-grant institutions.

In order to achieve the objectives of this study, an investigation was directed toward obtaining information in related areas of interest.

1) The first of these areas involved types of programs that were offered, in terms of (a) length of programs offered, (b) program style such as interview, one person, etc., (c) frequency of programs offered, (d) special events coverage, (e) distribution to commercial radio stations, (f) number of programs produced, and (g) radio stations served.

2) The range of services offered to commercial radio by institutions affects program assembling.
3) The number of employees engaged in radio work on a full or part-time basis is related to types of programs and service areas. This would appear to be useful in determining the amount of time devoted to the preparation of farm and home materials. At the same time, this information would be useful in determining the responsibility for the mechanics of recording, dubbing and distribution.

4) Another area of interest closely allied to the aforementioned is equipment. This governs to a great extent exactly what can be done by the radio department.

5) Finally, internal management was deemed to be important. This includes (a) program content, (b) criterion for sponsorship, if allowed, (c) operating budget based on programs produced, (d) experience desired and salaries of employees, and (e) involvement in operation of university-owned radio, both AM and FM, and television.

**Hypothesized Characteristics**

Contact with commercial radio personnel in South Dakota and radio specialists at a few colleges enabled the author of this study to draw tentative conclusions concerning programming provided commercial radio stations by radio specialists at sister institutions.

The following tentative conclusions were tested for their accuracy and validity.

1) Commercial radio wants programs of a short length to fit into the pattern of today's radio.

2) Interviews are the most popular program produced by personnel in college radio for their tape service.
3) Daily program offerings would be most popular because they would provide continuity.

4) Coverage of special events would be difficult because of the delay in tape versus live coverage.

5) Daily programs are most likely sent out once each week.

6) Campus-to-commercial-radio-station telephone hook-ups would be feasible where distances would be small enough to warrant line charges.

7) Interviews over the telephone are likely to become important sources of program material.

8) At least 50 per cent of the institutions provide tapes to fit into county agents' radio programs.

9) Extension and university radio functions are separate in more institutions than in those with combined facilities.

10) Full-time positions vary according to services offered to commercial radio and other staff members.

11) Home economics programs, in the majority of cases, will be handled by someone other than the radio specialist.

12) Students are hired by most institutions to dub tapes.

13) Sponsorship of programs is allowed by most institutions. Criterion for sponsorship is that sponsors must be in keeping with the image of the school.

14) Tape returns are important to a tape service. Almost all radio stations return them on a regular basis, but most institutions have had to drop at least one station in the last year that would not return tapes regularly.
15) Quality of master tapes determines program quality. Ampex tape recorders have become the base unit in a majority of studios.

16) A realistic budget for one institution would be quite unrealistic for another because of different services or method of work.

17) Commercial radio experience would be useful to a college radio employee.

18) Salaries of college radio personnel are higher than in commercial radio.

19) Freedom to develop programs exists at most institutions.

20) Regular AM broadcast radio outnumbers both FM radio and television at sister institutions.

Sampling Method Used

1) The survey group consisted of the 50 land-grant institutions listed in the book, Agricultural Information Staffs in the State Land-Grant Colleges and Universities, published by the United States Department of Agriculture.

2) The questionnaire was constructed in such a way that, when it was administered and analyzed, the hypotheses listed earlier in this study would be answered.

A number of individuals reviewed the questionnaire, but no pretest as such was conducted.

No signature was required of the respondents. The postmark was deemed sufficient evidence to determine who returned a particular form.

3) Forty-seven questionnaires were returned from the other 49
institutions. Forty-one were filled out sufficiently to be included in a compilation of results. Three had no radio service at all. Two had a situation that did not fit the questionnaire. One has a unique situation and will be covered individually.

The majority of the respondents returned the questionnaire within two weeks after mailing the instrument. (However, a number were returned later with a note of apology stating that the respondent had been on vacation). A follow-up letter and another copy of the form yielded three more returns. One of these had no postmark and thus became the only return that could not be identified immediately with a particular institution.

The questionnaire used in this research is included in Appendix C.
CHAPTER III

RESULTS OBTAINED

In the area of programs offered, more than two-thirds of the radio specialists at land-grant institutions offer only taped programs to commercial radio stations. Thirty-one per cent have both live and taped programs.

Length of Programs

Length of programs definitely points to the popularity of shorter material. Programs 5 minutes and under claimed more than three-fourths of all the programs offered to commercial radio stations. Of these, the 5-minute program was listed most often and claimed 38.6 per cent of the total programs. The category, "others," followed with 22.9 per cent. Most of the programs included in this category were of varying lengths of less than 5 minutes.

The 15-minute and 1-minute programs were next with each having about 15 per cent of the total.

The 30-minute program, even though far down the list with about 5 per cent of the total, was quite important in some states. For example, in Nebraska more commercial radio stations carry the 30-minute program than any other program the respondent had to offer. The respondent said they have the oldest continuing 30-minute program of its kind in the country.
The final category listed on the questionnaire was the 7-minute interview. It was the lowest in popularity among the answering respondents. The total for this particular category was only 3.6 per cent (Table 1).

**TABLE 1**

Length of Taped Programs Offered to Commercial Radio Stations

<table>
<thead>
<tr>
<th>Length</th>
<th>Number</th>
<th>Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 minutes</td>
<td>32</td>
<td>38.6</td>
</tr>
<tr>
<td>1 minute</td>
<td>13</td>
<td>15.6</td>
</tr>
<tr>
<td>15 minutes</td>
<td>12</td>
<td>14.5</td>
</tr>
<tr>
<td>30 minutes</td>
<td>4</td>
<td>4.8</td>
</tr>
<tr>
<td>7 minutes</td>
<td>3</td>
<td>3.6</td>
</tr>
<tr>
<td>Others (mostly under 5 minutes)</td>
<td>19</td>
<td>22.9</td>
</tr>
<tr>
<td></td>
<td></td>
<td>100.0</td>
</tr>
</tbody>
</table>

**Types of Programs Offered**

Interviews make up a major portion of the programs produced by respondents. However, there appears to be a trend toward more "one person" and combination programs. A number of respondents said they have started using the combination type program and are getting better response from personnel at commercial radio stations.

The combination programs, in this case, have several parts. The radio specialist develops a tentative theme. He then interviews
subject-matter specialists for evidence to support his theme. The radio specialist then decides which parts of the interview best support his theme. He then copies each segment he has chosen for later use. The final step is combining the two parts into a polished product. The narrator has the major role, while excerpts from the interview with the subject-matter specialist support his stand.

There are two reported advantages to this method. The first is that there is more room for interpretation by the specialist in communications. Second, more than one subject-matter specialist can be involved in a single program. The program can thus be more authoritative. (Network reporting follows this pattern).

There appears to be one major disadvantage—that is, the time involved to complete all of the processes in a single program. One respondent reported that it takes approximately 20 hours each week to produce five programs. This would appear to limit this particular type of program to those institutions where more than one radio specialist is involved. Approximately four hours work to produce a 5-minute combination program would be necessary in order to get the quality desired.

Three-fourths of the respondents produce daily and/or weekly programs. The remaining programs are for use at the discretion of the station (14.1 per cent), or other use (11.3 per cent). Included in the last group were programs for airing two or three times a week and those produced once a month (Table 2).
TABLE 2

Frequency of Programs Offered

<table>
<thead>
<tr>
<th>Use</th>
<th>Number</th>
<th>Per cent of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daily</td>
<td>28</td>
<td>39.4</td>
</tr>
<tr>
<td>Weekly</td>
<td>25</td>
<td>35.2</td>
</tr>
<tr>
<td>For Use at Discretion of Station</td>
<td>10</td>
<td>14.1</td>
</tr>
<tr>
<td>Other</td>
<td>8</td>
<td>11.3</td>
</tr>
</tbody>
</table>

Coverage of Special Events and Distribution of Programs

Special-events coverage varied widely among respondents. The range was from none to coverage for a wide variety of events of a special nature. It appeared that what the specialist in radio did depended heavily on which events personnel from commercial media decided to cover. Background and in-depth reports predominated over straight news reporting. This would appear to substantiate the immediacy of radio and support the idea that old news is dead news. Tapes cannot reach outlying stations as fast as direct communications from a reporter can.

Distribution of taped daily programs was on a weekly basis for most respondents. About three-fourths of the respondents mail tapes once a week. The remaining programs were split nearly evenly between several times a week and daily mailing.
The number of programs produced and stations served depended to a great extent on personnel and number of stations in the state. At the same time, differences in duties and equipment had a considerable influence.

**Services Offered by Institutions**

Services offered by the institutions varied considerably. A telephone hook-up from the campus to commercial stations was offered by slightly more than 40 per cent. This service was offered primarily in the heavily populated areas where commercial stations did not have long line charges to pay. At the same time, those institutions that offered this service appeared to cover more up-to-the-minute news.

New or improved equipment has made the telephone interview an important part of taped programs. Just over half of the respondents now use this technique to increase sources of information for their programs. It is now possible to interview people who are physically separated from the recording studio and also those who do not have the time to go to the recording studio for an interview. Authorities in fields other than those at a particular institution can add a wide dimension to existing programs.

In some areas taped programs are prepared so that the county agricultural agent can use them in his local program. A closer look at most of these areas shows that this method is popular in the heavily populated areas where the primary audience is urban rather than rural. This would indicate that radio specialists have found
this a good method to attain airing of their taped programs on agri­
culture.

Responsibilities of Personnel

Seventy per cent of the respondents said their institutions
had separate extension and university radio set-ups. Most of these
had a complete separation of studios, equipment and functions. It
should also be pointed out that a number of the extension radio special­
ists have some responsibility in television, depending upon where the
emphasis is placed. A number of these people reported that they felt
they were spread too thinly and couldn't do justice to either medium.

Related to the above area is the matter of full-time positions.
Two institutions had no full-time positions in radio. One listed one-
fourth of a full-time position. Four had one-half time positions; the
other half was in television in each case. Full-time positions were
listed by 18 institutions. Nine had two positions. Four had three
full-time positions. One institution had four full-time positions and
another listed eight in radio. Those that had more than two appeared
to do more special coverage of events (Table 3).

Programs in home economics were also prepared by more than half
of the respondents. The questionnaire did not pinpoint how much was
done in this area. However, where there were two or more people listed
as full-time in radio, the second position was usually listed as home
economics editor.

About three-fourths of the specialists hired students to help
them. Just over half reported that they used students to help make
copies of tapes. Staff members and college radio personnel prepare most of the remaining institutions' copies. Only two respondents said they hire commercial facilities to make dubs (Table 4).

**TABLE 3**

<table>
<thead>
<tr>
<th>Number of Positions</th>
<th>Respondents</th>
<th>Per cent of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>1</td>
<td>2.5</td>
</tr>
<tr>
<td>4</td>
<td>1</td>
<td>2.5</td>
</tr>
<tr>
<td>3</td>
<td>4</td>
<td>10.0</td>
</tr>
<tr>
<td>2</td>
<td>9</td>
<td>22.5</td>
</tr>
<tr>
<td>1</td>
<td>18</td>
<td>45.0</td>
</tr>
<tr>
<td>½</td>
<td>4</td>
<td>10.0</td>
</tr>
<tr>
<td>¼</td>
<td>1</td>
<td>2.5</td>
</tr>
<tr>
<td>0</td>
<td>2</td>
<td>5.0</td>
</tr>
<tr>
<td></td>
<td>40</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Recorders Used for Making Master Tapes

Equipment is important to the entire operation. It governs to a great extent, exactly what can be done. At the same time, it governs the mechanical quality of the original recordings and the copies. The recorder used for making the master thus controls the mechanical quality of all tapes produced. For the purpose of this report, only the make and model of the master recorder was requested.
### TABLE 4
Responsibility for Making Dubs at Respondents' Institutions

<table>
<thead>
<tr>
<th>Responsibility</th>
<th>Number of respondents</th>
<th>Per cent of total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yourself or other staff</td>
<td>8</td>
<td>19.5</td>
</tr>
<tr>
<td>Student help or technician</td>
<td>21</td>
<td>51.2</td>
</tr>
<tr>
<td>Commercial</td>
<td>2</td>
<td>4.9</td>
</tr>
<tr>
<td>Other (mostly university radio station personnel)</td>
<td>10</td>
<td>24.4</td>
</tr>
</tbody>
</table>

In the early years of taping on acetate or paper tape, Magnecord was the name of the recorder by which other tape recorders were judged. This researcher was of the opinion that Ampex had become the leader because of improvements in equipment that lead to higher fidelity and, thus, better quality in recordings. About three-fourths of the respondents use Ampex equipment to make master recordings.

Magnecord equipment was used by about 13 per cent. Other recorders mentioned were Uher, RCA and Roberts.

The entire area of recording is mushrooming so rapidly that it is difficult to keep abreast of developments. New companies continue to enter the field almost daily. At latest count there were more than 200 different recorders on the market. A majority of these do not meet broadcast standards and specifications. However, this still leaves a great number to keep track of for innovations that
might improve the extension radio specialist's capabilities in recording.

The topic and time of a recording are chosen by either the radio specialist or the specialist and the subject-matter specialist involved at most institutions. A radio committee was involved at only four institutions (Table 5).

**TABLE 5**

Determination of Subject and Airing Date of Radio Broadcasts

<table>
<thead>
<tr>
<th>Method Used</th>
<th>Number</th>
<th>Per cent of Total</th>
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<td>Yourself and subject-matter specialist</td>
<td>17</td>
<td>41.5</td>
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<tr>
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Sponsorship of Programs

Sponsorship of programs was allowed by a majority of the institutions. But most of these had varying regulations about who could sponsor the program. The most common regulations were a sponsor acceptable to the institution and no implied endorsement by the institution.

The first regulation eliminates undesirable sponsors such as liquor stores. Usually a qualifying statement says the sponsor must
be such that it would not impair the image of the college. The second regulation stops a sponsor from saying his product is endorsed specifically by the college. A few colleges have a further restriction; that is, the sponsor cannot break into a program for any commercial announcement.

Those institutions which allowed no commercial sponsorship (10) used this method to avoid any complications. They hoped that commercial radio stations would use their programs as a public service. No measurement was undertaken in this study to determine if this policy affected use of taped programs.

An attempt was made to measure the operating budgets of individual radio departments based on the number of programs produced. However, there were not enough answers to give a realistic picture. Of those that answered, a number of qualifying statements negated the value of the answer. So, no analysis was made.

Experience and Salaries of Radio Specialists

Experience and salaries were two categories that were investigated in this study. In the area of experience a majority of respondents considered commercial radio experience as being useful. About one-fourth considered commercial radio experience to be essential to a tape service. Ten per cent said commercial experience was of no use. (One respondent who favored commercial experience noted that it might prevent "ivory tower-itis" from becoming a problem).

There was a wide range in salaries listed. Almost 90 per cent of the respondents said salaries for radio specialists were higher or
about the same as those in commercial radio in their area. The higher salary category had a slight edge over the "about the same" category. Only four respondents reported salaries lower than those in commercial radio in their area.

Specific salaries showed a range from $7,000 to $14,000, depending on qualifications. For someone with three to five years experience and a bachelor's degree, the range was from $7,000 to $12,000. A majority of the salaries were in the upper end of this range, from $9,000 to $10,000. For someone with the same experience and a master's degree, the range was from $7,000 to $14,000. Here again the average salary was toward the upper end of the range with $12,000 and $10,000 most often mentioned, and in that order.

Two precautions should be kept in mind when looking at these figures. First, the questionnaire asked for a "fair" salary rather than a specific salary. It was hoped that the respondents would answer with their approximate salaries. Second, these figures are based on a questionnaire sent out in 1966. Therefore, the returns do not include any salaries that received increases during the past two years.

One observation can be made concerning the information received about salaries. That is, certain areas of the United States have developed distinctive patterns. For example, almost all of the low salaries were reported in the Northeast. Salaries listed for this section of the country were considerably lower than those in other parts. The only exception was West Virginia. It also reported a salary in the lower range.
Almost all of the respondents said they had ample freedom in their work to develop programs and meet other challenges. Only one said he did not have the freedom desirable to develop programs.

Broadcasting Facilities at Land-Grant Institutions

Thirty-seven respondents reported about their facilities for broadcasting over AM, FM or television. Eight said their institutions did not operate any broadcasting facilities. Fifteen institutions had one type of station in operation. Eight respondents reported their institutions operated two types of stations. Six respondents said their institutions operated all three types of broadcasting stations. Four respondents did not answer this question. According to Broadcasting, the 1967 Yearbook Issue, three of these stations had no broadcasting stations at the time the questionnaire was sent out. The fourth questionnaire with no answer was the one without a postmark which was reported earlier.

This questionnaire is believed to have been returned by the radio specialist at Louisiana State University. The author bases this belief upon the answers given on the questionnaire. This questionnaire had to be from either Louisiana, Massachusetts or South Carolina because returns were received from the rest of the states. The particular question which establishes the origin of the return is on the number of full-time positions in radio. The respondent reported one

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full-time position. According to the bulletin, Agricultural Information Staffs, Louisiana was the only one of the three with one full-time position. The University of Massachusetts had no position listed in radio and only the associate director of extension in any information position. Clemson University in South Carolina had three specialists in radio and television.\textsuperscript{7}

South Dakota State University did not operate an AM, FM or television station at the time the survey was conducted. The remaining eight institutions had four AM, 16 FM and five television stations licensed among them. The University of Alaska had one FM radio station.\textsuperscript{8} The University of Arizona had a television station.\textsuperscript{9} The University of Massachusetts had two FM licenses—one FM is licensed to the School of Education and the other is licensed to the Engineering School.\textsuperscript{10} Montana State University had an FM license.\textsuperscript{11} Clemson University had no facilities listed.\textsuperscript{12} Oregon State University had all three types of stations listed on the questionnaire as did the University of Wisconsin. The University of Wisconsin had nine FM and two AM radio stations licensed to it and the Wisconsin State Radio

\textsuperscript{7} Agricultural Information Staffs in state land-grant universities, U. S. Department of Agriculture, January 1967, pp. 11-23.

\textsuperscript{8} Broadcasting, Section B p. 8.

\textsuperscript{9} Broadcasting, Section A p. 6.

\textsuperscript{10} Broadcasting, Section B p. 77.

\textsuperscript{11} John Wheeler (personal communication March 2, 1968).

\textsuperscript{12} Broadcasting, Section B p. 144.
Network. This network is unique among land-grant institutions and will be discussed later.

The total number of AM radio stations operated by the 50 land-grant institutions included in this survey was 18. There were 37 FM radio stations in operation. Twenty-one television stations were operated by these institutions. Since the survey was completed no AM stations have been added, but seven more FM stations and 11 more television stations have begun operation. Nine of the new television stations were part of networks—five in Nebraska and four in Vermont.

Commercial Licenses at Land-Grant Institutions

There are a number of commercial stations owned and operated by institutions of higher learning. The University of Florida operates WRUF-AM and WRUF-FM as fully self-supporting commercial stations. The television station at the University of Florida, however, is educational and operates under the School of Journalism and Communications. Iowa State University has WOI-AM and WOI-FM operating as educational radio stations, but WOI-TV operates commercially. WOI-TV, however, uses no local salesmen and operates totally on national advertising. The station does provide time for educational programs. The University of Missouri operates KOMU-TV as a commercial station. It is most closely tied to the School of Journalism. In theory it is directed by

13 Broadcasting, Section B p. 133.
14 Broadcasting, Section A pp. 3-66; Section B pp. 3-187.
a special assistant to the university president. Because it has its own source of income, it is nearly autonomous.

Institutions without Radio Tape Services

A number of institutions were not included in the results of the survey because they did not have a tape service to commercial radio stations. Alaska, Arizona, and Montana have no one in radio and provide no services. The University of New Hampshire had a radio tape service, but discontinued it in 1966 when the radio specialist went on leave. Since that time they have had no one working in radio. Oregon State University does not have a regular tape service to commercial radio stations. The only service provided is special taped inserts from time to time for use in county agents' programs. The information staff also conducts workshops to train agents in broadcasting techniques. The radio-television man does provide a taped show to one station in Portland which is strictly for a suburban-urban audience. The respondent at the University of Wisconsin returned the questionnaire without completing it because it did not fit the situation at this institution.

Radio Services Provided by the University of Wisconsin

The University of Wisconsin is quite different from the 49 other land-grant institutions included in this survey in the way of radio services. The questionnaire did not apply to it in most instances.

because no taped programs are distributed. All of the programs are live over the Wisconsin State Radio Network, which includes 11 stations.

The extension radio specialist at Wisconsin produces live programs for the 11-station network. No telephone hook-up is offered from the campus to commercial radio stations; telephone interviews are not used. No tapes are prepared for use by county agents. There is a separate university and extension radio organization. Student help is used by the extension radio specialist. Topics and times on the live programs are determined by the radio and subject-matter specialist. An Ampex recorder is used to tape segments of the farm programs for use on the network. Salaries are about on a par with commercial radio personnel. A salary range of $10,000 to $12,000 was listed.

The Wisconsin radio network covers the entire state through nine FM and two AM stations. This network uses off-the-air linking of all the stations. This unique network operates without the use of any land-lines. Programs are relayed by pick-up and rebroadcast from station to station around the loop. Hops between stations range from 26 to more than 100 miles. Programs can be fed into the network from any of the transmitter positions. The daily weather roundups keep this facility constantly operative. Except for these weather reports, and an occasional emergency, the program service originates through Radio Hall and stations WHA and WHA-FM in Madison.

This network has been called the country's best example of
off-the-air linking of stations to cover a geographic area. It has been studied by many engineers and broadcasters, and is a pattern for planning by others. The network was planned by Glenn Koeler, WHA technical consultant. He also helped supervise its construction. The first FM station, WHA-FM, went into operation in 1947. Five more stations were added in the next three years, two were added in 1952 and the most recent station was added in 1965.

The operating reliability of the network is exceptionally good, with very little air time being lost. The greatest loss by individual stations was due to power-line failures. This has been practically eliminated by the installation of emergency power generators. This is the only existing network capable of reaching every county in Wisconsin day and night. In certain locations, however, physical features make the use of an outdoor antenna necessary for good reception of the FM signal.

Organization of Station Facilities

The final question on the questionnaire concerned the general organization of any broadcasting stations with which each institution was concerned.

Auburn University, the University of Arkansas and University of California were not involved with university-owned stations.

Colorado State University had an FM station operated by students. The radio specialist was not involved in its operation.

The University of Connecticut has an AM station—WHOS. It is run by students with volunteer help. There is no faculty intervention.
Training new staff members is the responsibility of experienced students of the staff. The television is closed circuit. There are four professional staff members in the Radio-Television Center. They produce programs live and on video tape for the Continuing Education Center. Radio-Television Center personnel are responsible for producing the weekly radio programs.

The University of Delaware does not have any broadcasting facilities.

The University of Florida has all three, AM and FM radio and television. The AM and FM radio stations are fully commercial and operate under the School of Journalism and Communications. A separate radio center operates under the School of Journalism and Communications also. This is a tape-distribution center through which educational programs are produced and distributed. All the extension radio work is produced and distributed through completely separate facilities. All of this work is produced and distributed through the radio section of the Editorial Department of the Agricultural Extension Service. This section has its own studios, recording equipment, dubbing equipment and other facilities.

The University of Georgia operates an individual educational television station and feeds programs from the College of Agriculture to seven other educational stations. All of these programs are aired at the same time on all of the stations. These programs are taped in advance of airing at the studios in the Continuing Education Center for replaying on commercial stations. In addition, the television
station tapes 5-minute programs and 1-minute spots for use by commercial stations. These programs are produced by three specialists in radio and television.

The respondent in Hawaii did not answer this question.

The University of Idaho has no position in radio or television. However, the experiment station editor does make a few radio tapes which are copied and mailed by a separate Radio-Television Center, part of the Department of Communications. This center pays for copying, labor involved and even furnishes the tapes. There is no budget for radio in agriculture information.

In Illinois, the university operates AM, FM and television stations. WILL AM and FM simulcast programs. No farm programs are presented on these stations. The same is true with WILL-TV. Although programs are produced for both radio and television by extension, they are not used on the three educational stations.

The radio specialist at Purdue University failed to point out how he works with the AM radio station.

In Iowa, Iowa State University operates educational AM and FM stations with state funds, but no state funds are used in the operation of WOI-TV. As has been mentioned, this station does make time available for educational programs.

Kansas State University has eight extension radio-television specialists. The AM station shares its time and frequency with the Capper Publications station in Topeka. KSAC programs are scheduled from 12:30 to 5:15 p.m., Monday through Friday. The station is
operated by the Kansas Cooperative Extension Service through its eight radio-television specialists. They produce more than 80 percent of the programming during this afternoon period. Television programs are designed by these same specialists for use on three commercial networks within the state. All three networks broadcast these programs between 6:45 and 7:45 a.m. 16

The FM station operated by the University of Kentucky is in the Department of Radio-Television-Films. The extension radio specialist does not cooperate with it.

The University of Maine operates educational FM and television stations. The FM operates through the Speech Department and carries all programs from the university including those in agriculture. The television station carries NET and ETV programs. Facilities are used to produce programs for commercial television stations.

No answer to this question was received from the respondent at the University of Maryland.

Michigan State University operates all three types of broadcasting stations. The radio-television specialist is paid by the radio stations, although the extension service provides the budget of $14,000. The specialist hires two students, one for radio, the other for television. The radio stations' tape network distributes the tapes to commercial radio stations each week. WMSB-TV is the university owned and operated station on a shared-time basis with WILX-TV,

16 Special Report, Program Series on Horticulture as Presented by Radio Station KSAC Extension Television in Wichita, pp. 2-7.
an NBC-TV affiliate station. Television programs are produced in the
studios of WMSB-TV and are also aired by the station. These programs
are also distributed to commercial television stations for their use.

The University of Minnesota operates KUOM, an AM station, in
cooperation with St. Olaf College in Northfield. The University of
Minnesota operates this station from 10:30 a.m. to sundown Monday
through Friday, part-time on Saturday and not at all on Sunday. The
radio-television specialist and his assistant have a daily farm pro-
gram at noon. The home economics editor has a morning show daily.
The University of Minnesota does not operate a television station. It
leases time, one hour a day, Monday through Friday, for general tele-
vision programs from KTCA-TV, an educational television station in
St. Paul. It also leases some extra time for course-credit work at
$140 an hour.

Mississippi State University operates no broadcasting facili-
ties. It has facilities for extension radio and its tape service.

The University of Missouri operates a commercial television
station, KOMU-TV. It is directed by a special assistant to the pres-
ident. The station operates loosely under the School of Journalism,
but since it has its own source of income it is nearly autonomous.
Most of the staff and management are non-academic personnel. The ra-
dio specialist operates through the office of the agricultural edi-
tor. He produces programs on agriculture and on other subjects as
time allows. The three specialists in radio do the interviews and
edit the tapes, but they do not dub copies. There is a separate unit for this function.17

The University of Nebraska operates KUON-TV in Lincoln and feeds a state-wide ETV network. The network is controlled by an ETV commission.

The University of Nevada operates a 10-watt FM station from 4 to 10 p.m. Monday through Friday. On Saturday and Sunday it stays on the air until midnight. The radio-television specialist is not connected with this operation.

No answer to this question was received from the respondent at Rutgers University in New Jersey.

New Mexico State University operates all three types of broadcasting stations. The radio specialist makes daily tapes for FM. He helps also in making selection of journalism scholarship recipients.

The AM station at Cornell University in New York is owned and operated by the university. The radio specialist does some live programs.

North Carolina State University operates three television studios. The television station which the extension service uses is located in Raleigh.

North Dakota State University operates an AM station, but the respondent didn't indicate anything about it.

Ohio State University has all three types of broadcasting

17 Roland Johnson (personal communication March 11, 1968).
facilities in operation. The tape service is conducted on a monthly request basis. The radio station personnel and county agents send in their tapes once a month. Radio personnel dub and return them. Extension radio specialists provide a daily program on the university-owned AM and FM facilities. For television, the extension radio editors produce a 5 to 6-minute program on video tape and film for use on commercial television stations. The campus station, WOSU-TV, records the show but does not use it on the air.

Oklahoma has AM and FM radio facilities. Both are used for student training in radio and television. These stations are under the College of Communications.

Pennsylvania State University operates an FM radio station and an educational television station. The FM station is student operated with a journalism faculty adviser. It is used in conjunction with training and course work. The educational television station is under Continuing Education and solicits programming from extension. The three extension radio-television specialists do a half hour daily program on a local commercial station. It is in its tenth year and has the largest daytime audience in the area, according to the respondent.

The University of Rhode Island did not operate any broadcasting facilities.

The University of Tennessee operates an FM radio station, but the respondent did not relate how the station operated.

Texas A & M University did not operate any type of broadcasting stations.
Utah State University operates a 1,000 watt, student staffed, FM radio station and an educational television station. The television station uses professional personnel in key positions. Some of the students on this television station are paid and some work as volunteers, depending upon the positions involved.

The University of Vermont operates one FM radio station. The respondent did not answer the question on its operation.

The respondent from Virginia Polytechnic Institute did not answer either the question on broadcasting facilities or the one on operation.

Washington State University operates an AM radio station and an educational television station. The extension service provides a daily 15-minute radio show on farm news for the radio station. A student is hired to do this show. The radio specialists produce three weekly reports on farm news and three on homemaking news for commercial radio stations. They also produce a 10-minute weekly television program. This show is put on video tape at the educational television station and sent out to six commercial stations. The tape is not used by the educational television station.

West Virginia University did not operate any broadcasting facilities.

The respondent at the University of Wyoming reported they had no facilities for broadcasting.
Comparison of Radio Questionnaire Results with the South Dakota State University Radio Tape Service

Sixty-nine per cent of the respondents produced only radio tapes. Thirty-one per cent produced both taped and live programs. At South Dakota State University the radio specialist produces only tapes for airing by commercial stations.

Modern radio programming leans to short material to keep in step with the fast pace of society. Length of programs produced by respondents showed that they are producing material to fit this pattern. Program lengths of seven minutes or less were reported by almost 80 per cent of the respondents. Seven-minute programs are produced by 3.6 per cent of the respondents. Five-minute shows are produced by 38.6 per cent and 1-minute spots by 15.6 per cent of the respondents. The category "others" had 22.9 per cent of the programs produced. Most of these programs were under five minutes. The 15-minute programs were produced by 14.5 per cent of the respondents. The 30-minute programs were produced by less than 5 per cent of the respondents.

Description of Programs at SDSU

The radio department at South Dakota State University has followed the trend toward short programs. Most of the new programs added in the last seven years have been of the short variety.

The "Farm Forum" is a 14-minute 25-second program on today's agriculture. It features an interview with a specialist in agriculture; the moderator reads general farm news. It has an opening and closing theme and three public-service spots. This program is
available to commercial radio stations that serve residents of South Dakota. It is available six days each week.

The "Farm and Home Digest" is 14-minutes 25-seconds in length. It is similar to the preceding program, but it differs in two respects. First, it is offered only weekly. Second, a 2-minute musical selection, a march, is included in the program.

"SDSU Agricultural News" is a 7-minute, open-end interview. It features an agricultural specialist and is available six days a week.

"SDSU Farm News" is a 4-minute, open-end interview program. It features members of the various agricultural departments on selected topics of interest to the farming population. It is available six days each week. This is the most popular program in terms of station usage produced in the radio department.

"Hi-Lites for Homemakers" is a 4-minute program with topics for the homemaker. It is complete with opening and closing theme and available five days each week. It features interviews with homemaking specialists with an occasional one-person presentation.

"Homemaker Hints for Today" are 1-minute spots on timely topics for housewives. Each spot has an opening and closing theme and is for daily use seven times each week.

"South Dakota 4-H on the Air" features John Younger, state 4-H and Young Men and Women leader, and his staff members discussing 4-H topics with club members, leaders and guests. Each program is complete with opening and closing theme. There is one 4-minute program each week.
"News and Notes" is a 10-minute program featuring news and events at South Dakota State University. It is narrated by students and is about students and faculty members. It is complete with opening and closing theme and is available weekly.

"Sports Interviews" is produced in two versions. One is a 3-minute interview. The other is a 1 and a half-minute interview. This program is produced during football, cross country, basketball and wrestling seasons as events occur. It features interviews with the coaches. These programs contain only the answers to questions. Timed blank spaces are to be filled in by the announcer at the station reading prepared questions. These programs provide a feeling of a "local" interview for the station.

"It's Your Yard and Garden" is produced jointly by the horticulture and forestry department and the radio department. This program provides the homeowner with tips on lawn, garden, shrub and tree care. It is 12 minutes long and is available weekly from April through September.

Special programs are made available to commercial stations as events take place. These are of varying lengths, depending upon the event. Most of these are recordings of speeches or concerts on campus.

One special program for a single station is made. This is an interview with faculty members or students for airing on WYAX radio during halftime of all South Dakota State University basketball games. It is an attempt to give listeners some idea of the scope of the work being done at the institution. This radio station reaches into just
about every section of South Dakota and has many listeners throughout the state.

The programs "SDSU Farm News," "Hi-Lites for Homemakers," "Homemaker Hints for Today," "South Dakota 4-H on the Air" and "Sports Interviews" are all under five minutes in length. These programs were started during the last seven years. Two other programs were started during this same period, but they are longer programs. They are "News and Notes" and "It's Your Yard and Garden."

Types of Programs Produced

Interviews make up the major portion of the programs produced at South Dakota State University. Interviews also make up the majority of programs that respondents produced.

The next most popular program listed was the one-person type, especially on the shorter material. Then came the combination type interview-discussion programs. Panel discussions and documentaries were seldom used. The respondent in Maine, however, reported that 40 per cent of that institution's programs were panel discussions. Kansas specialists reported that 20 per cent of their taped programs were of the documentary type.

Frequency of Programs Offered

The frequency of programs offered by the radio department at South Dakota State University is about the same as at sister institutions. Per cent of total programs offered daily by South Dakota State University was about 10 per cent higher than the average of the other institutions.
The share for weekly program offerings at South Dakota State University was about five per cent above the average of the other institutions. Programs for discretionary use by stations were somewhat less at South Dakota State University than the average of the other institutions.

Coverage of Special Events

Coverage of special events varied widely. The range was from no coverage to more than 100 special programs. Frequency of these offerings averaged between one and one-half a month. Offerings by the radio department at South Dakota State University averaged about the same.

Mailing Procedures of Daily Programs

Twenty-eight of the 34 respondents, or 82.4 per cent who produced daily programs mailed them to commercial radio stations once a week. Three of the respondents send their programs out twice a week. The remaining three who answered this question send out their programs on a daily basis.

Daily programs are sent out once a week at South Dakota State University.

Station Use of Programs

The range of stations using taped reports from respondents was from five in Hawaii to 115 in North Carolina. The tape service of the radio department at South Dakota State University is used by 32 commercial radio stations. This number varies by two or three
depending upon the season. With many daytime stations in South Dakota, tape usage sometimes drops during the short winter days.

A telephone hook-up from the campus to stations was reported by 17 respondents. This represented 42.5 per cent of the 40 respondents who answered this question. Many of the institutions which offered this service were located in the more heavily populated areas of the country. South Dakota State University does not offer this service through its radio department, nor is this service being planned for the near future because of the high cost involved in line charges.

The telephone was used for interviewing by 22 of the 41 respondents to this question, or 53.7 per cent. The radio department at South Dakota State University does not use this method. There is no equipment in the department for this type of interviewing. Also, most of the interviews used in the institution's radio programming are conducted with specialists located on the campus. These specialists can easily make recordings in the studios of the radio department. This insures professional quality in the recordings and eliminates a potential source of poor quality, the poor telephone connection.

County Agents Use of Tapes

A majority of the respondents prepared tapes to fit into county agents' local programs. Twenty-eight of the 40 respondents to this question, or 70 per cent, provided this service. The radio department at South Dakota State University does not provide this service.
Recording Facilities

A majority of the respondents reported that their institutions had separate extension and university radio facilities. Forty answered this question. Twenty-eight, or 70 per cent said they have a separate extension recording set-up. Thirty per cent have a combined operation. This combined operation is also true at South Dakota State University where personnel in the radio department work in both extension and university areas. About 70 per cent of the tapes released at South Dakota State University are related to agriculture and home economics. The remaining 30 per cent can be classified as university.

Full-time Positions

Full-time positions in radio varied from none to eight. Of the 40 respondents to this question, 18 had at least one full-time employee. Fifteen other respondents had two or more full-time employees in radio. Five had less than one full-time position and two had no one specifically assigned in the area of radio. The radio department at South Dakota State University has one full-time position in radio.

The most positions listed in radio, eight, were at Kansas State University where the extension and university facilities are combined. They have a powerful AM radio station on a low frequency. KSAC operates on a frequency of 530 kilocycles with five kilowatts power day-time and 500 watts at night. All eight of the persons employed are on the Kansas State University Extension Service staff.

18 Broadcasting, Section B p. '63.
Personnel at Kansas State produced both taped and live programs with taped programs including material up to 30 minutes in length. Slightly under five per cent of all the respondents produced this length show on tape. Kansas State University was the only institution which produced documentaries and which let the producer of each show select the topic and time for airing.

The interviews for the home economics tapes are handled by someone other than the radio specialist at South Dakota State University. This was true at 34.1 per cent of the 41 institutions included in this report. However, 65.9 per cent did not have outside help on these tapes. Of those institutions with one full-time employee or less, eight had someone else do the home economics tapes and 19 had no outside help. Of the 15 institutions with more than one employee, six had some outside help whereas nine did not. It is interesting to note that even where more than one person was employed several of the respondents found it advantageous to have someone else do such programs.

Use of Student Help

Forty-one respondents answered the question on student help. Seventy-three per cent said they used student help. The radio department at South Dakota State University hires two students on a part-time basis. Each student works between 10 and 20 hours each week.

These students at South Dakota State University have a variety of duties to perform and responsibilities to carry out. The foremost job is copying or dubbing tapes, which takes the majority of their
time. They also type inserts to accompany tapes. These inserts tell at what speed the tapes are recorded, the name of the program, topic, guest, narrator, running time of the program, whether the tape is a full-track recording and a return address. A space for comments is also provided. Students type labels for each station on each of the program lists, are responsible for keeping a check on tape returns from commercial stations and care for equipment.

Students are also responsible for the actual taping of many events of a special nature, and occasionally are asked to interview a guest for a program when the radio specialist is ill or otherwise unavailable. They also engineer programs when production is involved and operate equipment to switch from master tapes, voice, recorders and themes. All in all, they perform indispensable services within the radio department at South Dakota State University.

Choosing Subject and Airing Time

The topic and time for recording and airing material is determined by a committee at South Dakota State University. This is not true at most of the other reporting institutions. Only four of the respondents used a committee to select topic and time. The most popular method among the 41 respondents was for the radio specialist and subject-matter specialist to decide the topic and time jointly. This was 41.5 per cent of the total. The next most common method was for the radio specialist alone to choose the time and topic. He made the selection at 36.6 per cent of the institutions. Other methods of
choosing subject matter and time are used by the remainder of the respondents. At Kansas State University the producer of each show makes these decisions. At the University of Kentucky the department staff members from a subject-matter area decide what topic should be produced and when it should be aired. At the University of Minnesota department heads help the radio specialist select the time and topic. These are just three examples of the various ways programs get topics and times chosen.

The committee method for selection of time and topic is used at South Dakota State University.

**Sponsorship of Programs**

Most institutions have a policy of some sort regarding sponsorship of programs, but the policy varies considerably. The most popular way of handling this problem was to limit sponsors to those in keeping with the image of an educational institution. Spots must not imply college or extension endorsement of the product being advertised. This approximates the policy followed by the radio department at South Dakota State University.

Closely allied are the policies at five other institutions. Four have the policy of no implied endorsement with the additional stipulation that the spots must be used before the programs begin or after they end. The fifth institution in this group adds a buffer of "non-commercial" music to separate the advertising from the program.

Ten institutions allow no sponsorship of programs. Seven respondents did not answer this question. Three institutions had no
policy whatsoever and allowed commercial stations to do as they wished with the programs. The University of Delaware allowed the Delaware Power and Light Company to sponsor a program. In return the company provided an assistantship in radio. Oklahoma State University required a disclaimer, then let the commercial stations do as they wished. The University of Nevada reserved the right to refuse any sponsor. Rutgers University in New Jersey had one criterion—the sponsor must be acceptable to the talent on the program. Kansas State University had a full page of qualifications for sponsorship on both live appearances and taped programs.

Tape Returns

One problem with a tape service is getting the tapes back from commercial radio stations. Most stations are fairly dependable in returning tapes when they are through with them. At times a station may get behind because of problems at the station. Usually once the problems are corrected tape returns become normal. A card reminding personnel that they are behind in tape returns may get them back on schedule. This has been the usual way of handling the problem at South Dakota State University.

One radio station was dropped by South Dakota State University during the past year for non-return of tapes. The station returned the tapes only after a bill was sent. This is the ultimate weapon to force return of tapes.

Fourteen respondents had dropped at least one station in the year preceding this study.
There was no standard respondent approach to the problem of non-return of tapes. It appeared to be a problem because of the nature of the service offered. The respondents dropped a radio station only when other appeals failed. The value of the tapes was balanced against the coverage area of a station and the number of potential listeners involved. Respondents said another factor they considered was that of good will with radio stations.

**Equipment for Master Recordings**

The radio department at South Dakota State University uses Ampex tape recorders to make all studio recordings. An Ampex PR-10 portable is used for most recordings outside the studio. The only exception is where no electricity is available; a Norelco or Channel Master battery powered portable is then used.

Forty-six tape recorders were listed by 38 respondents as being used for making master recordings. Eight respondents listed two recorders for use when making master recordings. The Ampex was the most widely used of those mentioned. Thirty-five of the 46 respondents' recorders were Ampex. That was 76 per cent of the total. Magnecords were used by six or 13 per cent of the respondents.

**Dubbing Tapes**

Copying programs is time consuming. This work is done by students at South Dakota State University. At eight institutions this work was done by the respondent or other staff members. Twenty-one respondents used either student help or technicians to make copies.
Two respondents used commercial facilities for making dubs. The radio specialist at the University of California used commercial facilities exclusively. The radio specialist at North Dakota State University dubbed some tapes for himself and sent the rest to a commercial operator. Ten respondents had other arrangements for getting copies made. Seven of these reported that copies were made by radio station personnel at their respective institutions.

Comparison of Operating Budgets

No direct comparison could be made between the operating budget of the radio department at South Dakota State University and those of respondents. Many did not fill in this question. One respondent said the question was not specific enough. A number reported that their budgets were not separate from related communication services. The range of those responding was from "minimal" to $12,000. Fourteen of the 24 who did respond fell within the range from $1,000 to $3,000. Only one respondent reported more than $5,000 for his operating budget; that one reported a budget of $12,000. These budgets did not include any salaries or equipment purchases.

A related question concerning an ideal, but realistic, budget had only 20 responses. There was no attempt to make comparisons here, either. The only trend that was apparent was that the ideal budget was somewhat higher than that which the respondents reported. Only two of those reporting here said they were satisfied with their present budget.
Value of Commercial Experience

Forty-one respondents voiced their opinions on the value of commercial radio experience in extension radio work. Twenty-five, or 61 per cent, rated commercial experience as useful. Twelve, or 29.3 per cent, listed commercial experience as being essential. Only four, or 9.7 per cent, rated commercial experience as being not needed. The author believes that commercial experience is an asset to the extension radio specialist because it gives him knowledge of overall air-time content at a commercial station.

Comparison of Salaries

Thirty-five respondents compared their salaries with those of commercial radio personnel in their area. Sixteen, or 45.7 per cent, said their salaries were higher than salaries in commercial radio. Fifteen, or 42.9 per cent, estimated their salaries to be about the same as those of commercial radio personnel in their area. Four, or 11.4 per cent, reported their salary was lower than the salaries in commercial radio in their area. A comparison of the salaries at commercial stations in the immediate area surrounding Brookings showed that the average salary was slightly higher than that of the radio specialist. The top reported salary locally was slightly more than $11,000. Other salaries brought the average down to $10,000.
CHAPTER IV

CONCLUSIONS

Ideas to Improve SDSU's Programs

One of the purposes of this study was to get new ideas for South Dakota State University's tape service to commercial radio stations. The survey turned up a number of ideas deemed useful by the author. One of these, the introduction of 1-minute spots on topics in horticulture during the growing season, has already been tried.

The program that had been produced to cover topics around the yard and garden was "It's Your Yard and Garden" which was described earlier. It was a weekly program mailed so that it could be used on the weekend by the commercial radio outlets with the hope that it would reach a maximum audience. The program provided the homeowner with tips on lawn, garden, shrub and tree care. It was available from April through September and was used by 18 radio stations.

Two factors were important in the change from the long to the short form. First, the 1-minute spots in this field had proved successful in neighboring states and in those with large metropolitan centers. Second, members of the staff in horticulture and forestry hoped the spots would be used at "better" times and more often. It was decided to write up the spots and have the radio specialist record them.

About seven of the spots were included in each weekly tape. A
short pause was left between the spots on the tape for easier cueing. All of the stations using programs from the radio department at South Dakota State University were contacted. Each was informed of the availability of the program, its contents, length and intended use.

Use of the program was very limited. Personnel at only four stations decided to use the spots. Because the spots were not used by more stations, it was decided to drop them at the end of June rather than continue them all summer as had been planned. One of the users of these spots informed the author that the only reason he used the spots was because he couldn't get anything else on the subject. He requested the radio department at South Dakota State University to provide the long version of the program in the future.

In essence, then, instead of increasing the number of listeners, fewer potential listeners were reached than in previous years. Instead of serving more stations, fewer were served. Instead of hitting more listeners through use of the horticulture spots at prime time, fewer were reached.

The idea of short spots on horticulture-forestry subjects for homeowners did not work in South Dakota.

The author believes there were a number of reasons for failure of the spots to gain general use during prime time. First, the spots were all put on one tape which made it difficult for station personnel to cue up each spot. The right spot was difficult to find after the first few were played. Second, prime time is usually sold and is not available for public service programming. Finally, the short spots
have been most successful in states with large metropolitan centers. South Dakota has no comparable metropolitan centers.

The first problem, cuing the spots, was a technical problem that could have been resolved by putting leader tape between the spots. Station personnel could then find any spot they desired by counting the strips of leader tape.

There wasn't much that could have been done about the last two factors. Possibly improved content might have made some difference in the time the spots were aired.

A number of other ideas were obtained from the respondents. One of the ideas was from the respondent at Auburn University in Alabama. The extension service there provided a 5-minute farm summary six days each week to both United Press International and Associated Press. The respondent said that "this is one of the best pieces of work that we do." A survey showed that 88 stations in Alabama, both radio and television, regularly scheduled this news.

The Illinois radio staff members produced a weekly report on insect problems around the state. It was available via tape and telephone. The report was available to radio farm editors and farm advisors each Friday. By dialing a number in Urbana, Illinois, farm editors and advisors in commercial radio could get a 1 to 2-minute current report of the insect situation in their half of the state. The leased line was used for the northern report from 9-11 a.m. and for the southern report from 11 a.m. to 1 p.m. Entomologists and other staff members compile the summaries from farm advisor reports.
Radio specialists prepare and voice the tapes. The respondent said this service is used extensively by commercial stations throughout the state.

A number of respondents sent along flyers or leaflets telling about the services they offer in radio. Program descriptions made up the main portion of the leaflets. Also included were the stations which aired the programs. One included the time each station aired programs.

These were some of the ideas from the respondents. These ideas may or may not be of value in South Dakota. More work with these ideas and adaptation to this area would be needed before they could be tried.

Conclusions

Based on the results of the survey, some of the tentative conclusions were found to be true and others false.

1. Commercial radio wants programs of a short length to fit into the pattern of today's radio. This proved to be true. Taped programs provided by land-grant institutions were predominantly of the short variety. Almost three-fourths of the programs offered by respondents were five minutes or less. However, even though the percentage of the longer programs was small, they were considered important by the respondents who produced them.

2. Interviews are the most popular program produced by college radio personnel for use in tape services. A majority of the respondents reported that they use interviews. This is one of the easiest
programs to produce and it gets good listenership. There does appear to be a trend toward more one-person programs.

3. Daily program offerings would be most popular because they would provide continuity. This was true, but continuity didn't appear to be as important as the author thought. Daily program offerings were reported by 39.5 per cent of the respondents. Weekly programs were a close second with 35.4 per cent of the total.

4. Coverage of special events would be difficult because of the delay in tape versus live coverage. Even though this service is difficult, many specialists reported that they provide this service at least occasionally. The number of events covered was based on commercial coverage of the special events. The predominant types of programs produced by respondents on special events were background and in-depth reports.

5. Daily programs are most likely mailed once each week. Daily programs were sent out once each week by 82.4 per cent of the respondents.

6. Campus to commercial radio station telephone hook-ups would be feasible where distances would be small enough to warrant line charges. Beeper service was offered by 42.5 per cent of the colleges to commercial stations. These hook-ups appeared to be most common in states where distances were short and population high. However, there were a number of institutions providing this service where distances and line charges were substantial.

7. Interviews over the telephone are likely to become important...
sources of program material. Interviews were conducted by 53.7 per cent of the respondents.

8. At least 50 per cent of the institutions provide tapes to fit into county agents' radio programs. Seventy per cent of the respondents provide tapes for use by county agents.

The author believes that some of the best program sources for the county agent are local people and local events. Many of the county agents in South Dakota now have portable tape recorders which they can take along when they make calls. They can interview a variety of people throughout their counties for use on their radio programs. This means listeners will hear the names of local people and places with which they are familiar. An occasional interview with a subject-matter specialist visiting in the county will add spice and outside information.

The idea is to let the county agent be the authority in his area. However, if a particular problem comes up with which he is not familiar, he can call a specialist at South Dakota State University. An example when county agents needed clarification of a problem took place in the spring of 1963. A frost hit the entire state in late May. Chief damage occurred to the alfalfa crop which was about three-fourths mature. Farmers contacted their county agent to see what they should do. Would it be best to cut the alfalfa before it started to wilt? Or should they let it stand and wait for the regrowth before they cut? To get the answer many of the county agents contacted the head of agronomy at South Dakota State University. With this information at
hand each county agent was able to recommend the same principle his counterpart in other counties of the state recommended. Each county agent is the authority in his area through this method and has the backing of specialists on the state level. Those that had access to a radio station made special reports early enough in the day so that farmers still had time to take advantage of the recommendation.

9. **Extension and university radio functions are separate in more institutions than in those with combined responsibilities.** Seventy per cent of the respondents reported separate extension and university radio facilities.

10. **Full-time positions vary according to services offered to commercial radio and other staff members.** Positions in radio varied from none to eight. Services offered and duties of the employees varied considerably. No direct correlation could be made between the number of positions and services offered from the information received.

11. **Home economics programs, in the majority of cases, will be handled by someone other than the radio specialist.** Only 34.1 per cent of the respondents reported someone other than a full-time radio employee made the home economics tapes; 65.9 per cent did not have outside help. However, this question was related to the previous question and did not take into consideration that where more than one fulltime position was involved the second person was often a home economics radio specialist. The question did not distinguish between the duties of employees within the radio area.

Often where more than one male person was employed a woman was
brought in to voice homemakers' programs. It is presumed that the respondents found that a woman's voice on these tapes was more readily accepted by commercial radio stations.

12. Students are hired by most institutions to dub tapes. Seventy-three per cent of the respondents said they used student help for this phase of work.

13. Sponsorship of programs is allowed by most institutions. Criterion for sponsorship is that sponsors must be in keeping with the image of the school. Ten of the institutions allowed no sponsorship of programs.

The most used method to control sponsors was to limit sponsors to those in keeping with the image the institutions were trying to project. Policies varied considerably after this criterion was met.

14. Tape returns are important to a tape service. Almost all radio stations return them on a regular basis, but most institutions have had to drop at least one station in the last year because tapes were not returned regularly. Thirty-five per cent of the respondents had dropped one or more stations in the year preceding the questionnaire. It appeared that dropping a station was used only as a last resort after other appeals had failed to get the tapes returned.

15. Quality of master tapes determines program quality. Ampex tape recorders have become the base unit for a majority of studios. Seventy-six per cent of the respondents use an Ampex tape recorder to make master recordings. Magnecords were used by 13 per cent of the respondents.
The entire area of recording is mushrooming so rapidly that it is difficult to keep abreast of new developments. New companies continue to enter the field almost daily. At latest count there were more than 200 different recorders on the market. A majority of these do not meet broadcast standards and specifications. However, this still leaves a great number to keep track of for innovations that might improve the extension radio specialist's capabilities in recording.

16. A realistic budget for one institution would be quite unrealistic for another because of different service or method of work. No comparisons were made in this area. The question was not specific enough to get answers which could be used to compare budgets with services provided and methods of work involved.

17. Commercial radio experience would be useful to a radio employee. Only 9.7 per cent of the respondents rated commercial radio experience as being not needed. Sixty-one per cent said commercial radio experience was useful and 29.3 per cent said it was essential.

18. Salaries of college radio personnel are higher than commercial radio. This was true for 45.7 per cent of the respondents. About the same salary was reported by 42.9 per cent of the respondents. Salaries lower than those in commercial radio were reported by 11.4 per cent of the respondents to this question.

19. Freedom to develop programs exists at most institutions. Only one respondent reported he did not have the freedom he deemed desirable in his work.
20. **Regular broadcast radio outnumbers both FM radio and television at sister institutions.** This proved to be false. There has been a boom in construction of both FM and television facilities at educational institutions. There were 19 AM stations, 37 FM radio stations and 21 television stations in operation at the time the survey was made. Since that time no AM radio stations have been added, but four FM radio stations and 11 television stations have become operational.

Getting topics to fill up programs is quite a problem. There are a number of methods to select topics and airing time. As has been mentioned, the radio specialist, the radio specialist and the subject-matter specialist or the committee method might be used. At South Dakota State University the committee method is used. This process really involves the other methods previously mentioned. The first step involves sending a form letter to the extension leader in each subject-matter area. Then this letter is routed to each specialist in the leader's area. The specialist then lists the subject, or subjects, he would like to discuss and gives the dates he thinks the subjects should be aired. The letters are then returned from each area for action by the radio committee.

The radio committee then examines the suggested topics and arranges them for each day of the month. Usually the topics suggested by the individual extension specialists are approved for airing. Occasionally the committee substitutes another topic which members consider more timely. Suggested topics usually complete about two-thirds of
the schedule for the following month. The next step for the committee is to fill in the openings in the schedule with a timely topic from another area. Most of these topics are chosen as a result of some current research going on in the experiment station. Personnel from the experiment station as well as extension staff members, take part in radio programs.

A copy of the schedule for a month is sent to each person who is listed on the schedule. A note at the bottom of the schedule informs them that they will be contacted ten days to two weeks before the scheduled airing date. These scheduled topics are not followed if the subject-matter specialist and radio specialist decide there is a more timely topic. This gives sufficient leeway in programming to make changes where they are needed.

This system for getting topics and times for the programs has worked successfully at South Dakota State University. By using experiment station personnel on topics of current research, the programs make use of material as it develops. This type of programming also gives listeners an idea of the scope of research at the institution.

Mailing procedures are critical in a tape service. As has been mentioned, South Dakota State University mails daily programs once each week. There are a number of reasons for this policy. First, it is much easier to keep mailing lists of radio stations straight where more than one daily program is produced. Second, more than one of the shorter, daily programs can be put on a single tape. Third, it takes less time and labor to produce the same number of daily
programs. Finally, there are considerable savings in packaging time and in postage.

A closer look will show why this policy proves effective. Mailing lists would be difficult to keep straight for the four daily programs produced by the radio department if tapes were sent out daily or even semi-weekly. Just the simple mechanics of keeping tapes, inserts for identification of the program on the tape for the station, and labels for each station physically separated would take additional time. It is of utmost importance in relations with radio stations to make certain the scheduled program arrives at the stations before it is needed. Otherwise they have to substitute other material. If this happens a number of times, the station manager will usually drop a program in favor of one he can depend upon. When one depends on public service time, as most institutional radio departments do, for most of its time, dependable service must be provided.

Three of the daily programs are 4-minutes or less. More than one daily program is put on each 15 minute tape. For example, three 4-minute programs are put on one tape and all seven of the 1-minute programs are put on one tape. Thus, only two 15-minute tapes are required for each station's 4-minute programs. If these programs were sent out daily, it would require six tapes for the farm program, five for the homemakers' program and seven for the 1-minute spots. Figured on a weekly basis, the radio department saves 13 tapes for each station that uses all of these programs.

Labor and time can also be saved. The first step is to prepare
a master for each program. The tapes for the farm program, for example, are prepared in several steps. The program for Monday is dubbed from the original to a clean, de-magnetized tape which will serve as the master. A 10-second blank space is added at the end of this program. Then the program for Tuesday is dubbed onto the master, and another 10-second blank space is added. Then the Wednesday program is copied. This tape now is complete as a master for the first half of the week. The same process is used for the second half of the farm program as well as for the homemakers' program.

The 10-second pause between programs makes it easy for personnel at a radio station to find each program after the first has been played. Only three programs are put on a tape so the personnel do not have to run the tape so far forward to get at programs for the latter part of the week. It would be easier for the institution to use half hour tapes and put all the programs on one tape. However, some of the radio station personnel object to searching for the program they want, and the author has found that a few refuse to play the number six and seven spots in the 1-minute series because it takes too long to find them.

Once the masters for a program have been completed they can be used to make further copies. Time and labor are saved while these are being copied. First, only a portion of the total number of tapes needed, if sent out daily, have to be put on and taken off the recorders. Second, while tapes are being copied, other duties, such as typing inserts and labels can be performed. After the first copies have
been removed from the recorders, inserts can be placed inside the boxes. After the first copies of the second half have been completed, the operator can package and label these programs for the week for each station while making further dubs.

A savings of 70 per cent in packaging materials for mailing is effected under this policy. Only 22 per cent as many mailing cartons are used for weekly mailing as would be required for mailing on a daily basis. The larger cartons, however, do cost slightly more than the ones for single tapes, and more sealing tape per carton is also required for the larger cartons. These expenses reduce total savings by almost 10 per cent.

There are also savings on postage fees when tapes are sent out weekly. A single tape and mailing carton costs five cents to mail under present postage rates. If one program for a single station were sent out daily, cost for six days would be 30 cents. Total cost is only six cents for the entire week if the tapes are sent out in the slightly larger carton. Over a year this saving amounts to a considerable sum of money. Based on current postage rates and number of stations using these three daily programs, the cost would be $519.00 for mailing on a daily basis, but only $114.40 for weekly mailing.

There is one disadvantage to mailing on a weekly basis. Programs must be taped longer in advance. Programs are now taped from one to two weeks in advance of airing dates in the radio department at South Dakota State University. To avoid this delay many of the
respondents surveyed provided special reports on tapes with the idea of getting them to the station within a day or two after the event.

Suggestions for Further Study

This investigation reveals that there are many different methods used to get information to radio stations and to the public. Further research into these methods is needed to show why a particular method is used. This could lead to a revelation of the strong and weak points in each method.

Equipment is important in the operation of a radio tape service. More information is needed on facilities, recording equipment, dubbing equipment, microphones and other equipment. Perhaps better quality of programs and more efficient use of time might be the result.

Further study of the duties of staff members and part-time help would be advisable. This could define what areas are being covered and those that lack coverage. Students can perform many duties and thus relieve the radio specialists for creative work.

There are other areas that should be investigated, particularly in relation to the audience. Are people listening to the programs? Have the needs of the audience changed? What role do educational and occupational levels play in program usage? Have audience listenership patterns changed?

There is a lack of research and specific knowledge in the field of radio use at land-grant institutions. Many studies could be undertaken to lead to an improvement of services.
Summary

The purpose of this study was to gather information on the use of radio at land-grant institutions in the United States and to get new ideas for the improvement of South Dakota State University's tape service.

To get the information desired, a questionnaire was designed and sent to the 49 other land-grant institutions listed in the book, Agricultural Information Staffs in the State Land-Grant Colleges and Universities, published by the United States Department of Agriculture. This report is based on 47 returns.

Taped programs were offered by 69 per cent of the 41 respondents who answered enough questions to be included in the results. Programs under five minutes were the most popular. Interviews were the most popular type of programs produced. One person and combination programs are becoming popular. In the combination program the radio specialist has the major role while excerpts from an interview with a subject-matter specialist support his stand. About 75 per cent of the programs are produced on a daily or weekly basis with 14 per cent produced for use when the radio station personnel can. More than 80 per cent of the respondents send out daily programs once each week. Background and in-depth reports predominated over straight news reporting when special events occurred.

Telephone communications to commercial radio stations were offered by 42.5 per cent of the respondents. Seventy per cent reported that they prepared tapes for use by county agents.
Full-time positions varied from none to eight. Some of these positions were combination radio and television. Student help is used by 73.2 per cent of the respondents. Student help or the help of a technician is used by 21 of the respondents to produce copies of the programs.

About three-fourths of the respondents decide topic and time of broadcasts with the help of the subject-matter specialist involved or by himself.

Getting tapes returned by commercial stations creates problems, but only 35 per cent had to drop one or more stations in the year preceding this survey. Stations are dropped only as a last resort.

Ampex tape recorders are used to make master recordings by 76 per cent of the respondents. Magnecord recorders were used for master recordings by 13 per cent.

Commercial radio experience was rated as useful or essential by 90.3 per cent of the respondents.

Salaries of radio specialists were either higher or about the same as those in commercial radio in about 90 per cent of the reports. The range for someone with three to five years experience with a bachelor's degree was from $7,000 to $12,000 with the average from $9,000 to $10,000. For someone with a master's degree and the same amount of experience, the range was from $7,000 to $14,000 with $12,000 and $10,000 most often mentioned, and in that order.

Only one respondent reported that he did not have the freedom he desired in his work to develop programs.
APPENDIX A

DIRECTORY OF 50 LAND-GRANT SCHOOLS INDICATING THE
NUMBER HAVING AM, FM OR TELEVISION FACILITIES
AND THE NUMBER HAVING SEPARATE FACILITIES FOR
EXTENSION AND UNIVERSITY BROADCASTING
APPENDIX A

Directory of 50 Land Grant Schools Indicating the Number Having AM, FM or Television Facilities and the Number Having Separate Facilities for Extension and University Broadcasting

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APPENDIX B

CONTACT LETTER SENT TO RADIO SPECIALISTS

AT LAND-GRANT INSTITUTIONS
Dear Radio Director:

The enclosed short questionnaire concerns Land-Grant University radio. I'd be most appreciative if you would take a few minutes to fill it out.

The purpose is to gather some of the details on radio operations in each state. I feel this would be helpful to radio programming here, and most likely you would be interested in what others are doing too. I'll be glad to send a summary of the results.

Sincerely,

Neil Stueven
Director of Radio
APPENDIX C

QUESTIONNAIRE
QUESTIONNAIRE

1. Type of program you produce:
   live______ taped______ both______

2. Length of taped programs you offer:
   30 min.______ 15 min.______ 7 min.______ 5 min.______ 1 min.______ Others__________
   (specify)

3. What per cent of your taped programs are:
   interviews__________
   combination interview and discussion__________
   panel discussion__________
   one person__________
   other__________
   (specify)

4. Frequency of programs you offer:
   daily________
   weekly________
   for use when station can________
   other________
   (specify)

5. If you handle special events outside of your regular programs, how many did you send out in the last 12 months?__________

6. If you have a daily taped program, do you send tapes out weekly______, several times a week______, daily______?

7. How many programs do you send out each week?__________ (Count each complete unit, even if it is only a one-minute spot).

8. How many stations do you serve?__________

9. Do you offer a telephone hook-up from the campus to stations? Yes______ No______

10. Do you use telephone interviews on your taped programs? Yes______ No______

11. Do you prepare tapes to fit into county agents' local programs? Yes______ No______

12. Is there a separate University and Extension radio set-up? Yes______ No______
13. How many full-time positions do you have in radio? __________

14. Does someone else handle home economics tapes?
   Yes _____ No _____

15. Do you hire student help?
   Yes _____ No _____

16. Who determines topic and time?
   ______ yourself ______ committee
   ______ yourself and specialist ______ other (specify)

17. If your programs can be sponsored, what criterion is used in
determining an acceptable sponsor? ________________________

18. Have you had to drop any stations in the last year because tapes
were not returned regularly?
   Yes _____ No _____

19. What make and model recorder do you regularly use for making
masters?

20. Who makes copies or dubs?
   ______ yourself or other staff
   ______ student help or technician
   ______ commercial
   other __________________________ (specify)

21. What is your approximate operating budget for radio (not
including salaries of persons on contract)? ________________

22. What do you feel would be a near ideal—but realistic—budget?

23. How would you rate commercial radio experience in extension
radio work? _____ essential _____ useful _____ not needed

24. How do radio salaries in your area compare with salaries in
commercial radio?
   _____ about the same _____ lower _____ higher
   than commercial radio

25. What yearly salary would be fair for a university radioman
with three to five years radio experience and a bachelors
degree ________, masters ________?
26. Do you feel you have enough freedom in your work?

27. Does your institution operate any of the following stations?

   AM   FM   TV

28. Please outline the general set-up of the ones with which your institution is involved: (use back of page)
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