

THE PERCEPTIONS OF MONTANA VOCATIONAL AGRICULTURE
TEACHERS REGARDING HOW TEACHING SALARIES
MEET THEIR FINANCIAL NEEDS

by

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of a professional paper submitted by

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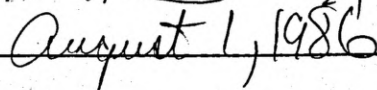
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ABSTRACT

The purpose of this study was to determine the teachers' perceptions of how teaching salaries met the financial needs of Montana vocational agriculture teachers, the degree to which teachers supplemented their income, how that supplemental income was used and the sources of that supplemental income.

There is a need to retain highly qualified and experienced teachers in the profession. One of the main factors causing teachers to leave the profession has been salaries. This descriptive research study was conducted to further investigate the salary issue. The population of the study consisted of fifty Montana vocational agriculture teachers who had taught for at least one year prior to the 1985-86 school year. A survey instrument was developed to gather data from the population. The instrument consisted of thirty questions dealing with demographic data and personal finances. The study was based on a 78.1 percent response rate.

The researcher concluded that the salary issue will continue to be a major factor causing vocational agriculture teachers to leave the profession. Teachers spend 81 percent of their teaching salary for necessary financial needs. Teachers with supplemental income use 67 percent of that income for necessary financial needs. Approximately 2 to 5 percent of total teacher income was spent in each of the areas of professional involvement, teacher recertification, inservice workshops, volunteer work and educational advancement. Teachers spend 12 percent of teaching salary and 59 percent of their supplemental income for capital accumulated. Teachers supplementing income tend to find that income originating from agriculture production, spouse's income, part-time work and capital and dividend income. Teachers that earn supplemental income spend approximately 18 percent of their total work time generating that income.

CHAPTER I

INTRODUCTION

Vocational agriculture teacher turnover in Montana each year ranges between ten and twenty percent. The members of the Montana Vocational Agriculture Teachers Association (MVATA) have become increasingly aware of the loss of experienced professionals in the field of teaching. The loss of many of these highly trained professionals during their first five years in the field is a matter that needs to be addressed by the profession and those who deal with these professionals on a daily basis. The abandonment of the teaching field by these professionals after having undergone four or more years of training is a serious matter.

Taylor (1985) indicated that only about one-half of the professionals qualified to teach vocational agriculture actually become teachers and many of those leave teaching before they have taught ten years. The constant turnover may help new professionals entering the field find jobs, but it may not be the type of situation that brings public confidence and respect to vocational agriculture programs and the teaching profession associated with those programs.

Up until 1985, there has been a national shortage of certified vocational agriculture teachers. In 1985 and 1986, there has been a surplus of vocational agriculture teachers trained and seeking employment in the teaching field. This situation may be due to the economics of the times or it may be due to the efforts of our universities

nationwide to reverse the vocational agriculture teacher shortage; however, the present situation allows for some selection by employers among graduates, but it still does not solve the problem of teachers leaving the field since teacher experience and quality programs are directly related (White, 1979).

In our society there has evolved a direct relationship between experience and salary. The more years of experience, the higher qualified and the higher level of education that a person has attained, the more he or she receives on the job market. Vocational agriculture teachers who can find higher salaries elsewhere may not remain in the profession under the current conditions. Taylor (1985) concluded that one reason teachers left the profession was due to salaries being inadequate. The researcher felt that it would be in the best interest of the profession to look further into the salary issue, thereby providing factual information, particularly as to why salaries are perceived by teachers to not be adequate to retain experienced and highly qualified individuals in the profession. This study begins to look at the salary issue by determining how teachers spend their teaching salary and supplemental income.

Statement of Purpose

The purpose of this study was to determine the teachers' perceptions of how teaching salaries met the financial needs of Montana vocational agriculture teachers, the degree to which teachers supplemented their income, how that supplemental income was used and the sources of that supplemental income.

Need for the Study

There is a need to retain highly qualified and experienced teachers in the profession. Taylor (1985) indicated in his study that ninety-seven Montana vocational agriculture teachers had left the profession for reasons other than retirement and death between 1974 and 1983. In his summary, Taylor (1985) indicated that one of the main factors influencing vocational agriculture teachers to leave the profession was associated with salaries. This exodus from the profession should be of concern to all of those associated with vocational agriculture in Montana. There is not only a need to further define the salary problem, but there is a need to determine what, if anything, those teachers in the profession are doing to cope with the salary problem.

There is also a need in the profession to realize that there is nothing wrong with looking at the salary issue of this profession. The new professionals in this field need to know what they are faced with and solutions need to be found to deal with the salary problem.

This study was conducted with the intent to provide more information regarding the salary status among instructors in Montana's vocational agriculture teaching profession. It is hoped, as a result of this study, that those associated with this profession will be able to use this information to find a solution to the salary problem among those involved in vocational agriculture in Montana.

Objectives

The objectives directing this study were:

(1) To determine the percentages that teaching salaries provide for and reflect the vocational agriculture teacher's financial needs.

(2) To determine the percentage of total income for vocational agriculture teachers derived from teaching salary and supplemental income.

(3) To determine the percentages of teaching salary and/or supplemental income used for the following:

- (a) necessary financial needs
- (b) professional involvement
- (c) teacher recertification
- (d) update and inservice workshops
- (e) capital accumulation
- (f) volunteer work
- (g) educational advancement

(4) To determine the sources of vocational agriculture teachers' supplemental income.

(5) To determine the percent of time vocational agriculture teachers spend earning supplemental income.

Assumptions

The assumptions of this study were:

(1) The 1985-86 Montana vocational agriculture teachers constitute a valid population.

(2) The salary problem and teachers leaving the profession are related.

Limitations

The limitations of this study were:

(1) The study was limited to Montana vocational agriculture teachers who had more than one year of teaching experience and taught during the 1985-86 school year.

(2) The study did not attempt to look at individual cases, but collected and compiled data for the population as an aggregate.

Definitions

(1) *Necessary Financial Needs* -- Includes the items of food, clothing, insurances, mortgage or rent payment, taxes, entertainment, children's education, transportation, health, utilities and other necessary items.

(2) *Supplemental Income* -- Any income other than a teaching salary, from any source, including spouse's salary.

(3) *Profession* -- The Montana vocational agriculture teachers and the positions they hold collectively as a group.

(4) *Professional Involvement* -- Teacher involvement in professional activities including dues and meeting expenses.

(5) *Capital Accumulation* -- Expenses related to increasing one's net worth.

(6) *Volunteer Activities* -- Those activities performed without any monetary compensation but which result in a monetary expense to the individual.

(7) *Workshops* -- Educational activities held to increase the knowledge and skills of a teacher.

(8) *Work Time* -- The time spent earning a monetary compensation based on a 52-week year.

Methodology

The purpose of this study was to determine the teachers' perceptions of how teaching salaries meet the necessary financial needs of Montana vocational agriculture teachers, the degree to which they supplement their income, how that supplemental income was used and the source of that income, the following methods and procedures were employed.

Population

The population of this study was comprised of the 1985-86 Montana vocational agriculture teachers who had at least one year of teaching prior to the 1985-86 school year. This population consisted of sixty-four of the total of seventy-nine vocational agriculture teachers in Montana in 1985-86. The entire population of sixty-four was not too large to be studied and was used as the population for the study. Addresses for the population were obtained from the Agricultural and Industrial Education Department at Montana State University and from the Montana Vocational Association Executive Secretary.

Instrumentation

An instrument was designed by the researcher that would quantify the purpose and objectives being studied (Appendix B). Definitions were devised to clarify the instrument to respondents. Since the information being requested dealt with personal finance, extreme care was taken to protect the anonymity of the individual respondents. This was accomplished by designing the questions in such a way that respondents used percentages of their earnings by specified category, thus not reflecting the actual dollar amounts earned by category. The instrument consisted of thirty questions. Two dealt with demographic data; the remaining twenty-eight dealt with finance and/or its source. Twenty-seven of the thirty questions were answered using a percentage scale (0-100%). The remaining three questions were answered using a number. The researcher designed the instrument so it would provide accurate data, yet be easily completed so as to assure a high rate of return.

Usability

Usability was checked by submitting the survey instrument to a total of four staff members at Montana State University. One was employed by the Cooperative Extension Service and three were from the Agricultural and Industrial Education Department. After reviewing and incorporating suggestions by MSU staff, the instrument was resubmitted to MSU staff and reviewed by one former vocational agriculture teacher. Suggestions from these individuals were formulated into the final instrument and cover letter. Respondents were assured that all responses

would be kept confidential and that the data from the total population would be aggregated and reported. A finalized copy of the cover letter and the accompanying survey instrument are enclosed in Appendix A and B, respectively.

Data Collection

The initial survey and cover letter were mailed on June 12, 1986. The mailing list and return envelopes were numbered to determine the non-respondents. A follow-up letter (Appendix C) and survey instrument were mailed to the non-respondents of the first survey on July 2, 1986. At that time 42 (65.7%) of the surveys were returned. By July 11, 1986, 48 (75.0%) of the surveys were returned. By July 14, 1986, which was the cut-off date for survey returns, 50 (78.1%) of the surveys were returned. A total of 14 (21.9%) surveys were not returned. A third return was not sent due to the high return on the first two mailings.

Analysis of Data

The data gathering techniques used in this survey were descriptive in nature. Most responses were given as a percentage and the others were a number. The raw data were compiled on a master sheet and then fed into a Sharp EL-510S calculator that had statistical functions to determine the means, standard deviations and percentages.

CHAPTER II

REVIEW OF LITERATURE

The researcher utilized two computer searches by the Online Bibliographic Services, review of the ERIC System and a review of the index of Dissertation Abstracts International, all of which are a part of the resources of the Montana State University Library, to search for specific articles related to this study.

Because a shortage of vocational agriculture teachers had concerned the profession prior to 1985, a number of studies to determine factors that resulted in teacher shortage were done by researchers in various states. Shadle (1980) indicated that the shortage existed even though Departments of Agriculture Education adopted as their main goal the intention to provide an adequate supply of qualified teachers. Using a previous study from Ohio State and the 1972-1978 graduates and others certified to teach by the Pennsylvania Department of Agriculture Education, he identified a number of factors that were associated with teachers leaving the profession. The factors identified for teachers leaving the profession were: the teacher had different long-range goals, salary, inadequate administration support, students placed in class that did not belong there, and poor student attitudes and discipline problems. In similar studies performed in Oklahoma by Adams and Morton (1975) and Reece (1976), salary was identified as the number one factor for teachers to leave the field, while a study by White (1979)

rated salary as the ninth ranking factor for teachers leaving the profession. These studies all point out the fact that salary is an issue in the profession resulting in teacher exodus.

Studies by Dillon (1978) in Nebraska, who interviewed past vocational agriculture teachers, Crosen (1976) in Virginia, and Branson (1978) in Washington, all indicated that salary was an issue for leaving the profession but did not find it ranked as high as the studies by Adams and Morton (1975) and Reece (1976). The Taylor (1985) study of Montana vocational agriculture teachers who had left the profession between 1974 and 1983 was the most recent study that identified factors for teachers leaving the profession. This study utilized a population of 97 former vocational agriculture teachers who had left the profession. Taylor (1985) compiled a lengthy list of factors for a survey instrument that included eight factors dealing with monetary considerations and a detailed list of factors making up nine other categories all dealing with issues that may have resulted in teachers leaving the profession. The monetary consideration category in the Taylor (1985) study included the following factors:

- (1) Salary was inadequate
- (2) Inadequate travel expense
- (3) Salary increase was unacceptable
- (4) Retirement benefits were inadequate
- (5) Evening class compensation too low
- (6) Extra duty compensation too low
- (7) Fringe benefits too low
- (8) Extended contract

The Taylor (1985) study had considerable influence on the researcher identifying that the salary issue existed in Montana by stating in his summary that, "The majority of factors influencing vocational agriculture teachers to leave the teaching field were primarily clustered around the salary, advancement, and administration areas."

The Bender (1978) speech before the American Vocational Association Agriculture Education Division indicated concern in his remarks about the number of teachers leaving the profession as indicated by the fact that the average age had dropped from 41 in 1961 to 33 in 1978. Bender also expressed concern over the lack of experience of teachers in the field indicating that the number of teachers with twenty or more years of experience had dropped from 28 percent in 1961 to 14 percent in 1978. In quoting a study done in Ohio, Bender (1978) listed five factors why teachers were leaving the profession. These factors were long-range occupational goals, students in class who should not be there, inadequate advancement opportunities, long hours and inadequate salaries. Bender (1978) also indicated that teaching was more difficult than in previous years and listed lack of financial support as one reason for this difficulty.

The Mattox (1974) study paralleled to some extent the Taylor (1985) study, but took place in Arizona. This study surveyed 58 former teachers who had left the profession between 1959 and 1972. He attempted to identify what were termed environmental factors of the vocational agriculture teaching profession. The factor inadequate salary ranked number three as a reason for teachers quitting the field. The only

other factor that indicated a financial problem ranked seventh and was too few teacher aids and materials.

The study by King and Key (1975) was an in-depth survey of salaries and working conditions of teachers in the United States. This study alluded to the shortage of teachers in the nation as being 106 as of August 1974. The study was an attempt to pull together the salaries and working conditions in different states in order to provide data to encourage teachers in some states to take teaching positions in other states. The study had a 100 percent return. The findings of the study indicated the minimum, maximum and average starting salaries of the states. The study dealt further with the salary issue by recommending that salary records be compiled and shared with other states, the public and the profession on a yearly basis.

The Melton (1977) study, like the King and Key (1975) study, surveyed salaries nationwide. The conclusions pointed out the salary issue once again by stating that, "in some states a lack of communication about salaries existed between the state departments and the local school districts." This was just two years after the King and Key (1975) study in which a 100 percent response regarding salary information was obtained. Both studies reported findings regarding minimum and maximum starting salaries, but the Melton (1977) study also reported on the number of months spent on the job by teachers. This study indicated that only 19 states had 100 percent of vocational agriculture teachers employed for 12 months.

The Garcia (1983) study sought to identify factors resulting in career change among vocational education teachers and also to identify

factors that hindered career change. The results of this study were interesting in that salaries were the number one factor causing teachers to seek to change careers, but the most significant factor identified for not changing careers by vocational teachers was the lack of financial security.

The Todd (1982) study in South Carolina was a survey study to determine employment trends among Clemson University graduates in agriculture education. The study identified factors that influenced the graduates to teach or to seek employment in other fields. The results of this descriptive research study indicated that only one-half of the graduates could be expected to take teaching jobs and approximately one-half of those will leave teaching for other jobs. Among the factors influencing graduates not to teach, salaries ranked first. Among Clemson graduates who were teaching and asked to identify factors they disliked most about teaching, salary once again ranked first.

The Henderson (1982) study was a research study that randomly sampled the Texas Teachers Association membership to begin to understand how 1980 economic conditions were affecting those teachers. A response of 70 percent was obtained on a sample population of 424 randomly selected teachers. The questionnaire used to survey the sample population included twenty questions covering demographic, salary and moonlighting (supplemental income) areas. The study concluded that a state of crisis existed in Texas education. One in three teachers was considering giving up teaching and low salary remained the major reason. Nearly 30 percent of the teachers surveyed were moonlighting to supplement their salaries. Texas teachers were earning only 68 percent of

what it takes to support a family of four in a middle class but not affluent fashion. Due to data collected regarding the salary issue, the study predicted a continued teacher shortage in Texas. The teachers surveyed indicated that their effectiveness in the classroom was being hindered by their moonlighting activities. Teachers were moonlighting an average of 12 hours weekly. Seventy-five percent of the teachers surveyed expressed a desire to quit moonlighting.

In conclusion, the researcher feels that literature available points up the importance of the salary issue to the profession, but that there is a lack of specific literature investigating the salary issue among Montana vocational agriculture teachers. This study does not address the salary issue in Montana in great detail, but only begins to scratch the surface.

CHAPTER III

ANALYSIS OF DATA

The purpose of this study was to determine the teachers' perceptions of how teaching salaries met the financial needs of Montana vocational agriculture teachers, the degree to which teachers supplemented their income, how that supplemental income was used and the sources of that supplemental income.

The data in Tables 1 and 2 summarize the responses to the survey questions describing demographic data.

Table 1. Years of Teaching Vocational Agriculture in Montana (N=50).*

Years	Number	Percent
1 through 5	13	26
6 through 10	13	26
11 through 15	14	28
16 through 20	4	8
21 through 25	5	10
26 through 30	1	2

*Mean = 11; Standard Deviation = 7.

The data in Table 1 indicate that 13 (26%) of the teachers that responded to the survey instrument had one through five years of teaching experience. The same number and percent had six through ten years

of experience, and 14 (28%) had eleven through fifteen years of experience. These three groups comprised 80% (26 + 26 + 28) of the teachers answering the survey. Only 2% of the teachers responding had twenty-six through thirty years of experience.

Table 2. Educational Degrees Held by Montana Vo-Ag Teachers (N=50).

Educational Degree	Number	Percent
Bachelor of Science	35	70
Master of Science	15	30
Doctor of Philosophy	0	0

The data from Table 2 indicate that 35 (70%) of the respondents hold bachelor of science degrees. Fifteen (30%) of the respondents hold master of science degrees, while none of the respondents hold doctor of philosophy degrees.

The data in Tables 4 through 9, 14 and 15 were developed to show the results concerning what teaching salaries were used for as reported by the respondents. The mean and standard deviation statistics in Tables 4 through 9, 14 and 15 do not contain numbers from the zero percent increment categories of those tables. This was done so that the statistics would only reflect those respondents that spend part of their teaching salary in the categories reported by Tables 4 through 9, 14 and 15. As an example, referring to Table 4, the number 35 in the zero category was not used as part of the population when figuring the mean and standard deviation. The mean was calculated by using the fifteen responses in the 0.1% through 10% categories. This resulted in a mean

of 2.25% and a standard deviation of 2.52. The same procedure was used for Tables 14 through 15 reporting supplemental income.

Table 3. Percent of Teaching Salary Used for Necessary Financial Needs (N = 50).*

Percent Increments of Teaching Salary	Number	Percent
50 through 55	1	2
56 through 60	4	8
61 through 65	3	6
66 through 70	3	6
71 through 75	5	10
76 through 80	7	14
81 through 85	5	10
86 through 90	11	22
91 through 95	5	10
96 through 100	6	12

*Mean = 81.26%; Standard Deviation = 12.6.

The data in Table 3 indicate 11 (22%) of respondents spend from 86 to 90 percent of their teaching salary for necessary financial needs. Fifty-four percent (10 + 22 + 10 + 12) of the teachers responding spent more than 81% of their salary on necessary financial needs. Only 1 (2%) spent 50 through 55 percent of their salary for necessary financial needs. A mean of 81% of teachers' salary is spent on necessary financial needs.

Table 4. Percent of Teaching Salary Used for Courses to Obtain an Advanced Degree (N=50).*

Percent Increments of Teaching Salary	Number	Percent
zero	35	70
0.1 through 5	14	28
6 through 10	1	2

*Mean = 2.25%; Standard Deviation = 2.52 (for teachers who spent salary on courses for an advanced degree).

The information in Table 4 indicate that 14 (28%) of the teachers spend between 0.1 and 5 percent of their teaching salary for courses toward an advanced degree. The data indicate that 35 (70%) did not spend teaching salary for an advanced degree.

Table 5. Percent of Teaching Salary Used for Recertification (N=50).*

Percent Increments of Teaching Salary	Number	Percent
zero	22	44
0.1 through 3	22	44
4 through 6	6	12

*Mean = 2.25%; Standard Deviation = 1.59.

The data in Table 5 indicate that 22 (44%) of the teachers spent less than 3 percent of their teaching salary for recertification courses, while 6 (12%) spent 4 to 6 percent of their salary for recertification. Twenty-two (44%) of the teachers did not spend teaching salary

for recertification. A mean of 2.25% was spent from teaching salary for this purpose.

Table 6. Percent of Teaching Salary Spent for Inservice Workshops (N=50).*

Percent Increments of Teaching Salary	Number	Percent
zero	9	18
0.1 through 3	34	68
4 through 6	5	10
7 through 9	0	0
10 through 12	2	4

*Mean = 2.30%; Standard Deviation = 2.39.

The data in Table 6 indicate that 9 (18%) of the teachers did not spend teaching salary for workshops. Thirty-four (68%) of the teachers spent from 0.1 to 3 percent of their salary for workshops, and 2 (4%) of the teachers spent from 9 to 13 percent of their teaching salary for workshops.

The information in Table 7 indicate that 16 (32%) of the teachers spend from 6 to 10 percent of their salary for capital accumulation. Fifty-four percent (22 + 32) spent less than 11 percent of their teaching salary for capital accumulation. Only 11 (22%) of the teachers did not spend any of their teaching salary for capital accumulation. The amount of salary used for capital accumulation varied from 11 (22%) using less than 5 percent to 2 (4%) using more than 31 percent. The mean percent spent on capital accumulation was 11.76%.

Table 7. Percent of Teaching Salary Spent for Capital Accumulation (N=50).*

Percent Increments of Teaching Salary	Number	Percent
zero	11	22
0.1 through 5	11	22
6 through 10	16	32
11 through 15	3	6
16 through 20	4	8
21 through 25	2	4
26 through 30	1	2
31 through 35	2	4

*Mean = 11.76%; Standard Deviation = 8.63.

Table 8. Percent of Teaching Salary Spent for Volunteer Activities (N=50).*

Percent Increments of Teaching Salary	Number	Percent
zero	22	44
0.1 through 4	20	40
5 through 8	6	12
9 through 12	2	4

*Mean = 3.16%; Standard Deviation = 2.75.

The data in Table 8 reveal that 20 (40%) of the teachers responding spent 4 percent or less of their teaching salary for volunteer

activities. Twenty-two (44%) did not spend any of their teaching salary on volunteer activities, whereas 2 (4%) spent 9 through 12 percent of their teaching salary for volunteer activities. The teachers spent a mean of 3.16% of their salary on volunteer activities.

Table 9. Percent of Teaching Salary Spent for Professional Involvement (N=50).*

Percent Increments of Teaching Salary	Number	Percent
zero	9	18
0.1 through 5	39	78
6 through 10	1	2
11 through 15	1	2

*Mean = 2.19%; Standard Deviation = 2.78.

The data in Table 9 indicate that 39 (78%) of the teachers spent 5 percent or less of their teaching salary for professional involvement. One (2%) of the teachers spent 11 through 15 percent of their teaching salary for professional involvement, and 9 (18%) of the teachers did not spend anything for professional involvement. Professional involvement in this study relates to those activities directly associated with the professional teacher associations.

The data in Table 10 show that 37 (74%) of the teachers responding to the survey indicated that they had supplemental income. Of the 37 (74%) responding yes, 13 hold master of science degrees; of the 13 (26%) responding no, 2 hold master of science degrees. There were 11 (22%)

teachers holding bachelor of science degrees that responded no, and 24 (48%) that responded yes to whether or not they had supplemental income.

Table 10. Supplemental Income by Educational Degree (N=50).

Response	Number	Percent	Bachelor of Science		Master of Science	
			Number	Percent	Number	Percent
Yes	37	74	24	48	13	26
No	13	26	11	22	2	4

Tables 11 and 12 were developed to indicate the percentages that teaching salary and supplemental income represent of the respondents' total income. A total of 37 vocational agriculture teachers reported having supplemental income.

Table 11. Teaching Salary as a Percent of Total Income (N=37).*

Percent Increments of Total Income	Number	Percent
40 through 49	4	10
50 through 59	4	10
60 through 69	3	8
70 through 79	6	16
80 through 89	8	21
90 through 99	13	35

*Mean = 75.1%; Standard Deviation = 18.3.

The data in Table 11 indicate that 13 (35%) of the teachers responding derived 90 percent or more of their income from teaching

salary. Four (10%) of the teachers indicated that 40 through 49 percent of their income was from teaching salary. Teaching salaries provide a mean of 75.1% of their total income.

Table 12. Supplemental Income as a Percent of Total Income (N=37).*

Percent Increments of Total Income	Number	Percent
1 through 9	7	19
10 through 19	11	30
20 through 29	4	11
30 through 39	4	11
40 through 49	6	16
50 through 59	2	5
60 through 69	3	8

*Mean = 24.85%; Standard Deviation = 18.3.

The data in Table 12 indicate that 11 (30%) of the respondents supplement their total income from 10 to 19 percent. Forty-nine percent (19 + 30) of the teachers supplemented their total income 19 percent or less. A mean of 24.85% of the respondents' income was from supplemental sources.

The data in Table 13 indicate that 13 (35%) of the respondents do not spend supplemental income on necessary financial needs. Thus, a total of 65% (2.7 + 13.5 + 8.3 + 13.5 + 27.0) of the respondents spent supplemental income for necessary financial needs. Ten (27%) spent between 80 and 100 percent of their supplemental income for necessary

financial needs. Of the 24 (37 - 13) that reported supplemental income, 67.2% was spent on necessary financial needs.

Table 13. Percent of Supplemental Income Used for Necessary Financial Needs (N=37).*

Percent Increments of Supplemental Income	Number	Percent
Zero	13	35.0
1 through 19	1	2.7
20 through 39	5	13.5
40 through 59	3	8.3
60 through 79	5	13.5
80 through 100	10	27.0

*Mean = 67.2%; Standard Deviation = 32.4.

Supplemental Income Spent on Courses for an Advanced Degree. The data indicate that only 4 (11%) of the 37 respondents with supplemental income spent that income on coursework toward an advanced degree. The least amount spent was 1 percent of the supplemental income and the most spent was 5 percent.

Supplemental Income Spent on Courses for Recertification. The data indicate that only 7 (19%) of the 37 respondents with supplemental income spent that income on courses for recertification. The least amount spent was 1 percent and the most was 15 percent of supplemental income. The mean for this category was 4.2%, with a standard deviation of 4.9.

Supplemental Income Spent on Workshops. The data indicate that only 9 (24%) of the 37 respondents with supplemental income spent that income on inservice workshops. The least amount spent was 0.5 percent and the most was 12 percent of supplemental income. The mean for this category was 4.4%, with a standard deviation of 4.09.

Table 14. Percent of Supplemental Income Used for Capital Accumulation (N=37).*

Percent Increments of Supplemental Income	Number	Percent
zero	13	35
1 through 25	7	19
26 through 50	4	11
51 through 75	3	8
76 through 100	10	27

*Mean = 59.2%; Standard Deviation = 37.4.

The data in Table 14 indicate that 13 (35%) of the respondents with supplemental income do not spend that income for capital accumulation. Ten (27%) of the respondents spend more than 75 percent of supplemental income for capital accumulation. A mean of 59.2% of supplemental income was spent on capital accumulation by 24 (37 - 13) teachers.

Supplemental Income Spent for Volunteer Activities. The data indicate that ten (27%) of 37 respondents with supplemental income spend that income on volunteer activities. The most that was spent was 15 percent, while the least was 1 percent of the respondent's supplemental

income. A mean of 5.9% was spent in this category, with a standard deviation of 4.5.

Supplemental Income Spent for Professional Involvement. The data indicate that 10 (27%) of 37 respondents spent supplemental income on professional involvement. The least that was spent was 1 percent, while the most was 80 percent of the supplemental income earned. This results in a calculated mean of 11.8%, with a standard deviation of 24.4. This mean may be somewhat misleading due to the fact that only one respondent spent over 15 percent of supplemental income on professional involvement.

Table 15. Percent of Total Yearly Work Time Spent Earning Supplemental Income (N=27).*

Percent Increments of Yearly Work Time	Number	Percent
1 through 15	17	63
16 through 30	5	18
31 through 45	3	11
46 through 60	2	8

*Mean = 17.6%; Standard Deviation = 16.4.

The data in Table 15 indicate that 17 (63%) of the teachers spend from 1 to 15 percent of their total work time earning supplemental income. Eighty-one percent (63 + 18) of the respondents spend less than 30 percent of their time earning supplemental income. Two (8%) of the teachers spend 46 through 60 percent of their work time earning

supplemental income. A mean of 17.6% of respondents' yearly work time is spent earning supplemental income.

The data in Table 16 indicate the sources by percent of the respondents' supplemental income.

Table 16. Sources by Percent of Supplemental Income.

Source	(N)	% Range	% Mean	S.D.*
Capital and Dividend Income	13	2 to 100	27.6	37.9
Agriculture Production	13	10 to 100	66.9	35.4
Small Business	6	10 to 38	21.2	18.1
Part-Time Work	10	6 to 100	40.7	35.7
Spouse's Income	23	5 to 100	56.3	35.0
Loan Interest Income	4	5 to 40	17.5	16.6
Gifts	1	10		
Grants	0			
Fees	1			
Other (coach, loan, land sale)	3	10 to 100	53.3	45.0

*S.D. = Standard Deviation.

The data in Table 16 indicate the sources of supplemental income and the percent range and mean that those sources made up of the respondents' supplemental income. Most supplemental income is from spouse's income (56.3%) and agriculture production (66.9%). The third highest source of income is from part-time work (40.7%), followed by capital and dividend income at 27.6%. There are a variety of sources,

as indicated by the table, where vocational agriculture teachers obtain supplemental income.

Table 17. Percent Mean and Standard Deviation by Category of Teaching Salary and Supplemental Income Spending by Vocational Agriculture Teachers in Montana.

Category	Teaching Salary			Supplemental Income		
	N	% Mean*	S.D.	N	% Mean*	S.D.
Necessary Financial Needs	50	81.26	12.60	24	67.20	32.40
Advanced Degree Courses	15	3.50	2.52	4	2.75	1.57
Recertification Courses	28	2.25	1.59	7	4.20	4.90
Workshops	41	2.31	2.39	9	4.40	4.09
Capital Accumulation	39	11.76	8.63	24	59.20	37.40
Volunteer Activities	28	3.16	2.75	10	5.90	4.50
Professional Involvement	41	2.19	2.78	10	11.80	24.40

*Mean percents may not equal 100 because not all respondents reported spending in each category.

The information in Table 17 indicates how Montana vocational agriculture teachers spend their teaching salary and supplemental income. Most of their total income is spent for necessary financial needs, with 81.26% of teaching salary and 67.2% of supplemental income. The second highest category of spending is for capital accumulation, with 11.76% of teaching salary and 59.2% of supplemental income being spent. The lowest category of spending is 2.19% of teaching salary for professional involvement and 2.5% of supplemental income for advanced degree courses.

CHAPTER IV

CONCLUSIONS, RECOMMENDATIONS AND IMPLICATIONS

Introduction

This study was conducted to further investigate the salary issue in Montana. The purpose of the study was to determine the teachers' perceptions of how teaching salaries met the financial needs of Montana vocational agriculture teachers, the degree to which teachers supplemented their income, how that income was used and the sources of that income.

The objectives directing this study were:

(1) To determine the percentage that teaching salaries provide for and reflect the vocational agriculture teacher's financial needs.

(2) To determine the percentage of total income for vocational agriculture teachers derived from teaching salary and supplemental income.

(3) To determine the percentages of teaching salary and/or supplemental income used for the following:

- (a) necessary financial needs
- (b) professional involvement
- (c) teacher recertification
- (d) update and inservice workshops
- (e) capital accumulation

(f) volunteer work

(g) educational advancement

(4) To determine the sources of vocational agriculture teachers' supplemental income.

(5) To determine the percent of time vocational agriculture teachers spend earning supplemental income.

Conclusions

Based on the data presented, the following conclusions have been formulated:

(1) Seventy-four percent of the respondents supplemented their teaching salary by approximately 25 percent. This left salary income making up 75 percent of total income. The respondents spent an average of 17.6 percent of their total work time earning supplemental income. The researcher concludes that the salary issue will continue to be a major factor causing vocational agriculture teachers to leave the profession.

(2) Teachers spend 81 percent of their teaching salary for necessary financial needs. Teachers with supplemental income use 67 percent of their supplemental income for necessary financial needs.

(3) Approximately 2 to 5 percent of total teacher income was spent in each of the areas of professional involvement, teacher recertification, inservice workshops, volunteer work and educational advancement.

(4) Teachers spend 12 percent of teaching salary and 59 percent of their supplemental income for capital accumulation.

(5) Teachers supplementing income tend to find that income originating from the following sources:

- (a) agriculture production
- (b) spouse's income
- (c) part-time work
- (d) capital and dividend income

(6) Teachers that earn supplemental income spend approximately 18 percent of their total work time generating that income.

Recommendations

The following recommendations are based on the researcher's findings and on his knowledge gained from this study:

(1) The salary issue should be studied further with regard to the need for and the reasons why vocational agriculture teachers with bachelor of science and master of science degrees supplement their income.

(2) All aspects of the educational profession dealing with vocational agriculture should be made aware of this study.

Implications

The following implications have been drawn as a result of the findings of this study:

(1) Thirty-five percent of the respondents who supplemented their income hold master of science degrees. This is 26 percent of the total number of respondents. These findings leave the researcher concerned as to the value of the master of science degree in terms of financial advancement in the teaching profession.

(2) Due to the amount of time spent earning supplemental income, time available for professional improvement is greatly reduced. Consequently, program quality may suffer.

(3) In light of the salary issue, it could be questioned whether new professionals understand the financial implications of teaching.

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APPENDICES

APPENDIX A

COVER LETTER



Montana State University
Bozeman, Montana 59717

Department of Agricultural and Industrial Education
College of Agriculture

June 12, 1986

Dear Montana Vo-Ag Teacher,

As a graduate student at Montana State University I am conducting a research study dealing with the financial needs of Vo-Ag teachers in Montana.

The basic purpose of this study is to determine the extent that teaching salaries are meeting the financial needs of Vo-Ag teachers in Montana. If salaries are not meeting these needs than I hope to determine how and to what extent they are being met by means other than salaries.

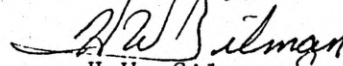
Your participation in this study is very important. Please take a few minutes and fill out the enclosed questionnaire. I can assure you that your response will be greatly appreciated and be treated with confidentiality.

Please return the questionnaire in the stamped self addressed post paid envelope.

This questionnaire was mailed to your home and your school to help assure a rapid response. Please return only one of the questionnaires.

Thank you for your time.

Sincerely,


H.W. Gilman

Telephone (406) 994-3201
Amberson, Polette, Bruwelheide, Roter, Wheatley
(406) 994-3691
Bishop, Shelhamer

APPENDIX B
QUESTIONNAIRE

Vo-Ag Teacher Financial Survey

Directions: Please answer the following question by placing an appropriate number in the blank provided.

Definitions:

Necessary Financial Needs - Includes the items of food, clothing, insurances, mortgage or rent payment, taxes, entertainment, childrens education, transportation, health, utilities, and other necessary items.

Supplemental Income - Any income other than a teaching salary, from any source, including spouse's salary.

___ 1. How many years of teaching experience do you have in Vocational Agriculture?

___ 2. What is the highest educational degree you hold?
1 - BS 2 - MS 3 - PHD

What percent of your vo-ag teaching salary is used for:

- ___ 3. necessary financial needs.
- ___ 4. educational courses leading to an advanced degree.
- ___ 5. courses taken for recertification.
- ___ 6. update and inservice workshops.
- ___ 7. capital accumulation. (savings, real estate, stocks)
- ___ 8. volunteer activities.
- ___ 9. professional involvement.(MVA, MVATA)
- ___ 10. Does your immediate family have supplemental income besides your vo-ag teaching salary? 1 - yes 2 - no
If no you have completed the questionnaire. If yes please complete remainder of questionnaire.

Consider your total income (vo-ag teaching salary plus supplemental income) to be 100%.

What percent is from:

- ___ 11. Vo-ag teaching salary.
- ___ 12. Supplemental income.

What percent of your supplemental income is used for:

- ___ 13. necessary financial needs.
- ___ 14. educational courses leading to an advanced degree.
- ___ 15. courses taken for recertification.
- ___ 16. update and inservice workshops.
- ___ 17. capital accumulation. (savings, real estate, stocks)
- ___ 18. volunteer activities.
- ___ 19. professional involvement.(MVA, MVATA)
- ___ 20. What percent of your total work time on a yearly basis (52 weeks) is spent earning supplemental income?

What are the sources by percent of your supplemental income?

- ___ 21. capital and dividend income.
- ___ 22. agriculture production.
- ___ 23. small business. (partner, stockholder, owner)
- ___ 24. part time work by yourself. What type of work? _____
- ___ 25. spouse's income.
- ___ 26. loan interest income.
- ___ 27. gifts.
- ___ 28. grants.
- ___ 29. fees. (honorariums, consultant, speaker)
- ___ 30. other. (specify) _____

APPENDIX C

REMINDER LETTER



Montana State University
Bozeman, Montana 59717

Department of Agricultural and Industrial Education
College of Agriculture

July 2, 1986

Dear Fellow Vo-Ag Teacher,

Recently you received a letter from me about some research that I have been doing regarding financial needs of Montana Vo-Ag Teachers. I would really appreciate your input regarding this matter. I hope you will take a few minutes and fill out the enclosed questionnaire and return it in the enclosed postage paid self addressed envelope. Enclosed please find a little something to help quench your thirst on a hot day.

Thank you for your time and input.

Sincerely,



H.W. Gilman

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Bishop, Shelhamer