UNIVERSITY OF MINNESOTA Division of Agricultural Education Department of Vocational and Technical Education

COST STUDY: ADULT FARM MANAGEMENT EDUCATION PROGRAMS IN MINNESOTA 1974-75, 1975-76, 1976-77

By: Edgar Persons, PhD
Division of Agricultural Education
University of Minnesota



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The study presented or reported herein was authorized by the Adult Farm Management Advisory Committee for the Agricultural Section, Vocational Division, Minnesota State Dept. of Education. However, the opinions expressed herein do not necessarily reflect the position or the policy of the advisory committee and no official endorsement by the advisory committee should be inferred.

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INTRODUCTION

Minnesota has one of the most extensively developed management programs for adults in production agriculture of any of the states in the nation. Although this state, along with all others, experienced a drastic decline in the number of farmers during the last decade, the number of farmers served by the public education program in farm management has continued to increase. The decline in farm numbers has now leveled off. The Minnesota Department of Agriculture reported 118,000 farms in Minnesota for the past five years, according to the U.S. Census definition of farms. Some would argue that the number of viable family sized units has in fact increased and using a more restrictive definition of a farm, placed the current numbers of producing farms at about 58,000.

Regardless of the definition, farming remains a large and dynamic industry, utilizing the resources of about 30,600,000 acres of Minnesota land. Because of the dynamic nature of the industry and the rapid introduction of new or expanded technology, education programs that can aid the farm operator in learning to deal with modern agriculture are essential.

By the very nature of the tasks the farmer must perform, education programs to meet his needs must have some unique qualities. The farmers principle role is that of manager and only secondarily that of a laborer or a farm worker. While it is recognized that the farmer performs all of the roles of the firm, without an understanding of the roles and responsibility of management, the firm may cease to exist. Thus the farmers in Minnesota have enjoyed the opportunity to participate in farm management education programs offered through the public schools.

While it has been relatively easy to account for the <u>output</u> of the farm management education programs in terms of the number of people served, and even in increased income of the participants, the <u>costs</u> of farm management programs have been more elusive. Although the direct costs of items such as teachers salary and travel have been available, the other costs of programs have not been reported. The purpose of this study was to determine the total costs of the farm management education programs in Minnesota, using the cost accounts of the local education agency as the source of data.

Historical Review of Program Development. Farm management education had its roots in the educational programs which emanated from the war adjustment acts of 1944-46 and the implementation of institutional on-farm training for veterans of W.W.II. In Minnesota the state leaders developed a format for educational

1Minnesota Dept. of Agriculture, "Minnesota Number of Farms and Land In
Farms", Jan. 5, 1976
2Copa, George and Edgar Persons, "Where Have All The Farmers Gone? Or Have
They?" The Visitor, April 1974.

delivery that proved to be extremely effective. Instruction combined large groups, small groups and individualized instruction. Not only was the instruction organized to optimize effectiveness by imposing rules on class size and homogeneity of student goals, but it incorporated the use of a uniform business accounting system for all veterans.

Sometime prior to the implementation of the I.O.F.T. program the Department of Agricultural Economics devised a system of comprehensive farm record analysis. This system gave the opportunity to examine the business in detail with the intent that the farmer could detect the strong and weak parts of the business and could effect changes in his business to maximize his profit.

Since the veteran students were all required to keep farm accounts and since there was a system of analysis available, a number of enterprising teachers combined the systems to provide a business analysis for their students. The first accounts were analyxed by the Department of Agricultural Economics as a special service for the veteran teachers.

Because this innovative approach to adult education in the federally subsidized farm training program appeared to have tremendous potential for regular adult education in the public school vocational agricultural programs, Dr. Milo Peterson, Head of the Department of Agricultural Education, elected to demonstrate how it could be used in adult education programs with volunteer adult education students. In 1952 he secured a substantial grant from the Hill Foundation to assist in program development and demonstration. Lauren Granger was employed to develop and test the system, using the work done in Agricultural Economics as a basis for the business analysis system.

When the program had been in the trial phase for only two years the Minnesota State Department of Education recognized the value of the farm management approach to adult education and determined that the program would develop more rapidly and be more effective if there was a good system of coordination. Eventually the state was divided into eight coordination areas, each assigned an agricultural area coordinator with responsibilities for development and promotion of farm management education and for coordination of general vocational agriculture at the high school and post secondary levels.

The University of Minnesota continued to promote the program through both undergraduate and graduate education. In 1964 a staff member was added and gradually given the responsibility for program development and the training of undergraduates and graduates in the philosophy and operation of a farm management education program.

Progress in the program can be measured by the number of farmer students who submitted their business records for analysis. The chart which follows shows the growth in the program in Minnesota.

Minnesota Vo-Ag Farm Management Education

	1961-2	1967-8	1972~3	1973-4	1974-5	
Total Number of Vo-Ag Departments	287	277	269	269	270	
Full Time Equivalent Adult & Veter	rans					
Teachers	39	70	133	187	206	
Number or Records Analyzed	450	1560	3700	4700	5700	

The number of farmers reached is actually higher than the number of records analyzed since there are some farmers enrolled who do not complete an analysis (approximately 10% of the enrollment) and another sizable group who are partners in the business where a single analysis serves more than one family. It can be documented that for every 1,000 farm analysis completed, about 1,150 farmers are represented through partnership or multiple operator organizations.

The process of record analysis has undergone constant change. The first major revision in procedure was in 1965 when the first set of records was analyzed via computer. In 1967 the format of the analysis was revised to incorporate new analysis procedures made possible by the introduction of computer processing. Since then, some revisions have been made each year. The introduction of a national invitational farm management education conference in 1973 has provided the medium for exchange of ideas among the teachers in those states which have adopted the Minnesota approach to adult education in agriculture. At the 1975 conference hosted in Seattle by the Washington farm management group, the following states were represented: Minnesota, North Dakota, South Dakota, Nebraska, Washington, Oregon, Alaska, Oklahoma and Texas.

How has the program been disseminated and what has been the result? Program dissemination has been largely based on the initiative of state leaders who, upon examing the results of the programs in operation, have determined that it is a viable alternative for serving their own rural clientele. The University of Minnesota has provided the opportunities for short term internships for interested teachers as well as inservice training of larger cadres of prospective management instructors. Through short intensive workshops most of the participating states have had an opportunity to get an initial start in the development of their own statewide system of management education.

In addition, the program has been backed by the investment of a considerable research thrust in both program development and program evaluation. It is estimated that about a million dollars has been expended by institutions and individuals in Minnesota alone in the research thrust related to management education. In addition there has been in recent years an investment of about 2.5 million dollars annually in program support at the state level and an additional support of one million at the local level. The combined investment in both research and program support, while to the layman a sizeable sum, has been more than repaid by the increase in business activity generated by the management program. In fact in Minnesota, the additional tax revenue which is generated by the increased earnings of farm families enrolled can be shown to almost repay the entire cost of both local and state program support annually. In a very real sense, the old adage that "education doesn't cost, it pays" can be demonstrated in hard dollar and cents facts.

As alluded to earlier, the management program for farmers has spread to other states. Since all states use the same curriculum materials, the same business analysis format and the same record service center for analysis, there is considerable savings of public moneys through simple economics of size and the principle of spreading fixed costs. The chronology of the spread to other states at this point is not well documented, but only approximate.

Initiated in Washington 1966 Initiated in Nebraska 1969 Initiated in North Dakota 1970 Initiated in South Dakota 1968 Initiated in Oregon 1970 Initiated In Wisconsin 1972 Initiated In Oklahoma 1975 Initiated In Pennsylvania 1976

The dates of initiation in Alaska, Connecticut and Idaho are uncertain.

It is obvious that programs have grown more rapidly in some state than in others. The differential in growth can be attributed in large part to the assistance that state leadership has provided in organizing training sessions for prospective teachers and in providing some form of state-wide coordination of the developmental efforts. The second most important element has been the support provided by local administrators to the development of the program within their own school area. Without the strong support of both the state and local educational agencies, the program has a more difficult task in reaching the objectives of providing education to farm families that will raise the level of rural living and improve the stability of modern agriculture.

Study Design

<u>Sample</u>: The objective of the study was to measure program costs for adult farm management education programs. Since computation of costs is a rather complex procedure, only farm management instructors who were employed full time in that position were included in the sample. Extrapolation to part-time adult farm management programs can be made on the basis of full time instructor program costs.

The sample of instructors was drawn by examination of the records of the State Dept. of Education, Vocational Division where the names and percent assignment to farm management education were reported for the year 1974-75. Seventy-Seven instructors met the criteria previously outlined.

<u>Instrumentation</u>. The data collection instrument was designed to follow the cost accounting codes published for the uniform cost accounting procedures for Minnesota schools. The account number from the chart of accounts was included with each data line to serve as a guide for collecting the proper data. In addition a narrative set of instructions specific to each data line was appended to the questionnaire, along with a covering letter explaining the purpose of the study. A sample of the materials sent to each person follows.

TO: Adult Vo-Ag Instructors

FROM: Edgar Persons

SUBJECT: Calculating Costs For Adult Farm Management Instruction Programs

Adult Farm Management Education programs seem to move from crisis to crisis. We have faced each crisis as it has appeared, and with the combined aid of the teachers, state staff and friends in the industry, have found a solution that has allowed the management program to serve the purposes for which it was designed.

We have now reached another crisis point. Within the next year the formula under which adult programs will be financed will be reorganized. No one at this time knows what the outcome of the financing directives will be. While we have spent considerable time in examining some possible alternatives, the decision as to which alternative may be most feasible has not been determined.

Our task is to aid in the decision process. As experienced management instructors, you know that a good decision starts with sound information as to the current status of programs. Since a funding program formula decision must be based on some information about costs of program operation, it seems appropriate that decision makers have program cost data as a starting point.

Unfortunately, the data on program cost is very incomplete. The only cost data available now is information about gross salary, travel and equipment purchased with vocational aids. All of you would recognize that these three items do not accurately reflect the total costs of program operation. A good analogy would be to reflect on a dairy enterprise analysis that contained only information of feed cost, veterinary expense and breeding fees. Could you make good decisions on costs if this were all the information you had, or plan your cash flow needs for the coming year bases upon incomplete data? Obviously, you would not feel comfortable making major decisions based upon such limited knowledge.

Neither can the decision makers in the legislature feel comfortable about the decisions they might make if they have little information available to them. To help them in the decision process, we are asking that you assist in gathering some cost information about your program. We realize that it will take some time and effort on your part—time you probably don't have to spare. However, getting this information is so important to the future of adult education, we hope you will agree that it has a high priority among your many tasks.

Because accurate information is very important, the questionnaire that accompanies this memo spells out exactly what information should be collected. You may not agree with the rationale used to assign the costs. We hope that you will set aside your disagreements for the present and follow the instructions to the letter. Again, your experience as a management instructor should be helpful in recognizing that we must have data for which we can document the source if they are to be useful in making financial decisions.

Only schools that had full time (100%) adult instructors employed for the 1974-75 school year will receive this inquiry. The questionnaire asks for <u>actual</u>

data for the 1974-75 year and <u>best estimate</u> for the 1975-76 year. When this information is coupled with the enrollment data already on file with the State Department of Education, we will be able to calculate costs for a program on a per teacher and perhaps per student basis. The information you submit will be used to compile an average cost, and will not be used in a manner so that your program can be identified.

In order to insure that the information is accurate, we are asking that each of you personally take charge of collecting the data. We recognize that you will have to enlist the aid of your school administrator and/or fiscal agent to gather the data requested. Because of the urgency of getting accurate data from which cost estimates can be made, we must have a return from each of the 77 instructors surveyed. Even more crucial is the timing. We must have the information returned by June 15 from all 77 teachers.

The objective of the survey is to develop a profit and loss statement for the adult agriculture program. A sample of that statement is enclosed. Based upon your reports to the State Dept. of Education, we already have some of the output data for 1974-75 included in the sample P and L Statement. At this time it is listed in the units we can account for, enrollments, families served, and student contact hours. Hopefully, the units can be translated at a later date into dollars and cents or some better measure of program output.

To gather similar output data for 1975-76, you will need to complete the adult report form you usually submit in late June. A copy is enclosed. Since there is only a one month period of the year remaining, you should be able to supply an accurate estimate of your program output.

Please read the instruction sheets very carefully before you collect the data. It is absolutely essential that each person follow the same set of rules. For many items the account number from the chart of accounts included in the current handbook for uniform school accounting is listed on the questionnaire. These account numbers should assist you in locating the proper account in the school record system.

ADULT AGRICULTURE STATISTICAL REPORT

July 1, 1975 - June 30, 1976

PROGRAM

Course Title

School Name

Family

Units

No. People Enrolled

No. of

Sess

Teacher Name

 $\frac{\text{Farm Management I}}{\text{Farm Management II}}$

Courses

Farm Management Il	I			
Farm Management Ad	lv.			
Enterprise			xxxx	
Enterprise			xxxx	
Mechanized Agric.			xxxx	
Mechanized Agric.			xxxx	
Beginning Farmer 1				
Beginning Farmer 1	I			
	TOTAL ENROLLMENT			
Class Instruction Farm Management Enterprise Mechanized Agric. Beginning Farmer	WORK LOAD CALCULATION No. Classes Held Hours x 3 = x 3 = x 3 = x 3 = x 3 = Total A	Group Instr Groups Meet Field Trips	ings	No. Events Time/ Held Event Hours Total B
Individual Instruc				
Farm Management Enterprise Classes Mechanized Agric. Beginning Farmer Individual Inst. at School	No. of Inst. Events Hours	Class Instr	ruction ction of	- Total A - Total B - Total C

COST STUDY OF ADULT VO-AG PROGRAMS FOR THOSE SCHOOLS EMPLOYING FULL TIME INSTRUCTORS IN REGULAR FARM MANAGEMENT EDUCATION PROGRAMS

Costs

Α.	Reg	ılarly Cert	ified A	dult Vo-	Ag Instru	ictors			
				1974-75	1975-76	1976-76 Estimate	1974-75	1975-76	1976-77 Estimate
	1. 2. 3. 4.	Salary Payroll Ta: Fringe Ben Combined T & Subsista:	efits ravel						
В.	Tea	cher Aids/S	uppleme	ntary In	structors	s/Substitute		1975-76	Estimate 1976-77
	5. 6. 7.	Salary Payroll Tar Fringe Bend							
С.	Dire	ect Clerica	1 Suppo	rt For A	dult Vo-A	ng Instructi	lon		
	8. 9. 10.	Salary Payroll Tar Fringe Bend							
D.	Off	ice Expense	*			Š,			
	11.	(240.8) Gen	neral O	ffice Su	pplies				
Ε.	Inst	ructional l	Materia	L & Suppl	lies				
	14.	(220.8) (240.1) (240.265) (240.8)	Special	l Instrud l Departi	ctional S mental Su For Inst	pplies			
F.	Inst	ructional l	Equipmer	nt					
	16. 17.	(730.1) (1200.0)	Equipme Capital	ent - Rep L Outly B	olacement For Non-C	Consumable Consumable			
G.		nuse the remonstrates	maining		ill be al			s of two	o separate
	18.	Total Numbe Equivalents		chool Dis	strict Em	ployees Rec	luced to	Full Tin	ne

^{*} General Accounting Code Numbers normally used in Uniform School Accounting are enclosed in parentheses.

	19.	Total Number of Full Time Equivalent Employees Assigned to the AVTI or Secondary Vocational Center.	1974-75	1975-76
	20.	Total Number of Full Time Equivalent Instructional Personnel (Teachers, Teacher Aids, Paraprofessionals) employed in the unit in which the Adult Vo-Ag Program is administered.		
н.	Dist	rict Costs For Administration		
	21. 22. 23.	(110) School Board Expense(120) Contracted Services For Administration(130) General Administration		
I.	Admi	nistration Costs for AVTI or Secondary Vocational Center		
	24. 25.	Contracted Services For Administration General AVTI Administration		
J.	Phys	ical Plant Operation & Maintenance		
	26. 27.	(600) Plant Operation (700) Plant Maintenance		
Κ.	Misc	ellaneous Fixed Charges		
	28. 29. 30. 31.	<pre>(820.1) Property Insurance (820.3) Liability Insurance (820.4) Surety Bond Premiums (820.5) Judgments Against Unit</pre>		
	32. 33. 34.	(830) Rent Expense (840) Interest on Current Loans (850) Other Fixed Charges		
L.	Debt	Retirement		
	35.	(1310-1350) Debt Service For Unit		
М.	Incom	INCOME INCOME		
	37.	Tuition Income Payment for Supplies & Materials Payment for Business Analysis & Computerized Depreciation Schedules & Other Specialized Services.		
		<u>Policy:</u> What tuition or enrollment fee is charged for person of the following courses?	enrolle	ed
		Resident: F. Mgt. II F. Mgt. III 4th Year 5th Year 6th Year 7th	Year 8	Sth Year
		ict Resident: F. Mgt. III 4th Year 5th Year 6th Year 7th	Year 8	th Year

General description of policy regarding enrollment of non-district residents:

- 1. Report the contract salary for each teacher separately. Report only gross pay; do not include payroll taxes and fringe benefits paid by the school as part of the salary.
- 2. Payroll taxes: Include the school district's share of social security and state and federal unemployment compensation insurance.
- 3. Fringe benefits: Include district contributions for workmen's compensation, group hospitalization, health and accident insurance, life insurance, retired employee insurance programs and other employee fringe benefits.
- Report the total travel and subsistance for which the teacher claimed reimbursement.
- 5. Report the salary of any teacher aids, supplementary instructors or substitutes who were employed to assist the adult Vo-Ag program. Report only the portion of such salaries that are assignable to the adult management program teachers listed on the questionnaire; exclude that portion which should be assigned to the secondary Vo-Ag program, post-secondary program, or Veterans farm management or other adult Vo-Ag instructors not listed on the questionnaire.
- 6. Payroll taxes: Include only that portion of payroll taxes for teachers aids, supplementary instructors or substitutes assignable to the adult Vo-Ag program teachers listed in items 1-4 (see item 5).
- 7. Fringe benefits: Include only that portion of fringe benefits (as defined in item 3) assignable to the teacher aids, supplementary instructors or substitutes for the adult Vo-Ag program teachers included in the questionnaire.
- 8. Clerical salaries should include only salaries for clerical staff who were assigned directly to the adult Vo-Ag program. If the clerical staff served the secondary, post-secondary, veterans farm management or other adult Vo-Ag instructors, report only the share of such salary that should be prorated to the instructor/instructors to whom the questionnaire was addressed.
- 9. Assign payroll taxes for clerical (defined in item 2) on the same basis as the salaries in item 8 were pro-rated.
- 10. Assign fringe benefits for clerical staff (defined in item 3) on the same basis as the salaries in item 8 were pro-rated.
- 11. General office supplies: Include the general office supplies assignable to the portion of the adult Vo-Ag program conducted by the adult Vo-Ag instructors listed on the questionnaire. It may be necessary to pro-rate the costs. General office supplies should include paper, pencils, stationary, envelopes, postage, etc. used in ordinary conduct of the office. Do not include instructional material in this item.
- 12. Only textbooks purchased for use by the students should be included in this item. Report only the share of these materials purchased for use in the programs directed by the persons named on the questionnaire.

- 13. General instructional supplies: Enter such items as writing paper, drawing paper, construction paper, thumb tacks, workbooks, pencils, pencil sharpeners, wastebaskets, and magazines and newspapers for classroom use.
- 14. Special departmental supplies should be assigned on the same basis as line 12. This item should also include the payment made for farm business analysis, computerized depreciation schedules, account books, and account analysis summaries, and other instructional supplies directly related to the instructional program. Include also rental for film, slide sets, etc.
- 15. Miscellaneous supplies for instruction: Curriculum supplies, proffessional books and subscriptions for the instructional staff, supplies for school exhibits such as demonstration plots, supplies for in-service training of instructional staff and supplies for the operation of equipment such as typewriter ribbons, batteries for calculators, etc.
- 16. & 17. Equipment purchase exclusively for the adult Vo-Ag program (or the pro-rata share of equipment if shared with other instructors not listed on the questionnaire).
- 18. In order to allocate certain costs to the adult Vo-Ag program, it is necessary to know how many full time equivalent employees in the school district, including administrators, teachers, clerical staff, custodians, cooks, bus drivers, and other support staff. All persons employed by the school district should be reported.
- 19. If the adult Vo-Ag program is housed and administered in a secondary vocational center or an AVTI, report the <u>total</u> number of employees in the unit, reduced to a full time equivalent basis. (Use same definitions as reported in Item 18)
- 20. Item 20 should include only instructional personnel. (Full time equivalents) Teachers, teacher aids, and paraprofessionals who work with students in an instructional setting. Do not include administrators, counselors, librarians, and other personnel who do not perform a teaching function. If the adult Vo-Ag program is housed in the secondary Vo-Ag program, the instructional personnel count should include all district instructional personnel, if the program is housed in a secondary vocational center, include only secondary center personnel. For programs housed and administered in AVTI's, include only AVTI instructional personnel.
- 21., 22., & 23. Items 21, 22 and 23 are total district expenses for central administration according to the items recorded under items 110, 120 and 130 in the code for uniform school accounting.
- 24. & 25. Administrative costs are reported separately for AVTI's and secondary vocational centers. <u>Total</u> costs should be taken directly from the school financial reports.
- 26. 35. Items 26-35 refer only to the <u>total</u> costs for each item assigned to the unit in which the adult Vo-Ag program is housed and administered. The unit would be the <u>district</u> if the program is housed and administered in the secondary Vo-Ag program; the secondary vocational center is housed and

administered in that unit or the AVTI when housed and administered within the AVTI. The code number preceding each line (600, 700 etc.) designates the code numbers for accounts in which these items are recorded under the uniform code for school district accounting. The total cost will be allocated to the Vo-Ag adult program based upon the information you report in item 20. You need only report the totals. We will do the allocating by formula.

- 35. According to the note on the sample Profit and Loss statement, debt retirement will be used to illustrate the cash flow required for total program and institutional support. Debt retirement (both principal and interest on bonded indebtedness) should be reported according to the unit to which the adult program is assigned—total district, secondary vocational center or AVTI.
- 36. Report the portion of fees collected that could be considered tuition for programs directed by the instructors named on the questionnaire.
- 37. Include payments from students for materials and supplies used in farm management, enterprise, beginning farmer or ag mechanics classes if such payment was for programs conducted by the instructors named on the questionnaire.
- 38. Payments for business analysis, computerized depreciation schedules, soil tests, feed analysis, computer decision aids or other specialized services rendered.

<u>Data Collection Procedure</u>. The data collection instrument was mailed to each instructor in the sample. He was instructed to personally take charge of the collection of data, even though it was recognized that he would need to elicit the aid of the school administrator or business manager to complete the task.

When three weeks had elapsed, a follow-up reminder was sent urging each teacher who had not responded to complete the material. In addition, the study was explained at a meeting of the district directors of the MVAIA urging them to assist their respective teachers in getting the information returned.

When the questionnaires had been reviewed, letters were sent to those who had obviously misinterpreted some of the questions. Those who failed to respond were contacted via telephone to verify reported data and to supply some information omitted from the questionnaire.

<u>Data Analysis</u>. The data was anlyzed by hand after first being arranged in a format that allowed relatively easy computation. Because some data was subjected to an allocation formula, these computations were made prior to the final data analysis.

Some Assumptions. Any study involves some assumptions. This study is no exception, but the assumptions made are critical to the interpretation of the end result. The assumptions made apriori will be explained in some detail to enable the reader to evaluate the resulting data.

Assumption One: Costs of maintaining programs at less than full time are proportionate to the costs of full time instructor programs. Since part-time adult programs differ only in scope rather than in substance, it is logical to assume that the costs incurred by such programs are in direct proportion to the percent of instructor time assigned. Thus only full time programs were surveyed with the assumption that they are a true and accurate presentation of program costs, and that those costs can be accurately interpolated for programs with less than full time employees.

Assumption Two: Administrative costs in a school should be equally divided among all of the employed personnel. Administrative costs are incurred because the school employs people. Thus all administrative costs within a unit should be divided equally among the total number of persons (full time equivalent) employed in that administrative units. In this study, all administrative costs were allocated on an equal basis to all full time equivalent employees.

Assumption Three: The operation and maintenance costs of the school plant are incurred because the school has students. Without students, there would be no reason for the plant to exist. Likewise, the school exists for the purpose of instruction, and thus those costs of plant maintenance & operation should be divided among the instructional personnel only, since other ancillary and administrative personnel are important to the school only if instructional programs exist. Since the adult farm management programs rarely if every utilizes the services of ancillary personnel such as counselors, psychologists, librarians and others, these costs were not deemed an appropriate charge against farm management instruction.

Since the farm management program is unique in its utilization of the school plant, an adjustment was made in the charges assessed against the program. The farm

management program was assigned only one-third the costs of other full time instructors. The rationale for the one-third charge is based upon an assessment of the normal facility use. The only space assigned to adult programs on an exclusive use basis is the instructors office. Use of the classroom or other instructional space is usually limited to the after school hours, and in total represents approximately 20% of the normal 1050 hours devoted to instruction and facility use experienced by other teachers. Thus the combination of facility use for instructional space and for office facilities was judged to constitute one-third of the use of other day school instructional personnel.

Assumption Four: Debt retirement represents a real out-of-pocket costs for local educational agencies, and can be used as a proxy measure of the depreciation allowance that could be assigned to programs for the use of fixed assets. In this study, debt retirement represents via proxy, the annual charge for the utilization of fixed assets.

The Results Of The Study

As with most research studies, a portion of the sample failed to respond to the questionnaire. Some information was received from sixty-one of the seventy-seven potential respondents. However, only forty-two of the respondents returned questionnaires that were complete and could be used to determine costs. Not all of the non-response can be blamed on those sampled. At least seven teachers reported via letter or telephone that their school administration refused to cooperate in collecting the data or denied access to the school records for purposes of completing the survey. The non-response of the other nine members of the sample has not been accounted for.

In the final analysis, thirty teachers are represented in the secondary institutions and 12 instructors in post-secondary institutions.

The table depicting average program costs for programs in secondary schools, post secondary schools and the average of all respondents follows. The tables are organized by the years 1974-75, 1975-76 and 1976-77. For the 1976-77 year, only costs that were already determined by contract obligations or costs that could be carefully estimated were reported. None of the indirect costs are assigned for the 1976-77 year.

Intrepretation of Cost Data. The reader will note that the output measure show small but insignificant variations between the programs in secondary schools and those administered in Area Vocational Technical Institutes. Some differences occur in the number of farm families enrolled, but the difference is not significant. All of the AVTI programs reported have been in existance for a long enough period to have significant enrollments in the advanced farm management classes whereas some of the secondary programs had been established more recently and thus had smaller advanced enrollments.

There were notable differences also in the amount of time devoted to Ag-Mechanics instruction between the groups, although both groups spent relatively little time in this instructional area. The relatively little attention focused on mechanized agriculture by full time management instructors is probably not a good measure of the opportunities available to farmers for such instruction. Other members of the instructional team are often responsible for mechanized

OUTPUT AND COST STATEMENT

TABLE I FULL TIME ADULT VOCATIONAL AGRICULTURE

FARM MANAGEMENT INSTRUCTION - SECONDARY ONLY, 1974-75

OUT	PUT OF PE	ROGRAMS	Total Population of 77 Full Time Adult Management Instructors	Sample of Secondary tors	
1)	FARM MAN	NAGEMENT INSTRUCTION			
		Families Served	49	51.61	
		Individuals Served	106	101.74	
2)	ENTERPR]	ISE INSTRUCTION			
3)		room Student Contact Hours (Total) NICS INSTRUCTION	684	552.0	
4)		coom Student Contact Hours (Total)	13	14.0	
	Indivi	dualized Student Contact Hours	81	104.9	
5)		ormal Instruction - Indiv. RIPS, TOURS, NON-FORMAL INSTRUCTION	101	86.9	
3,		Hours of Instruction Conducted	36.2	43.2	
INC	OME FROM	FEES AND SERVICES		884.23	
DIR	ECT PROGR	AM COSTS			
DECI	III ADIV CE	RTIFIED ADULTS VO-AG INSTRUCTOR	<i>₽</i> :		
KEG	230.3	Salary	1	6,062.00	
	230.3	Payroll Taxes	:	19.16	
		Fringe Benefits	· ·	330.53	
		Tringe benefits		330.33	
TEAC	CHER AIDS	/SUPPLEMENTARY INSTRUCTOR/SUBSTITUT	PES		
	210.62	Salary		25.00	
		Payroll Taxes			
		Fringe Benefits	(
וקדת	ፑ ርጥ ር፲ ፑ <mark></mark> ፬ፐ	CAL SUPPORT FOR ADULT VO-AG STAFF		.,	
דונו	210.61	Salary		167.86	
	210.01	Payroll Taxes	3 	7.70	
		Fringe Benefits	(2.571.22	2.13	
		Tringe Benefits	-	2.13	
TOTA	AL TRAVEL	COST			
	250.2	Combined Travel & Subsistance	· <u></u>	1,154.60	
SUPF	PLIES				
2011	240.8	General Office Supplies		120.82	

INSTRUCTIONA	L MATERIALS	
220.8	Textbooks	24.96
240.1	••	207.43
240.265		418.77
240.8	Miscellaneous Supplies For Instruction	102.39
INSTRUCTIONA	L EQUIPMENT	
730.1	Capital Outlay For Non-Consumable Equipment-Replacement	20 /7
1200.0	Capital Outlay For Non-Consumable Equipment-New	28.47
mom 4.1 D.T.D.T.C.		
TOTAL DIRECT	COSTS	18,718.14
ATTOCATED DD	OGDAM GOCTC	
ALLOCATED PR	OGRAM COSIS	
DISTRICT EXP		50.00
110 120	School Board Expense Contracted Services For Administration	50.83
130	General Administration	59.71
130	General Administration	415.82
AVTI ADMINIS	TRATION COSTS	
PHYSICAL PLA	NT OPERATION & MAINTENANCE	
600	Plant Operation	505.74
700	Plant Maintenance	102.44
MISCELLANEOU	S FIXED CHARGES	
820.1	Property Insurance	53.42
820.3	Liability Insurance	6.87
820.4	Surety Bond Premiums	.77
820.5	Judgments Against School District	.04
830	Rent Expense	6.07
840	Interest On Current Loans	.35
850	Other Fixed Charges	12.28
1310-1350	Debt Service (Annual)	554.20
TOTAL INDIRE	CT COSTS	1,768.54
TOTAL PROGRAM	M COSTS	20,486.68

Other Costs Not Listed Include:

State Share of Social Security/Retirement Benefits (\$744.83) Pro-rata Share of Cost of Agricultural Coordinators Pro-rata Share of State Supervisory Staff Costs.

OUTPUT AND COST STATEMENT

TABLE II

FULL TIME ADULT VOCATIONAL AGRICULTURE

FARM MANAGEMENT INSTRUCTION - SECONDARY ONLY, 1975-76

OUTPUT OF P		Sample of 30 Full Time Adult Management Instructors
_,	NAGEMENT INSTRUCTION f Families Served	54.41
	f Individuals Served	101.90
2) ENTERPR	ISE INSTRUCTION	
	room Student Contact Hours (Total)	506.6
•	ANICS INSTRUCTION	05.7
	room Student Contact Hours (Total) ISE & AG MECHANICS INSTRUCTION	25.7
,	idualized Student Contact Hours	80.5
	ormal Instruction - Indiv.	66.1
	RIPS, TOURS, NON-FORMAL INSTRUCTION	00.1
	Hours of Instruction Conducted	42.2
INCOME FROM	FEES AND SERVICES	1,023.99
DIRECT DROCK	DAM GOCTIC	
DIRECT PROG	RAM COSTS	
REGULARLY C	ERTIFIED ADULT VO-AG INSTRUCTOR	
230.3	Salary	16,991.00
	Payroll Taxes	13.83
	Fringe Benefits	449.47
me A CHED A TO	CALINDI ENGRADA TRAMBULAMAN ALIDAM TRUMEC	
210.62	S/SUPPLEMENTARY INSTRUCTOR/SUBSTITUTES Salary	45.43
210.02	Payroll Taxes	75.75
	Fringe Benefits	
חופורי כווים	ICAL SUPPORT FOR ADULT VO-AG STAFF	
210.61		251.30
	Payroll Taxes	11.40
	Fringe Benefits	12.06
TOTAL TRAVEI	COST	
27	Combined Travel & Subsistance	1,341.70
SUPPLIES		
240.8	General Office Supplies	134.32

220.8 Ceneral Instructional Supplies 253.53 240.15 Special Dept. Supplies 433.13 240.8 Miscellaneous Supplies For Instruction 108.56 INSTRUCTIONAL EQUIPMENT 730.1 Capital Outlay For Non-Consumable Equipment-Replacement ment 33.56 1200.0 Capital Outlay For Non-Consumable Equipment-New 71.17 INTRUCT EXPENSES DISTRICT EXPENSES 110 School Board Expense 52.46 120 Contracted Services For Administration 69.22 130 General Administration 400.72 AVTI ADMINISTRATION COSTS PHYSICAL PLANT OPERATION & MAINTENANCE 600 Plant Operation 551.62 700 Plant Maintenance 551.62 820.1 Property Insurance 70.16 820.3 Liability Insurance 5.99 820.4 Surety Bond Premiums 6.7 820.1 Property Bond Premiums 3.44 840 Interest On Current Loans .72 850 Other Fixed Charges 18.86 1310-1350 Debt Service (Annual) 540.43 TOTAL PROGRA	INSTRUCTION	AL MATERIALS	
240.265	220.8	Textbooks	41.95
108.56	240.1	General Instructional Supplies	253.32
INSTRUCTIONAL EQUIPMENT 730.1 Capital Outlay For Non-Consumable Equipment-Replacement 33.56 1200.0 Capital Outlay For Non-Consumable Equipment-New 71.17 TOTAL DIRECT COSTS 20,192.20	240.265	Special Dept. Supplies	433.13
Table	240.8	Miscellaneous Supplies For Instruction	108.56
Mement 33.56 1200.0 Capital Outlay For Non-Consumable Equipment-New 71.17	INSTRUCTION	AL EQUIPMENT	
1200.0 Capital Outlay For Non-Consumable Equipment-New 71.17	730.1		22.56
ALLOCATED PROGRAM COSTS 20,192.20	1200.0		
ALLOCATED PROGRAM COSTS			
DISTRICT EXPENSES 110	TOTAL DIREC	r costs	20,192.20
DISTRICT EXPENSES 110	ALLOGATED D	DOODAM COCKE	
110 School Board Expense 52.46 120 Contracted Services For Administration 69.22 130 General Administration 400.72 AVTI ADMINISTRATION COSTS 26.84 PHYSICAL PLANT OPERATION & MAINTENANCE 551.62 600 Plant Operation 551.62 700 Plant Maintenance 105.05 MISCELLANEOUS FIXED CHARGES 820.1 Property Insurance 70.16 820.3 Liability Insurance 5.99 820.4 Surety Bond Premiums .67 820.5 Judgments Against School District .01 830 Rent Expense 3.44 840 Interest On Current Loans .72 850 Other Fixed Charges 18.86 1310-1350 Debt Service (Annual) 540.43 TOTAL INDIRECT COSTS	ALLOCATED P	ROGRAM COSTS	
120 Contracted Services For Administration 69.22 130 General Administration 400.72 AVTI ADMINISTRATION COSTS 26.84 PHYSICAL PLANT OPERATION & MAINTENANCE 600 Plant Operation 551.62 700 Plant Maintenance 105.05 MISCELLANEOUS FIXED CHARGES 820.1 Property Insurance 70.16 820.3 Liability Insurance 5.99 820.4 Surety Bond Premiums .67 820.5 Judgments Against School District .01 830 Rent Expense 3.44 840 Interest On Current Loans .72 850 Other Fixed Charges 18.86 1310-1350 Debt Service (Annual) 540.43 TOTAL INDIRECT COSTS 1,846.19			Ε
AVTI ADMINISTRATION COSTS AVTI ADMINISTRATION COSTS 26.84 PHYSICAL PLANT OPERATION & MAINTENANCE 600			
AVTI ADMINISTRATION COSTS 26.84 PHYSICAL PLANT OPERATION & MAINTENANCE 600			
PHYSICAL PLANT OPERATION & MAINTENANCE 551.62 600 Plant Operation 551.62 700 Plant Maintenance 105.05 MISCELLANEOUS FIXED CHARGES 70.16 820.1 Property Insurance 70.16 820.3 Liability Insurance 5.99 820.4 Surety Bond Premiums .67 820.5 Judgments Against School District .01 830 Rent Expense 3.44 840 Interest On Current Loans .72 850 Other Fixed Charges 18.86 1310-1350 Debt Service (Annual) 540.43 TOTAL INDIRECT COSTS 1,846.19	130	General Administration	400.72
600 Plant Operation 551.62 700 Plant Maintenance 105.05 MISCELLANEOUS FIXED CHARGES 820.1 Property Insurance 70.16 820.3 Liability Insurance 5.99 820.4 Surety Bond Premiums .67 820.5 Judgments Against School District .01 830 Rent Expense 3.44 840 Interest On Current Loans .72 850 Other Fixed Charges 18.86 1310-1350 Debt Service (Annual) 540.43 TOTAL INDIRECT COSTS 1,846.19	AVTI ADMINI	STRATION COSTS	26.84
700 Plant Maintenance 105.05 MISCELLANEOUS FIXED CHARGES 820.1 Property Insurance 70.16 820.3 Liability Insurance 5.99 820.4 Surety Bond Premiums .67 820.5 Judgments Against School District .01 830 Rent Expense 3.44 840 Interest On Current Loans .72 850 Other Fixed Charges 18.86 1310-1350 Debt Service (Annual) 540.43 TOTAL INDIRECT COSTS 1,846.19		ANT OPERATION & MAINTENANCE	
MISCELLANEOUS FIXED CHARGES 820.1 Property Insurance 70.16 820.3 Liability Insurance 5.99 820.4 Surety Bond Premiums .67 820.5 Judgments Against School District .01 830 Rent Expense 3.44 840 Interest On Current Loans .72 850 Other Fixed Charges 18.86 1310-1350 Debt Service (Annual) 540.43 TOTAL INDIRECT COSTS 1,846.19		•	CONTRACTOR OF THE PARTY OF THE
820.1 Property Insurance 70.16 820.3 Liability Insurance 5.99 820.4 Surety Bond Premiums .67 820.5 Judgments Against School District .01 830 Rent Expense 3.44 840 Interest On Current Loans .72 850 Other Fixed Charges 18.86 1310-1350 Debt Service (Annual) 540.43 TOTAL INDIRECT COSTS 1,846.19	700	Plant Maintenance	105.05
820.3 Liability Insurance 5.99 820.4 Surety Bond Premiums .67 820.5 Judgments Against School District .01 830 Rent Expense 3.44 840 Interest On Current Loans .72 850 Other Fixed Charges 18.86 1310-1350 Debt Service (Annual) 540.43 TOTAL INDIRECT COSTS 1,846.19	MISCELLANEO	JS FIXED CHARGES	
820.4 Surety Bond Premiums .67 820.5 Judgments Against School District .01 830 Rent Expense 3.44 840 Interest On Current Loans .72 850 Other Fixed Charges 18.86 1310-1350 Debt Service (Annual) 540.43 TOTAL INDIRECT COSTS 1,846.19	820.1	Property Insurance	70.16
820.5 Judgments Against School District .01 830 Rent Expense 3.44 840 Interest On Current Loans .72 850 Other Fixed Charges 18.86 1310-1350 Debt Service (Annual) 540.43 TOTAL INDIRECT COSTS 1,846.19	820.3	Liability Insurance	5.99
830 Rent Expense 3.44 840 Interest On Current Loans .72 850 Other Fixed Charges 18.86 1310-1350 Debt Service (Annual) 540.43 TOTAL INDIRECT COSTS 1,846.19	820.4	Surety Bond Premiums	
840 Interest On Current Loans .72 850 Other Fixed Charges 18.86 1310-1350 Debt Service (Annual) 540.43 TOTAL INDIRECT COSTS 1,846.19	820.5	Judgments Against School District	.01
850 Other Fixed Charges 18.86 1310-1350 Debt Service (Annual) 540.43 TOTAL INDIRECT COSTS 1,846.19	830	Rent Expense	3.44
1310-1350 Debt Service (Annual) 540.43 TOTAL INDIRECT COSTS 1,846.19	840	Interest On Current Loans	.72
TOTAL INDIRECT COSTS 1,846.19	850	Other Fixed Charges	18.86
	1310-1350	Debt Service (Annual)	540.43
TOTAL PROGRAM COSTS 22,038.39	TOTAL INDIR	ECT COSTS	1,846.19
	TOTAL PROGRA	AM COSTS	22,038.39

Other Costs Not Listed Include:

State Share of Social Security/Retirement Benefits (\$844.60) Pro-rata Share of Costs of Agricultural Coordinators Pro-rata Share of State Supervisory Staff Costs

ESTIMATED DIRECT COST STATEMENT - SALARY & TRAVEL

TABLE III

FULL TIME ADULT VOCATIONAL AGRICULTURE

FARM MANAGEMENT INSTRUCTION - SECONDARY ONLY, 1976-77

DIRECT PROGR	AM COSTS	Sample of 30 Full Time Adult Management Instruc- tors
	RTIFIED ADULT VO-AG INSTRUCTOR	
230.3	Salary	18,094.00
	Payroll Taxes*	23.17
	Fringe Benefits	495.73
TEACHER AIDS	/SUPPLEMENTARY INSTRUCTOR/SUBSTITUTES	
210.62	Salary	48.33
	Payroll Taxes	
	Fringe Benefits	per and laps
DIRECT CLERI	CAL SUPPORT FOR ADULT VO-AG STAFF	
210.61	Salary	285.10
	Payroll Taxes	12.90
	Fringe Benefits	13.26
TOTAL TRAVEL	COST	
250.2	Combined Travel & Subsistance	1,529.57
TOTAL LISTED	COSTS	20,502.06

^{*}State Share of Social Security/Retirement Benefits (\$882.66)

OUTPUT AND COST STATEMENT

TABLE IV

FULL TIME ADULT VOCATIONAL AGRICULTURE

FARM MANAGEMENT INSTRUCTION - AVTI ONLY, 1974-75

OUTPUT OF PROGRAMS	Total Population of 77 Full Time Adult Management Instruc- tors	Sample of 12 AVTI Instructors
1) FARM MANAGEMENT INSTRUCTION		
No. of Families Served	49	55.3
No. of Individuals Served	106	98.5
2) ENTERPRISE INSTRUCTION	1) 684	971.2
Classroom Student Contact Hours (Tota 3) AG MECHANICS INSTRUCTION	1) 684	9/1.2
Classroom Student Contact Hours (Tota	1) 13	.8
4) ENTERPRISE & AG MECHANICS INSTRUCTION		
Individualized Student Contact Hours	81	59.5
Non-Formal Instruction - Indiv.	101	229.3
5) FIELD TRIPS, TOURS, NON-FORMAL INSTRUCT		
Total Hours of Instruction Conducted	36.2	19.9
INCOME FROM FEES AND SERVICES		
DIRECT PROGRAM COSTS	,	
REGULARLY CERTIFIED ADULT VO-AG INSTRUCTOR		
230.3 Salary		17,321.00
Payroll Taxes		24.75
Fringe Benefits		325.41
TEACHER AIDS/SUPPLEMENTARY INSTRUCTOR/SUBST	TTIITES	
210.62 Salary	110125	25.00
Payroll Taxes		
Fringe Benefits		
DIRECT CLERICAL SUPPORT FOR ADULT VO-AG STA	FF	276 00
210.61 Salary Payroll Taxes		376.00 9.25
Fringe Benefits		
3		
TOTAL TRAVEL COST		
250.2 Combined Travel & Subsistance		1,077.50
SUPPLIES		
240.8 General Office Supplies		109.91

TNSTRUCTION	IAL MATERIALS	
220.8	Textbooks	25.83
240.1	General Instructional Supplies	313.08
240.265	Special Dept. Supplies	1,131.67
240.8	Miscellaneous Supplies For Instruction	51.91
INSTRUCTION	IAL EQUIPMENT	
730.1	Capital Outlay For Non-Consumable Equipment-Replacement	33.33
1200.0	Capital Outlay For Non-Consumable Equipment-New	278.83
TOTAL DIREC	T COSTS	21,103.47
ALLOCATED P	PROGRAM COSTS	
DISTRICT EX	PENSES	
110	School Board Expense	13.30
120	Contracted Services For Administration	81.30
130	General Administration	213.40
AVTI ADMINI	STRATION COSTS	770.14
PHYSICAL PL	ANT OPERATION & MAINTENANCE	
600	Plant Operation	648.50
700	Plant Maintenance	125.57
MISCELLANEO	US FIXED CHARGES	
820.1	Property Insurance	31.63
820.3	•	4.00
820.4	Surety Bond Premiums	.19
820.5	Judgments Against School District	
830	Rent Expense	26.10
840	Interest On Current Loans	72.28
850	Other Fixed Charges	8.19
1310-1350	Debt Service (Annual)	564.48
TOTAL ALLOC	ATED COSTS	2,559.08
TOTAL PROGR	AM COSTS	23,662.55
		

Other Costs Not Listed Include:

State Share of Social Security/Retirement Benefits (\$746.20)

Pro-rata Share of Cost of Agricultural Coordinators

Pro-rata Share of State Supervisory Staff Costs

OUTPUT AND COST STATMENT

TABLE V

FULL TIME ADULT VOCATIONAL AGRICULTURE

FARM MANAGEMENT INSTRUCTION - AVTI ONLY, 1975-76

OUTPUT OF	PROGRAMS	Sample of 12 AVTI Instructors
1) FARM M	ANAGEMENT INSTRUCTION	
No.	of Families Served	53.4
No.	of Individuals Served	103.2
2) ENTERP	RISE INSTRUCTION	
Clas	sroom Student Contact Hours (Total)	551.0
,	HANICS INSTRUCTION	
	sroom Student Contact Hours (Total)	46.4
,	RISE & AG MECHANICS INSTRUCTION	
Indi	vidualized Student Contact Hours	71.5
	Formal Instruction - Indiv.	184.8
	TRIPS, TOURS, NON-FORMAL INSTRUCTION	
Tota	1 Hours of Instruction Conducted	17.6
INCOME FRO	M FEES AND SERVICES	1,710.90
DIRECT PRO	GRAM COSTS	
REGULARLY	CERTIFIED ADULT VO-AG INSTRUCTOR	
230.3	Salary	18,438.00
	Payroll Taxes	24.41
	Fringe Benefits	426.92
TEACHER AI	DS/SUPPLEMENTARY INSTRUCTOR/SUBSTITUTES	
210.62	Salary	31.83
	Payroll Taxes	Bills with Alex Time
	Fringe Benefits	100 to 10
IRECT CLE	RICAL SUPPORT FOR ADULT VO-AG STAFF	
210.61		398.92
	Payroll Taxes	9.75
	Fringe Benefits	
OTAL TRAV	EL COSTS	
250.2		1,196.75
SUPPLIES		
240.8	General Office Supplies	128.66

INSTRUCTIONAL	L MATERIALS	
220.8	95.50	
240.1	288.34	
240.265	1,265.75	
240.8	43.83	
INSTRUCTIONAL	L EQUIPMENT	
730.1	Capital Outlay For Non-Consumable Equipment-	
	Replacement	45.91
1200.0	Capital Outlay For Non-Consumable Equipment-New	245.83
TOTAL DIRECT	22,640.40	
ALLOCATED PRO	OGRAM COSTS	
		
DISTRICT EXPI		21 00
110 120	School Board Expense Contracted Services For Administration	21.80
130	General Administration	87.82
130	General Administration	220.46
AVTI ADMINIST	822.28	
PHYSICAL PLAN	NT OPERATION & MAINTENANCE	
600	737.78	
700	Plant Maintenance	149.85
MISCELLANEOUS	S FIXED CHARGES	
820.1	Property Insurance	37.03
820.3	Liability Insurance	6.18
820.4	Surety Bond Premiums	.11
820.5		
830	Rent Expense	17.10
840	Interest On Current Loans	54.92
850	Other Fixed Charges	11.48
1310-1350	Debt Service (Annual)	559.04
TOTAL ALLOCAT	2,725.85	
TOTAL PROGRAM	25,366.25	

Other Costs Not Listed Include:

State Share of Social Security/Retirement Benefits (\$848.67) Pro-rata Share of Cost of Agricultural Coordinators Pro-rata Share of State Supervisory Staff Costs

ESTIMATED DIRECT COST STATEMENT - SALARY & TRAVEL

TABLE VI

FULL TIME ADULT VOCATIONAL AGRICULTURE

FARM MANAGEMENT INSTRUCTION - AVTI ONLY, 1976-77

DIRECT PROGRAM COSTS	Sample of 12 AVTI Instructors	
DIRECT TROGRAM COSTS	Instructors	
REGULARLY CERTIFIED ADULT VO-AG INSTRUCTOR		
230.3 Salary	19,398.00	
Payroll Taxes*	51.25	
Fringe Benefits	467.00	
ŭ		
TEACHER AIDS/SUPPLEMENTARY INSTRUCTOR/SUBSTITUTES		
210.62 Salary	213.33	
Payroll Taxes		
Fringe Benefits	27.41	
DIRECT CLERICAL SUPPORT FOR ADULT VO-AG STAFF		
210.61 Salary	474.25	
Payroll Taxes	10.33	
Fringe Benefits		
TOTAL TRAVEL COSTS		
250.2 Combined Travel & Subsistance	1,495.00	
TOTAL LISTED COSTS	22,136.57	

^{*}State Share of Social Security/Retirement Benefits (\$891.83)

OUTPUT AND COST STATEMENT

TABLE VII

FULL TIME ADULT VOCATIONAL AGRICULTURE FARM MANAGEMENT INSTRUCTION, 1974-75

OUTPUT OF P	ROGRAMS	Total Population of 77 Full Time Adult Instructors	Sample of 42 Instructors
1) FARM MA	NAGEMENT INSTRUCTION		
No. o	f Families Served	49	52.7
	f Individuals Served	106	100.9
•	ISE INSTRUCTION		
	room Student Contact Hours (Total	684	688.6
•	ANICS INSTRUCTION		200
	room Student Contact Hours (Total)	13	4.3
•	ISE & AG MECHANICS INSTRUCTION	0.1	00.0
	idualized Student Contact Hours	81	92.0
	ormal Instruction - Individual RIPS, TOURS, NON-FORMAL INSTRUCTION	101	128.0
•	Hours of Instruction Conducted	36.2	36.5
TOTAL	nours or instruction conducted	30.2	20.2
INCOME FROM	FEES AND SERVICES		1,059.55
REGULARLY C	ERTIFIED ADULT VO-AG INSTRUCTOR Salary Payroll Taxes Fringe Benefits		16,421.92 20.76 329.07
TEACHER AID	S/SUPPLEMENTARY INSTRUCTOR/SUBSTITUT	TES	
210.62	Salary		25.00
	Payroll Taxes		
	Fringe Benefits		
DIRECT CLER	ICAL SUPPORT FOR ADULT VO-AG STAFF		
210.61	Salary		227.33
	Payroll Taxes		8.14
	Fringe Benefits		1.52
TOTAL TRAVE			1 100 50
250.2	Combined Travel & Subsistance		1,132.59
SUPPLIES			
240.8	General Office Supplies		117.70

INSTRUCTIONAL MATERIALS				
220.8	Textbooks	25.20		
240.1	General Instructional Supplies	237.40		
240.265	Special Dept. Supplies	622.45		
240.8	Miscellaneous Supplies For Instruction	87.97		
INSTRUCTION	AL EOUIPMENT			
730.1	Capital Outlay For Non-Consumable Equipment-Replacement	29.86		
1200.0	Capital Outlay For Non-Consumable Equipment-New	112.75		
TOTAL DIRECT	COSTS	19,399.66		
ALLOCATED PE	ROGRAM COSTS			
DISTRICT EXE	PENSES			
110	School Board Expense	40.11		
120	Contracted Services For Administration	65.88		
130	General Administration	342.99		
AVTI ADMINIS	STRATION COSTS	235.05		
PHYSTCAT, PLA	NT OPERATION & MAINTENANCE			
600	Plant Operation	546.53		
700	Plant Maintenance	109.05		
MISCELLANEOU	S FIXED CHARGES			
820.1	Property Insurance	47.19		
820.3	Liability Insurance	6.05		
820.4	Surety Bond Premiums	.60		
820.5	Judgments Against School District	.03		
W.				
830	Rent Expense	11.79		
840	Interest On Current Loans	20.90		
850	Other Fixed Charges	11.10		
1310-1350	Debt Service (Annual)	557.07		
TOTAL INDIRECT COSTS				
TOTAL PROGRAM COSTS				
TOTAL PROGRAM COSTS				

Other Costs Not Listed Include:

State Share of Social Security/Retirement Benefits (\$759.53) Pro-rata Share of Cost of Agricultural Coordinators Pro-rata Share of State Supervisory Staff Costs

OUTPUT AND COST STATEMENT

TABLE VIII

FULL TIME ADULT VOCATIONAL AGRICULTURE FARM MANAGEMENT INSTRUCTION, 1975-76

OUTPUT OF P	ROGRAMS	Sample of 42 Instructors
_,	NAGEMENT INSTRUCTION f Families Served	54.12
	f Individuals Served ISE INSTRUCTION	102.26
Class	room Student Contact Hours (Total) ANICS INSTRUCTION	526.6
Class	room Student Contact Hours (Total) ISE & AG MECHANICS INSTRUCTION	32.36
Indiv	idualized Student Contact Hours	78.0
5) FIELD T	ormal Instruction - Indiv. RIPS, TOURS, NON-FORMAL INSTRUCTION	100.1
Total	Hours of Instruction Conducted	35.1
INCOME FROM	FEES AND SERVICES	1,220.29
DIRECT PROG	RAM COSTS	
	ERTIFIED ADULT VO-AG INSTRUCTOR	
230.3	Salary	17,404.66
	Payroll Taxes Fringe Benefits	16.78 443.02
	S/SUPPLEMENTARY INSTRUCTOR/SUBSTITUTES	
210.62	Salary Payroll Taxes	41.54
	Fringe Benefits	
DIRECT CLER	ICAL SUPPORT FOR ADULT VO-AG STAFF	
210.61	Salary	293.48
	Payroll Taxes	10.93
	Fringe Benefits	8.62
TOTAL TRAVEI		1 200 20
250.2	Combined Travel & Subsistance	1,300.28
SUPPLIES 240.8	General Office Supplies	132.70

INSTRUCTION	NAL MATERIALS	
220.8	Textbooks	57.25
240.1	••	263.32
240.265	• • •	671.02
640.8	Miscellaneous Supplies For Instruction	90.07
INSTRUCTION	NAL EQUIPMENT	
730.1	Capital Outlay For Non-Consumable Equipment-Replacement	37.09
1200.0	Capital Outlay For Non-Consumable Equipment-New	121.08
TOTAL DIREC	TT COSTS	20,891.84
ALLOCATED I	PROGRAM COSTS	
DISTRICT EX	PENSES	
110	School Board Expense	43.71
120	Contracted Services For Administration	74.54
130	General Administration	349.22
AVTI ADMINI	254.11	
PHYSICAL PI	ANT OPERATION & MAINTENANCE	
600	Plant Operation	604.81
700	Plant Maintenance	117.85
MISCELLANEC	OUS FIXED CHARGES	
820.1	Property Insurance	60.70
820.3	Liability Insurance	6.04
820.4	Surety Bond Premiums	.51
820.5	Judgments Against School District	.01
830	Rent Expense	7.34
840	Interest on Current Loans	16.20
850	Other Fixed Charges	16.75
1310-1350	Debt Service (Annual)	545.75
TOTAL INDIR	ECT COSTS	2,097.54
TOTAL PROGR	AM COSTS	22,989.38

Other Costs Not Listed Include:

State Share of Social Security/Retirement Benefits (\$845.76) Pro-rata Share of Costs of Agricultural Coordinators Pro-rata Share of State Supervisory Staff Costs

ESTIMATED DIRECT COST STATEMENT - SALARY & TRAVEL

TABLE IX

FULL TIME ADULT VOCATIONAL AGRICULTURE FARM MANAGEMENT INSTRUCTION, 1976-77

DIRECT PROG	Sample of 42 Instructors	
REGULARLY C	ERTIFIED ADULT VO-AG INSTRUCTOR	
230.3	Salary	18,467.00
	Payroll Taxes*	31.19
	Fringe Benefits	486.09
TEACHER AID	S/SUPPLEMENTARY INSTRUCTOR/SUBSTITUTES	
210.62	Salary	95.48
	Payroll Taxes	- 100
	Fringe Benefits	7.83
DIRECT CLER	ICAL SUPPORT FOR ADULT VO-AG STAFF	
210.61	Salary	339.14
	Payroll Taxes	12.17
	Fringe Benefits	9.47
TOTAL TRAVE	L COST	
250.2	Combined Travel & Subsistance	1,519.69
TOTAL LISTE	O COSTS	20,968.06

^{*}State Share of Social Security/Retirement Benefits (\$885.29)

agricultural instruction for adults in addition to their regular day school activities.

The non-formal and group instructional activities are an important part of Farm Management Programs. There are noted differences in the time spent in these activities between instructors employed in secondary and AVTI schools.

The income reported by schools is not a good indicator of the money that was assessed against program participants. Only twenty of the thirty secondary programs reported any income, yet all farm management families enrolled were assessed for the business analysis and supplies for the management program. The ten schools which reported no income utilized a "pass through" account where fees received were passed directly to the area analysis center without being encorporated in the school accounting system. By the same token these schools reported no expenditure in the supplies category for the analysis services.

Only one of the AVTI Systems utilized a "pass through" account mechanism for income. Thus the income reported for AVTI programs is significantly higher than the income reported for secondary programs, although the actual income of both groups can be assumed to be about equal based upon the fee schedule reported in the survey questionnaire. The inclusion of pass through income also affects the amount reported as expenditures for supplies and materials.

Wages and salaries paid to instructors is higher in AVTI's than in secondary schools. There is a significant difference. The salary differential is explained by several factors not shown in this report. The AVTI instructors have longer tenure in school systems than do those in the secondary programs, thus are higher on the salary schedule on the average than are secondary adult instructors. The AVTI instructors are also in school districts of comparative larger size and thus probably enjoy a slightly higher base pay than do secondary adult instructors in smaller school systems.

Neither group had significant expenditures for clerical assistance, although the AVTI instructors reported about twice the expenditure than did their secondary peers. The low expenditure in no way reflects the ideal situation, but rather the utilization that was made with very limited budgets for ancillary services. It is likely that the availability of funds for such ancillary service would prompt a rapid expansion in the use of clerical personnel. Utilizing clerical staff would in fact add to the efficiency of the adult instructor by freeing him of the performance of many clerical tasks for which he is poorly trained and inefficient.

The procedures for allocating the indirect costs have been explained in the assumptions section. The reader should again refer to that section before interpreting the costs reported as indirect. In summary, costs of administration have been divided equally among all personnel employed. All other indirect costs have been assigned against instructional personnel only with the adult instructor assigned only 1/3 of the costs attributed to full time day school personnel.

The only principle difference in indirect cost occurs in administrative costs. Programs in AVTI's have considerably higher total administrative costs than do

those in secondary schools. Administrative costs for the AVTI per employee are rather high in some of the smaller schools, and in combination with general administrative costs, higher than total administrative costs for secondary school programs.

Debt retirement, as explained in the assumptions section, is used as a proxy measure of the amortization costs of the physical facilities. While the discharge of these costs is subject to different rules than is program operation, they nevertheless represent tax dollars that must be generated by the local education agency to meet annual financial obligations, and must be considered in a finance plan that may restrict local educational agencies from raising local revenue.

In general, costs of maintaining a farm management education program for adults varied in 1975-76 from about \$22,000 in secondary shoools to \$25,400 in AVTI's. The average costs of the 42 programs reported was \$22,479.

Under the funding arrangement now in effect, some of the program costs were recovered by the local education agency. Vocational funds administered through the vocational divisions, State Dept. of Education, were distributed to shoools to partially reimburse expenditures for teachers salaries and travel. The funding reimbursement effected a cost sharing between state government and the local education agency as follows. Some of the local costs were in turn passed on to the participants through fees and tuitions.

1975-76	Total Costs		State Reimb.	Local Costs	% of <u>Total</u>
AVTI	\$25,366.24	Salary Travel	\$13,828.50 598.38 \$14,426.88	\$10,939.36	43%
Secondary	\$22,038.39	Salary Travel	\$12,743.25 670.85 \$13,414.10	\$ 8,624.29	39.1%
Total	\$22,979.38	Salary Travel	\$13,053.50 650.14 \$13,703.64	\$ 9,275.74	40.4%

It is hoped that the information contained in this report will be useful to program administrators and policy makers in developing a plan to continue the promotion and funding for adult programs in agriculture. It is evident from the information reported herein that program costs are rising at a fairly rapid rate. The salary of the teacher accounts for about 75% of the total program costs. Teachers salaries for the three years in this study have increased 12% from 1974-75 to 1976-77. While not all other costs have risen at the same rate most of the costs have at least been affected by the inflationary nature of the economy. It is the problem of dealing with the rising costs and limited revenue at the local level that this study is directed. Hopefully a solution can be found that will not only benefit the economy of Minnesota, but will attest to the careful and efficient use of educational resources.

