

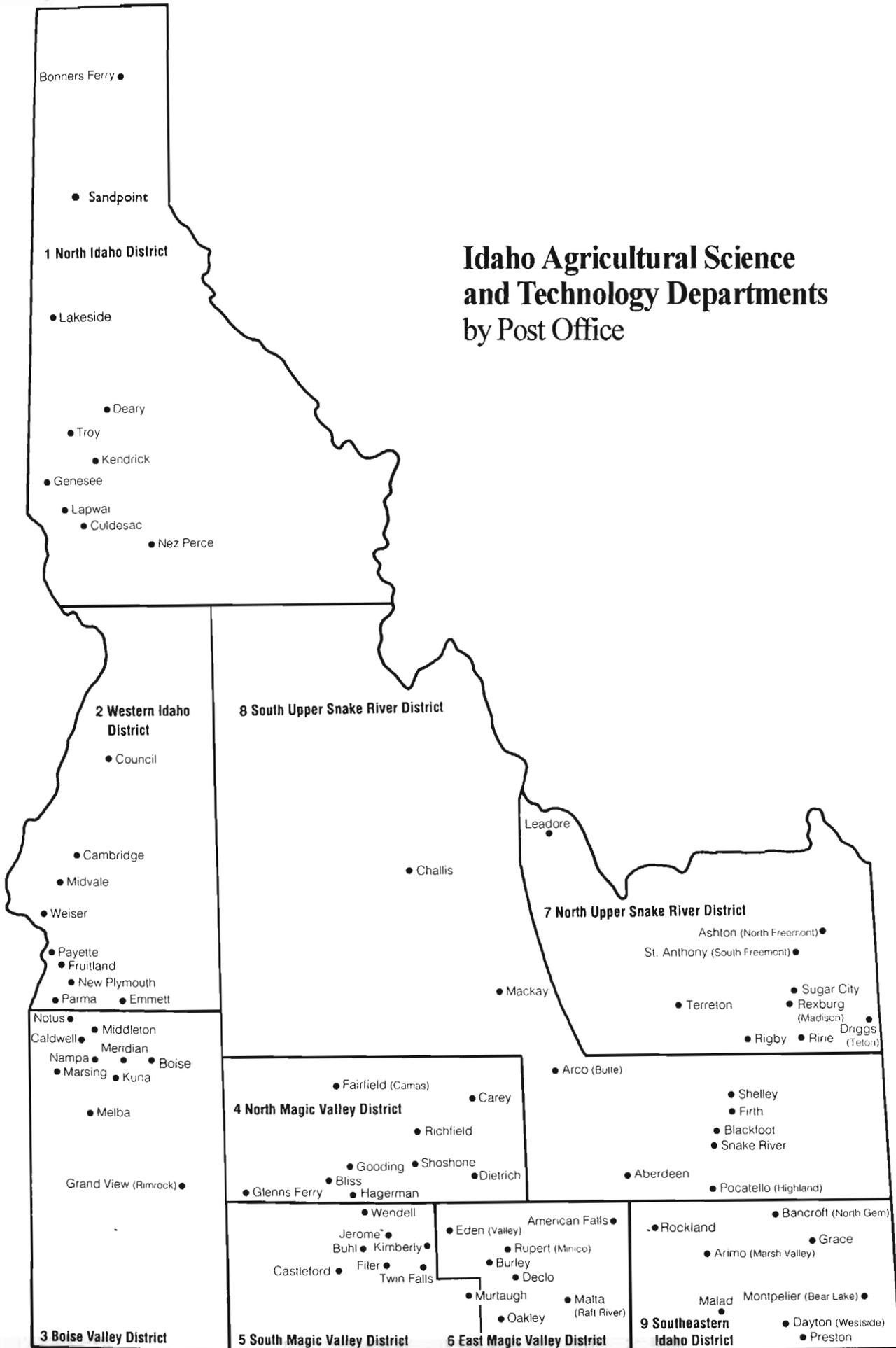
Today's 
 Education for
Tomorrow's
Agricultural Professionals



*Future Directions: Idaho Secondary
Agricultural Science and Technology Education*

A Special Report

Idaho Agricultural Science and Technology Departments by Post Office



Today's Education for Tomorrow's Agricultural Professionals



*Future Directions: Idaho Secondary
Agricultural Science and Technology Education
October, 1992*

A Special Report

A joint project conducted by:

- The University of Idaho Department of
Agricultural and Extension Education
- The Idaho State Division of Vocational Education
- The Idaho Vocational Agriculture Teachers Association

Preface

It is generally safe to say that at no time in recent history has education faced and had to deal with such rapid change. The changes in our world are global and affect world politics, international economics/trade, world health issues, (e.g. AIDS) environmental issues, and the world supply of safe and nutritious food. These changes and others affect the educational system in our nation and in our local communities.

We as a nation and state have pressing issues which must be addressed, at least in part, by our public schools. These issues include: poverty, illiteracy, violence, drugs, AIDS, single parent homes, homeless children, child care, and preparing our young people to understand and participate in a democratic form of self-governance. Schools now face the task of addressing contemporary social issues as well as teaching traditional subjects.

The questions for secondary agricultural education are then: Do we fit, and how do we fit in today's educational delivery system? In our mind there is no question that we do indeed fit. The larger question and not so easily answered is, how do we fit? In order to effectively resolve these questions, it will require exemplary and visionary leadership from all of us. We must charge ourselves with the resolve to chart our own future.

Recently, we here in Idaho have done much to address the many changes which have occurred and are occurring today. Through the efforts of many, we have addressed issues

affecting high school graduation and college entrance requirements, science credit for agriculture courses, the development of a secondary agriculture curriculum outline and curriculum resources guides, program philosophy, and a tactical plan for agricultural education in Idaho.

With all of this the fact remains, confusion exists as to what we believe constitutes a "program" of agricultural education in an Idaho high school. Some confusion is understandable given we have changed to: numbered semester courses, science credit courses, and business management counting for consumer economics. The structure of an Idaho school day varies greatly and includes: six-period days, seven-period days, eight-period days, eight-period roll over and tri-semester schedules. Confusion is understandable given the changes in course content and reporting, along with science and economics credit given for some classes and a wide variety of school day structures. In all of this, we must maintain program integrity and not compromise the basic components of our program: classroom and laboratory instruction, the FFA, and SAEP.

All of us involved with agricultural education in Idaho have felt frustration as we have dealt with these issues. We believe that it is safe to say that most teachers have struggled with structuring a local program which meets community needs, and in the larger sense, fits into the total framework of the educational delivery system at the local, state and national levels. The Department of Agricultural and Extension

Education is charged with the preparation of teachers for agriculture programs both in the present and future. The department needs the dialogue, interaction, and consensus of the profession as it works with the future teachers and plans and delivers their professional course work. The State Division of Vocational Education needs the consensus of all as it provides overall leadership, guidance and direction dealing with approving and funding programs.

This report is an internal look at Idaho secondary Agricultural Science and Technology education. The report describes the present situation and offers specific recommendations for the future direction of Agricultural Science and Technology programs in Idaho.

This report is the combined effort of a selected group of Idaho educators who were charged with taking an internal look at Agricultural Science and Technology programs in Idaho. The committee was endorsed and supported by the Idaho Vocational Agricultural Teachers Association, the State Division of Vocational Education and the Department of Agricultural and Extension Education at the University of Idaho.

The Committee members were:

Jon Fabricius - Genesee
Keith Hyatt - Payette
Steve Wilder - Meridian
Joe Blackstock - Kuna
Alan Schoen - Rimrock
Tom Woodland - Gooding
Ron Thaemert - Buhl
Marc Beitia - American Falls
Kent Scott - Malad
Mark Pratt - Firth
Alan Heikkila - Highland
Dave Ross - Teton
Don Bird - West Jefferson
Craig Clapier - Nampa
Stuart Nesbitt - Weiser
DeVere Burton - Boise
Richard Ledington - Pocatello
Lou Riesenberg - Moscow
John Mundt - Boise

The report which follows is a composite of their individual and collective effort. It is intended that this report be utilized by: policy makers, administrators, agricultural educators, parents, members of advisory committees, and the industry of agriculture.

The Present Situation

Secondary Agricultural Science and Technology Program: Defined

A Secondary Agricultural Science and Technology program in Idaho is defined as an organized sequential program of instruction for secondary students that addresses agricultural services and many phases of production, processing, and distribution of agricultural products. The program includes basic principles of science, communications and math that are inherent to the curriculum and promote the concept of environmental awareness. Student leadership activities and supervised agricultural experience programs are considered to be integral parts of the program of instruction. Appropriate program outcomes include entry level employment in the agricultural industry or enrollment in post-secondary /university degree programs.

Idaho, An Agricultural State

The basic and most prominent industry in Idaho is agriculture. Agriculture and allied industries supply more than half of Idaho's gross product and employ more than one-third of Idaho's labor force; while nationally, agriculture accounts for one in five (23 million) jobs. Over 20 percent of the gross national product can be tied to the agricultural industry of the nation.

Idaho produces approximately 95 agricultural commodities which makes it a very diversified agricultural state. This intense and diverse production agricultural industry is supported by an equally diverse allied agribusiness industry; ranging from agricultural sales and service, processing and distribution to agricultural marketing, management, mechanics, and engineering. The allied industries of agriculture are the major employers in the state.

Secondary Schools

Agricultural education programs are located in 77 of the public secondary schools in the state. The 77 schools with agricultural education programs are classified by size as follows:

Secondary Schools with Agricultural Programs

Class of school of programs	Number
A-1	09
A-2	18
A-3	23
A-4	27

During 1985-86, there were approximately 3904 agriculture students enrolled in and served by the 75 secondary schools that offered agricultural education programs. A new curriculum was implemented in Idaho during the 1989-90 school year. The number of students enrolled in the program has increased each year since 1989-90. Some of the increase is thought to be due to changes in the scheduling format in some schools. The cumulative effects of the two changes is evident in larger enrollments in the programs across the state. The total enrollment in Agricultural Science and Technology in 1991-92 was 6,883 students enrolled in 77 programs. Other trends that are evident for the same period of time are decreases in the percentage of students who participate in SAE programs and who are members of the FFA.

**Agricultural Enrollment/FFA Membership
1982-92**

Year	Enrollment	FFA Membership	% FFA Membership
1982	4485	3952	88.1
1983	4531	4046	89.3
1984	4197	3904	93.0
1985	4109	3840	93.4
1986	3904	3492	89.4
1987	4211	3365	79.9
1988	4663	3465	74.3
1989	4880	3451	70.7
1990	5296	3444	65.0
1991	5938	3225	54.3
1992	6883	3399	49.4

**Secondary Agricultural Science and
Technology Programs**

The 77 secondary programs in Idaho are instructed by 84 Agricultural Science and Technology teachers. The programs are diverse in nature with the instructional emphasis focusing on community needs. The youth organization (FFA) and the Supervised Agricultural Experience Programs (SAEP's) are integral components in most secondary programs. The backgrounds of students enrolled in the programs are broad and varied. The majority of the students enrolled do not live on commercial farms. They reside on small acreages or within the residential areas of Idaho towns and cities.

Approximately fifty-five (55) percent of the students participate in an SAE program. In recent years there has been an increase in the number of placement and work experience programs.

Approximately forty-nine (49) percent of the Agricultural Science and Technology students are members of the FFA and participate in a variety of activities offered by the program at local, district, state, and national levels.

Secondary Agricultural Education Program Philosophy

Secondary agricultural education is an organized program of instruction provided through and in harmony with public schools. It is a sequential, semester-based program which prepares students with competencies in the specialized areas of agricultural occupations. Agricultural Science and Technology program instruction emphasizes applied academics with a hands-on practical instructional approach.

The curriculum consists of a core for all programs and includes units of instruction which are systematically sequenced so as to build on learned competencies. Upon completion of the program, a student should be able to enter production agriculture or secure an entry-level job in agriculture or related industry. Many students will elect to further their education at the post-secondary level, either at a vocational technical school or a four-year degree granting institution.

All students enrolled in Agricultural Science and Technology shall have an approved Supervised Agriculture Experience Program (SAEP). SAEP's in realistic settings provide students the opportunity to put into practice those skills and competencies acquired in the traditional school setting. All students with the help of their instructor and their parents shall select an appropriate program related to the

students' interests. All students will be expected to keep neat and accurate records of their program. The instructor shall provide on-site instruction and supervision periodically throughout the year.

All students enrolled are encouraged to become members of the local, state, and national FFA organization. FFA is an integral component of instruction in secondary agricultural education. Agricultural Science and Technology/FFA includes instruction in leadership through many avenues such as: public speaking, parliamentary procedure, committee work, and community service activities. FFA contests and other student participation and recognition activities are related to the Agricultural Science and Technology program.

Secondary Agricultural Education is a learning-by-doing concept. Meaningful SAE programs and FFA activities allow for application of classroom and laboratory knowledge and skills.

The program is a year-round educational concept, and extended service for instructors is a necessary requirement in order to meet the objectives of the program. Local program advisory committees shall be involved in local program operation, future planning and direction.

Secondary Agricultural Education Program Goals

- Develop agricultural competencies and the basic background knowledge to become successful in agriculture and related occupations.
- Develop entrepreneurial, business, and management skills needed by students preparing to enter agriculture related occupations.
- Develop an understanding of agriculture's relationship to the environment and our natural resources.
- Develop the students' ability to think critically, solve problems, and function effectively in a competitive society.
- Develop an understanding of career opportunities in agriculture and the preparation needed to select and enter an agricultural occupation.
- Develop career objectives and job-seeking, employability, and job-retention skills.
- Develop the ability to advance in an occupation through a program of continuing education and life-long learning.
- Develop communication skills and abilities which are essential in any occupation.
- Develop the abilities needed to exercise and follow effective leadership in fulfilling occupational, social, and civic responsibilities.

A Process for Learning

It is recognized that secondary school students are a diverse group, varying in background, ability, aptitude, and aspiration. A wide variety of educational approaches are needed to accommodate those differences; no single prescription can be effective for everyone. Vocational education is an alternative that builds upon the general and academic education foundations and responds to diverse learning styles. Agricultural Science and Technology can be justified in the secondary curriculum on this basis alone.

The following aspects of vocational education characterize it as a learning process:

- Applied and small-group learning activities reinforce basic communication and interpersonal skills and promote their transfer to other settings.
- Individualized instruction.
- Abstract principles can be taught in concrete ways.
- Cooperative learning; students help each other.
- Academic course work is applied.
- Problem solving is incorporated; emphasis is on reasoning and critical thinking skills.
- Development of students' competence and confidence in their abilities by applying both knowledge and skills to the tasks at hand.
- Immediate feedback is given on how well students are performing.
- Activities are interesting and relevant to students' lives, thus, a source of motivation.

Adapted from The Unfinished Agenda: The Role of Vocational Education in the High School. The National Commission on Secondary Vocational Education, United States Department of Education, Washington, DC.

Minimum Program Standards

Overview of Present Situation:

Current program standards for Agriculture Science and Technology have been approved by the State Board for Vocational Education. In recent years, alternate delivery systems have been developed and implemented in most Secondary Agricultural Science and Technology programs. Funding, legislation and the changing backgrounds of students entering agricultural programs have brought dramatic changes to most programs. Coupled with technology advances in agriculture and methods of instruction, the program standards are in need of revision and updating.

Instruction in Agricultural Science and Technology is moving toward a competency-based curriculum and is designed to meet the needs of each community. Secondary Agriculture instructors are continually striving to upgrade their teaching methods, instructional materials, and equipment. Instructors are showing increased interest in professional development and inservice activities; likewise, they are demonstrating an increased interest in the utilization of advisory committees for program planning.

Present State Division of Vocational Education Standards:

** The items marked with an asterisk are basic components of an approved program. Programs missing these components are considered nonapprovable.*

Administration

- * Vocational funding is administered and program fiscal records are maintained in accordance with state policies and guidelines.
- * A budget exists for the vocational program and the instructor is involved with its development.

- * A plan, approved by the school administrator(s), is available for vocational instructor(s) whose contracts include time beyond the normal academic year. The plan is consistent with program philosophy and goals. The time beyond the normal academic year supported with vocational education funds has a program of work with emphasis on program improvement.

Staff

- * Vocational instructor(s) hold(s) current vocational credentials.
Vocational instructor(s) participate in professional development activities.

Program of Study

- * Classes offered meet sequence of courses for the program area.
- * Current state approved competency-based curriculum for the program area is used. Substantive curriculum changes are approved by the State Division of Vocational Education.
- * A program advisory committee representative of business, labor, industry, minorities, and individuals in non-traditional occupations provides input for program improvement.
- * Leadership development is integral to the program as generally provided through vocational student organizations.

A written program philosophy is compatible with the educational objectives of the school district.

Written program goals reflect the needs of community, business/industry, and students.

Curriculum supports reinforcement of basic skills and employability skills.

Resources support curriculum.

Realistic work experience is provided through laboratory, industry-related activities, or both.

A follow-up is conducted and used for program planning and improvement.

Equity and Access

- * Opportunities are provided for all students to participate in all vocational programs.
- * Nondiscriminatory counseling, curriculum design, classroom procedures, and placement services are followed.

Student Services

- * Guidance and recruitment services are provided.

Instructor, in cooperation with school counselor, is involved with guidance and placement.

A plan for disadvantaged and/or handicapped students is used for assessment of interests, abilities, and special needs.

Facilities and Equipment

- * Students are provided with clean, safe classrooms/laboratories.
- * Enrollment meets capacity standards as mutually established and recorded in the State Division of Vocational Education.

Equipment is systematically updated, maintained, and inventoried.

Laboratory facilities and equipment support curriculum.

Recommendations for the Future:

1. For approval and full state vocational funding, the following are considered minimum standards for secondary agricultural education programs:
 - a. A part-time or full-time instructor teaching

Agricultural Science and Technology shall hold a valid Idaho Standard Secondary Certificate endorsed for Vocational Agriculture.

- b. The development of the Agricultural Science and Technology curriculum, and the relevant instruction thereof, shall be based on the needs of the students, community and consistent with the approved state curriculum.
- c. The program shall include a youth organization (FFA) as an integral component and include a comprehensive plan of activities and objectives.
- d. Each Agricultural Science and Technology student shall have a Supervised Agricultural Experience Program (SAEP) coordinated with a practical sequence of events leading to the occupational objectives of the student.
- e. Facilities, equipment and instructional materials shall be of acceptable quality and in adequate quantities to facilitate the instruction relevant to current practices in the agricultural industry.
- f. The program shall have an active advisory committee composed of members representing the various segments of agriculture in the community.

2. An approved Agricultural Science and Technology program shall be operated as a 12-month instructional program.
3. Any Agricultural Science and Technology program that does not include employment beyond the academic school year shall not be eligible for state vocational funding.
4. The maximum effective student/ teacher ratio shall be 70:1. If the student/teacher ratio exceeds 70:1, consideration shall be given to employing another part-time or full-time instructor.
5. All Agricultural Science and Technology instructors/FFA advisors shall submit FFA dues to the State office, in a timely manner, for each student who joins the FFA at the local level.

Program Curriculum and Content

Purpose of Curriculum:

Agricultural Science and Technology programs strive to meet the needs of the communities and students they serve. The content of the program curriculum should reflect the needs of not only the local population but the agriculture industry in general. The content of the curriculum should change with advancement in technology and approved practices throughout the industry.

The curriculum shall consist of a core of approved courses which are systematically sequenced to build on previously learned competencies. Components of the FFA and Supervised Agriculture Experience Programs shall be considered as integral parts of the Agriculture program. A student completing a program should have entry-level skills in agricultural related occupations or be prepared to pursue further education at the post-secondary or university level.

Trends and Concerns:

Through the implementation of the semester/trimester courses the enrollment in most Agricultural Science and Technology programs has increased. Although, the increase in program enrollment has been welcome, much of the traditional program (AG I, II, III, IV) continuity has been lost due to the open entry/open exit policies of many programs. The number of students enrolling in Agricultural Science and Technology programs have increased but the

percentage of those students becoming actively involved in the FFA and SAE programs has decreased drastically from 93% to about 50%.

The adoption of the new course structure in many programs has increased the diversity of program delivery. Current delivery systems include: 6 period, 7 period, and 8 period roll-over days on the semester basis, along with the 5 period day through the trimester system. The differences between the delivery systems causes a variety of differences among the programs due to the constraints and/or flexibility of the individual system. In addition there are differences in instructor certification within the profession. All instructors are certificated in agricultural education. Some are certificated in natural science, biological science and/or consumer economics. These additional certifications have allowed some instructors to teach agriculture courses not available to those certified only in agricultural education.

All public schools are faced with the fact that they must meet the needs of "at risk" students. Many of these students have been directed into the Agricultural Science and Technology programs. This being the case, most instructors have had to do some program restructuring, which has caused the dilution of some integral components of the overall program content. To accommodate the needs of "at risk" students and those students not seeking baccalaureate degrees, some programs may need to incorporate the option of an Agricultural Tech Prep track.

Recommendations and Action Steps:

1. Program enrollment should not exceed the capability for the instructor or the facility.

Action step: Develop suggested student enrollment loads for the facility.

2. Program curriculum shall be a sequential based scope and sequence which prepares students with competencies in the areas of agriculture occupations.

Action Step: Develop recommended sequences for students to follow.

3. Career information, exploration, and planning should be components of the Secondary Agricultural Science and Technology curriculum.

Action Step: Inform students about courses in career opportunities available in the agriculture industry.

4. The FFA shall be an integral part of the Agricultural Science and Technology curriculum.

Action Step: The FFA shall be introduced and membership encouraged during the introductory courses for each curriculum. Active membership shall be promoted through the remainder of a complete program.

5. Human relations, social skills, job placement, leadership development, and interpersonal

communication skills should have considerable emphasis in an Agricultural Science and Technology curriculum.

Action Step: These skills and competencies shall be introduced and reinforced throughout the entire curriculum of a complete program.

6. All students shall receive instruction in SAE programs and record keeping.

Action Step: Each student and/or parent should be informed of the SAE requirement, explore alternatives, and develop a plan for an SAE program.

7. Although program content delivery and instructor certification will vary, comprehensive Agricultural Science and Technology programs shall strive to comply with the approved curriculum and program content.

Action Step: Teachers of comprehensive programs should include curriculum from the following areas of instruction: **animal science, agricultural mechanics, SAEP, crop and soil science, agricultural business management, environmental and natural resources, and leadership development.**

8. In order to meet the needs of all students, steps should be taken to assist "at risk" students in being successful in school.

Action Step: Explore agriculture tech prep opportunities for the Agricultural Science and Technology program.

Introduction to Agricultural Science and Technology

AG 0110	Introduction to Agricultural Education
AG 0120	Introduction to the Agricultural Industry
AG 0130	Introduction to Agricultural Mechanics
AG 0140	Introduction to the Livestock Industry
AG 0150	Introduction to the Agricultural Plant Industry

Agricultural Mechanics

AG 0210	Agricultural Welding
AG 0220	Agricultural Power Technology
AG 0221	Small Gasoline Engines
AG 0222	Agricultural Power Technology/Large Engines
AG 0225	Agricultural Systems/Electricity and Hydraulics
AG 0227	Agricultural Machinery
AG 0230	Agricultural Structures
AG 0240	Agricultural Fabrication

Applied Agricultural Management

AG 0310	Applied Livestock Management
AG 0320	Applied Crop Management
AG 0330	Landscape Design
AG 0335	Floral Design and Marketing
AG 0340	Applied Greenhouse and Nursery Management
AG 0350	Forestry and Wildlife Management

Agricultural Leadership and Management

AG 0410	Personal Skill Development
AG 0460	Agribusiness Management and Marketing
AG 9800	Occupational and Career Experience
AG 9900	Cooperative Education

Applied Biology

AG 0510	Botany/Plant and Soil Science
AG 0512	Botany/Science of Plant Growth and Development
AG 0514	Botany/Horticulture Plant Science
AG 0516	Botany/Forestry Science
AG 0518	Botany/Range Science
AG 0520	Ecology/Natural Resources Science
AG 0530	Zoology/Animal Science
AG 0532	Zoology/Science of Animal Nutrition
AG 0534	Zoology/Science of Animal Reproduction
AG 0536	Zoology/Fish and Wildlife Science
AG 0540	Agricultural Biotechnology

Consumer Economics

AG 0660	Agricultural Business and Economics
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Capstone courses will vary among programs but may include any course above the 100 series. Capstone courses are those courses that are taken during the 11th and 12th grade by program completers. The content of such courses will be of an advanced nature.

Suggested Models for Scope and Sequence:

All students should be required to take one of the following: AG 110, 120, or 410 as a prerequisite to any other course. A comprehensive program scope and sequence will include the areas of **Animal Science, Plant and Soil Science, Agricultural Mechanization, Agribusiness Management, Natural Resource Management, FFA and SAEP**. The following tracks are provided as guidelines for the program areas of Agricultural Mechanization, Applied Science, Applied Management, Natural Resource Management and Tech Prep. The total program scope should be systematically sequenced to provide continuity.

Below are suggested tracks that may be used in determining a program's Scope and Sequence. No more than three of the five tracks should be selected for a given program with one instructor. Course numbers and their corresponding prerequisites (courses in parenthesis are prerequisites) are listed for each suggested track.

<u>Ag Mech</u>	<u>Applied Mgmt</u>	<u>Applied Science</u>	<u>Natural Resource</u>
Ag 110	Ag 110	Ag 110	Ag 110
Ag 130 (110)	Ag 140 (110)	Ag 410	Ag 410
Ag 140 (110)	Ag 150 (110)	Ag 530 (110)	Ag 150/510 (110)
Ag 150 (110)	Ag 310 (140)	Ag 510 (110)	Ag 140/530 (110)
Ag 221 (110)	Ag 320 (150)	Ag 512 (510)	Ag 520 (150/510)
Ag 210 (130)	Ag 340 (150)	Ag 514 (510)	Ag 350/516(150/510)
Ag 240 (210)	Ag 350 (110)	Ag 532/534 (530)	Ag 518 (150/510)
Ag 410 open	Ag 460/660 (seq)	Ag 536 (530)	Ag 536 (530)
Ag 420 (240&410)	Ag 420 (seq)	Ag 420 (410& Seq)	Ag 420 (410&Seq)

Tech Prep Options

	<u>Tech Prep Welding</u>	<u>Tech Prep Engine Mechanics</u>	<u>Tech Prep Horticulture</u>	<u>Tech Prep General Ag</u>
				Ag 410
				Ag 221 (410)
				Ag 210 (410)
				Ag 240 (210)
11th grade	Ag 410	Ag 410	Ag 410	Ag 222 (221)
	Ag 220	Ag 220	Ag 150	Ag 510 (410)
12th grade	Ag 210	Ag 221	Ag 221	Ag 512 (510)
	Ag 240	Ag 222	Ag 340	Ag 514 (512)
				Ag 340 (514)

Suggested Delivery Schedules:

The following are example program schedules for the different delivery systems. They are intended to be used as guidelines only. The flexibility of the schedule should be based on program needs and the discretion of the instructor.

Semesterized - 7 period day or 8 period rollover model

Example 1 combines agricultural mechanics and applied management tracks

Period	1st semester	2nd semester
1	X	X
2 Freshman	110	140
3 Sophomores	150	130
4 Juniors	221	210
5 Seniors	240	460
6 Related Courses	310	320
7 Related Courses	340 or 350	410

Example 2 combines agricultural mechanics and applied science tracks

Period	1st semester	2nd semester
1	X	X
2 Freshman	110	130
3 Sophomores	510	530
4 Junior	221	210
5 Seniors	240	460
6 Related Courses	532 or 534	512 or 514
7 Related Courses	536 or 514	410

Trimester 5 period day model

Example 1 combines agricultural mechanics and applied management

Period	1st Trimester	2nd Trimester	3rd Trimester
1 Freshman	120	140	340
2 Sophomores	150	320	310
3 Juniors	130	221	210
4 Seniors	240	230	660

Example 2 combines agricultural mechanics and applied science

Period	1st Trimester	2nd Trimester	3rd Trimester
1 Freshman	110	410	130
2 Sophomores	530	221	510
3 Juniors	514	210	532/534
4 Seniors	536	240	240
5 Optional	420	420	420

Semesterized - 6 period day

Example 1 combines agricultural mechanics and applied management tracks

Period	1st semester	2nd semester
1	X	X
2 Freshman	110	130
3 Sophomores	140	150
4 Juniors	210	221
5 Seniors	240	310 or 320
6 Prerequisite	460	410

Example 2 combines agricultural mechanics and applied science tracks

Period	1st semester	2nd semester
1	X	X
2 Freshman	110	130
3 Sophomore	510	530
4 Juniors	536	210
5 Seniors	240	460
6 Prerequisite	532 or 534	410

Idaho Middle/Junior High School Agricultural Education

Exploratory classes in Agricultural Science and Technology are taught in many Idaho schools to seventh and eighth grade students. There is no uniform, approved state curriculum for students who participate in these classes. In some schools, the introductory courses for the high school programs are used; in others, teachers choose the curriculum that they believe to be appropriate for this group of students. No state funding is available to support these classes. However, one class period per day can be devoted to exploratory or other courses without losing state program funds.

The National FFA constitution allows students who are enrolled in 7th/8th grade agriculture classes to become dues paying FFA members. These students are allowed to join the

FFA in Idaho, but do not enjoy all membership privileges accorded to high school members. The following restrictions apply to middle/junior high school FFA members:

1. They are not eligible to attend and participate in state judging competition or leadership activities.
2. They may not earn points toward state degrees and awards until their 9th grade year in school.
3. FFA districts may determine locally those activities in which middle/junior high school FFA members are eligible to participate.

Funding of Approved Programs

Overview:

The State Division of Vocational Education provides funding to support school districts with the added cost associated with offering approved Agricultural Science and Technology programs. The funding is awarded based on the **number of approved courses** offered during the school day. Funding is not dependent on student enrollment in an individual course or program. This funding is prorated for programs with more or fewer approved courses. School districts are expected to provide local support for the basic program expenditures, (e.g. regular salary and benefits, facilities, textbooks, and consumable supplies). State vocational reimbursement can only be used for the following: extended contract, professional development, travel, instructional supplies, and equipment. **Additional support by the district** to update equipment, supplies, and facilities will contribute to a modern, quality program. The regular program funding for the 1991-92 school year is outlined below:

Full-Time Equivalent	Program Units	Estimated Funding
.81 - 1.00	1.0	\$8,400
.61 - .80	.8	6,720
.41 - .60	.6	5,040
.21 - .40	.4	3,360

During 1991, the Idaho legislature approved the expenditure of state funds to replace federal funds lost to regular vocational programs. Therefore, the regular vocational program formula is funded entirely with state dollars. Assuming the state economy remains stable, then this should translate to greater stability for regular program funding.

The State Division of Vocational Education also receives federal funding through the Carl D. Perkins Vocational and Applied Technology

Education Act of 1990. These funds target special population students and the improvement of existing vocational programs. School districts qualify for federal funding based on a formula specified in the Act. A school district and/or consortium must submit a grant application to access federal funding. Contact Larry Lannigan, Federal Projects Coordinator, State Division of Vocational Education, at 334-3216 for more information concerning the grant process.

Additional funding or donations of surplus equipment is available periodically through the Idaho Vocational Education Foundation. Contact Dick Winn, IVEF Coordinator, at 334-3216 for more information.

Recommendations:

1. Minimum program standards be adopted and enforced for continuation of a funded program.
2. Individual Agricultural Science and Technology program compliance with minimum program standards should be reviewed at least every five years by the Agriculture Program Supervisor with the Idaho Division of Vocational Education. An option would be to develop a district review committee which would provide a vehicle for local evaluation and program improvement.
3. Programs not in compliance with minimum standards shall be placed on conditional approval or probationary status, followed by loss of program funding if improvement is not evident within one year.
4. Maintain the regular program funding for Secondary Agricultural Science and Technology programs. As available, funding be increased to address new initiatives or priorities.

5. Efforts be made to suggest appropriate uses of federal funds in regular vocational programs.
6. Consider development of a pilot program initiative to provide additional competitive funding to develop model programs and stimulate new and innovative efforts in Secondary Agricultural Science and Technology programs.
7. Alternative funding be identified and/or developed to address the needs of Secondary Agricultural Science and Technology programs.

Supervised Agricultural Experience and Summer Programs

Definition: Supervised Agricultural Experience Program (SAEP)

A supervised Agricultural Experience Program consists of all the planned practical activities in which the student develops and applies agricultural knowledge and skills. Students participating in SAEP's are supervised by teachers, parents, employers, or other adults who assist them in achieving their educational objectives. The competencies to be developed should be determined cooperatively by the student, teacher, parents and employer.

Supervised Agricultural Experience Programs are the planned application and development of agricultural competencies in a learning environment as closely related to the real conditions of the occupation as can be provided. The total of the student's experiences comprise a program. Year-round long-range Supervised Agricultural Experience Programs are critical in the development of entry level competencies in the agricultural industry.

Summer Program:

Summer programs at present are used for SAEP on-site supervision, professional improvement, preparation of curriculum materials, facility maintenance and organization, assistance at county fairs, etc. Some programs are not requiring students to have a summer Supervised Agricultural Experience Programs (SAEP's) while others require students to have SAEP's year-round.

Trends:

In the past, many SAEP's consisted of production enterprises; however, in recent years, there has been an increase in the number of

placement and agricultural experience programs. Secondary agricultural education programs can offer students credit for summer SAEP's. There is an increased emphasis in agriculture science to ensure that what is taught in the classroom can be tied to real situations experienced by students. Applied Science must be practiced in the appropriate setting; reinforced, supervised and organized in a sequential manner.

Because of the changes in student populations and the need to experience realistic situations many of the practical applications of agriculture occur in the summer months. This cannot be duplicated in the classroom or laboratory. The agricultural science instructor must increasingly use agriculture related businesses to reinforce the competencies taught in the classroom and laboratory. The application of objectives for many problems taught must be completed in practical settings and in agriculturally related industries/businesses. The instructor and the agricultural industry/business need to be involved in the learning process of the student. The recent trend is to maintain existing summer programs.

Recommendations for the Future:

1. Agricultural science instructors should:
 - a. develop comprehensive summer program plans including the scope and sequence of individual student summer program plans.
 - b. develop an evaluation process of the SAEP designed to meet the needs of the local education agency.
 - c. attend workshops or seminars to aid in developing and monitoring SAEP's.
 - d. supervise and encourage student participation in county and state fairs.

- e. cooperate with agricultural agencies, industries, and business in planning summer educational programs.
 - f. conduct leadership training for students and supervise FFA activities.
 - g. attend educational courses, field days, conferences and inservice activities to keep pace with new technology.
 - h. use the Summer Weekly Report Forms and keep administration and other school staff aware of summer program progress.
 - i. be employed for 12 months.
2. Students meeting established criteria should be granted high school credit for completion of a Supervised Agricultural Experience Program for the summer months.
 - a. Students enrolled in SAEP's should have the opportunity to develop skills in the areas of their interest.
 - b. Supervision of these programs is to be provided by the agricultural science instructor.
- c. Definite goals and learning objectives shall be established by students, agricultural science instructors, parents, and cooperating agribusiness employers.
 - d. In cooperation with parents and/or cooperating employers, the agricultural science instructor shall monitor and record the progress of the student toward objectives.
 - e. Individualized and group instruction shall take place on farms, in agribusiness firms, in group meetings, on tours, and during field days.
 - f. Guidelines for credit should be established by the local school district.
3. Agricultural science should reflect instruction in those areas that are beneficial to the SAEP.
 4. Review current SAEP record book.
 5. Alternative SAEP activities should be identified that are appropriate for science based instruction.

The National FFA Organization

Youth Group for Students Enrolled in Agricultural Science and Technology Programs

Overview of Present Situation:

FFA is an essential and integral component of Agricultural Science and Technology programs in the state of Idaho. It is an intra-curricular instructional strategy used to develop leadership, community awareness, responsibility, and a cooperative work ethic. FFA is a vehicle for positive competitive interaction in the personal growth of the individual member. FFA is also an effective tool in recruiting students into the Agricultural Science and Technology programs.

Trends:

Total membership has stabilized in the state, but percentage membership compared to classroom enrollment has decreased significantly. This is due in part to the semesterized open entry/open exit delivery system adopted by many Agricultural Science and Technology programs in the state.

Recommendations for the Future:

1. FFA should continue to be a vehicle for personal growth in areas of leadership, community responsibility, cooperative work ethic, positive competitive interaction, and environmental awareness.
2. FFA should continue to be used as an effective recruitment tool for Agricultural Science and Technology programs.
3. FFA activities should provide positive public relations.
4. FFA should continue to recognize deserving students through the FFA awards program.
5. FFA should emphasize the learning by doing concept.
6. FFA should continue to encourage participation in relevant local, district, state, and national activities and contests.
7. FFA should involve community resource persons--parents, alumni, etc.--whenever practical.
8. Each FFA chapter should have a comprehensive written plan of activities and objectives.
9. Increased FFA membership should be promoted by statewide recruitment programs. State award programs should be designed and implemented to recognize chapters which increase membership.

Instructor Recruitment and Preparation

Overview of Present Situation:

In order to maintain and enhance secondary agricultural education programs, it is imperative that the best possible candidates be recruited and educated to teach agricultural science and technology. Most of the current agricultural science and technology instructors have completed a secondary vocational agriculture program. All secondary agricultural education instructors have completed bachelor degree programs in agricultural education and are certificated. Some Agricultural Science and Technology programs offer students graduation credit and college entrance credit in natural science and/or consumer economics. The University of Idaho provides the only state-approved preservice program in agricultural education.

Trends:

Recently, at the national and especially at the state level, there has been a shortage of secondary agricultural instructors. The curriculum content for agricultural education majors will continue to be broad based.

Inservice education for secondary agricultural instructors has increased in recent years. The University of Idaho has made inservice courses more accessible to agricultural instructors throughout the state.

Recommendations for the Future:

1. Recruit quality students majoring in agricultural education.
2. Continue to upgrade the agricultural education curriculum to meet the needs of Agricultural Science and Technology instructors.
3. Agricultural Science and Technology instructors must have an active role in determining which inservice courses are offered.
4. The University of Idaho, other colleges and universities, and industry continue to bring practical inservice courses to the Agricultural Science and Technology instructors.
5. University courses covering FFA and SAEP subjects need more detailed instruction to meet the needs of non-agricultural based student teachers.
6. Since several courses taught in the agriculture curricula are science and consumer economics based, teachers need to work towards certification in these areas.
7. College of agriculture courses be accepted for certification in the areas of natural science.

Image and Communication

Overview:

The Agricultural Science and Technology programs in Idaho have provided a positive learning environment for over 60 years. Secondary agricultural education has allowed students to acquire the basic skills needed for success in the world of work. The success of the Agriculture Science and Technology programs in Idaho has been the result of the accomplishments of the students involved.

Trends:

Confusion exists with what we believe constitutes a “program” of agriculture education in an Idaho secondary school. Some confusion is understandable, given the changes that have occurred, including: numbered semester courses, science credit courses, and business management counting for consumer economics. The structure of an Idaho school day varies greatly and includes: six-period days, seven-period days, eight-period days, eight-period roll-over, and trimester schedules. In all of this we must maintain program integrity and not compromise the basic components of our program: classroom and laboratory instruction, the FFA, and SAE.

Recommendations for the Future:

1. Identify means of enhancing the image of a career in agriculture.
2. Inform the educational system and community of the potential contributions of secondary agricultural education to the total education of the student.
3. Promote efforts to inform students, community and school personnel that a program of Agricultural Science and Technology educates students for more than farming and ranching. FFA/ SAEP are components of the agricultural curriculum and participation in SAEP and membership in the FFA should be increased.
4. Improve the image of secondary agricultural education, by bringing programs in compliance with minimum standards in the areas of curriculum, FFA and SAEP.
5. Encourage communication among the State Division of Vocational Education, local school administration, University of Idaho Agricultural Education staff and the agricultural instructors on policy changes and reporting procedures.
6. Communicate with local media, state vocational publications, FFA and IVATA publications to portray a positive image of what is happening in Agricultural Science and Technology programs.

