IDAHO AGRICULTURAL SCIENCE AND TECHNOLOGY

A Tactical Plan for the 90's

Approved and Accepted by the:

Idaho Vocational Agriculture Teachers' Association

Idaho State Division of Vocational Education

Department of Agricultural & Extension Education

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University of Idaho
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INTRODUCTION

Agriculture is a dynamic industry. It has been changing throughout recorded history but especially during the last decade. The development of new agricultural technologies has been responsible for bringing many new methods into practice. Production yields have increased, hand labor has been replaced by machine labor, farm sizes have increased and the farm population has decreased. All of these changes have had impacts on agricultural education at the secondary level.

Original legislation which created secondary agricultural education programs (Smith-Hughes Act) was designed to train boys to go back to the farm. Our mission today has expanded. We must provide educational experiences to young men and women which lead to professional careers in the industries and agencies related to agriculture. The curriculum will continue to provide learning experiences for those who plan careers in production agriculture/farming, but it also addresses professional agricultural careers.

Science plays an important role in agriculture. Most of the new agricultural technologies have come from attempts to apply scientific research to practical applications in agriculture. The new curriculum places greater emphasis on the science of agriculture. The slogan adopted by agricultural educators at the 1988 National AgriScience Conference is appropriate to the new curriculum; *Today's Science - Tomorrow's Agriculture*.

The courses outlined in The Idaho Agricultural Science and Technology Curriculum have been identified by name and number. These courses are approved by the State Division of Vocational Education (SDVE) as appropriate courses for secondary agriculture. Courses for which reimbursement is requested from SDVE must use the approved titles and numbers for state reports. Appropriate titles and numbers should also be used on student transcripts to ensure that proper credit is given when transcripts are evaluated for post secondary purposes.

Any major deviation from the course content as provided through the state curriculum should be cleared through the State Division of Vocational Education. Such courses shall be reviewed by SDVE and will be assigned appropriate course numbers.

The applied biology/agricultural science courses have been identified as appropriate courses for lab science credit. Teachers must be properly endorsed to teach science before using the 500 series titles and numbers on students transcripts.

IDAHO AGRICULTURAL SCIENCE AND TECHNOLOGY
A STATEMENT OF PHILOSOPHY

The Idaho Agricultural Science and Technology Program is an organized program of instruction provided through and in harmony with public schools. It is a four year community based program which prepares students for careers in the specialized areas of production agriculture, agricultural business, supply and service, agricultural mechanics, agricultural processing, horticulture, agricultural resources, forestry, and environmental management.

Secondary agricultural programs are structured so as to provide pre-employment and entry level and advanced skill and knowledge development for the students enrolled. The curriculum consists of a series of semester/trimester length courses which are designed to track students toward a variety of agricultural career objectives. Upon completion of the program, a student should be able to enter production agriculture or secure an entry level job in agriculture or related agribusiness. Many students will elect to further their education at the post secondary level, either at a vocational technical school or four year degree granting institution.

All students enrolled in an Agricultural Science and Technology Program shall have an approved supervised agricultural experience (SAE) program. SAE programs in realistic settings provide students the opportunity to put into practice the skills and competencies acquired in the traditional school setting. All students, with the help of the instructor and their parents, shall select either a production agriculture, entrepreneurial, or cooperative program or participate in approved alternate agricultural experiences.

All students enrolled in an Agricultural Science and Technology Program are expected to become members of the FFA organization. FFA is an internal and external learning laboratory which is an integral component of the instruction in secondary agricultural education. Secondary agriculture/FFA includes instruction in leadership through public speaking, parliamentary procedure, committee work and community service activities. FFA contests and other student participation and recognition activities are related to the secondary agriculture program.

Secondary agricultural education is based on a learning by doing concept. Meaningful SAE programs and FFA activities allow students to put learned classroom and laboratory knowledges and skills into practice. The program is a year round educational process and extended service for instructors and a necessary requirement to meet the objectives of the program. A local program advisory committee shall be involved in local program operation, future planning and direction.

IDAHO AGRICULTURAL SCIENCE AND TECHNOLOGY
A STATEMENT OF OBJECTIVES

- 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 and related occupations.

- 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.

IDAHO AGRICULTURAL SCIENCE AND TECHNOLOGY
A PROCESS FOR LEARNING

It is recognized that high school students are diverse, varying in background, ability, aptitude, and aspirations. 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. Agriculture 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.

IDAHO AGRICULTURAL SCIENCE AND TECHNOLOGY
A TACTICAL PLAN

During the Winter and Spring of 1989 representatives of various agricultural organizations and industry came together for two National Summit meetings sponsored by the National Council for Agricultural Education. The agenda was simple but not easy. There emerged a single crucial question: "How can agricultural education, which now involves more than a half million individuals, move together to meet the challenges of change?"

So much has been written in recent years about the wrenching changes brought on by the ongoing transition from the Industrial Age to the Information Age. So much, in fact, that all sectors of our society are inundated in a growing mountain of expert reports and recommendations.

Agricultural education is no exception. At least three major rivers of change are converging on agricultural education, forcing immediate reaction and suggesting that the modification process will have to be accelerated and sustained indefinitely.

ECONOMICS are turning global. People and programs in agricultural education must consider and deal with foreign markets, governments, suppliers and competition.

TECHNOLOGY is advancing at an accelerating pace. Overnight, new technology can change what agribusiness makes, how it makes or delivers it and who its competitors are. Unless educators keep pace, their students will inevitably study under obsolete curriculums.

VALUES AND LIFESTYLES have exploded into such diversity that old assumptions about the people serving or working in agriculture have become hopelessly inadequate. Anguish, confusion and conflict are natural by-products of an era in which people and organizations under pressure are left wondering: "Who are we...what do we value...what are our goals...what or whom can we count on, believe in? And what's happening to the roots we once had and the life we once loved?"

The truth is, these basic human questions are being asked, not just by people in agricultural education, but by people in virtually every industry, corporation or organization in the land.

If agricultural education is to meet the challenge of change, the profession must begin answering those questions together in a way that renews, confirms and revitalizes our collective sense of esteem, purpose and meaning.

The outcome of the National Summit was a blueprint for the future of agricultural education - a national strategic plan. It included a set of value based resolutions, an overarching mission statement and seven key goals to propel us into the next decade. Tactical plans, which include specific objectives and action steps, are written and accomplished by each of the agricultural

organizations on an ongoing basis. The following is the tactical plan for Idaho.

National Goal 1

To update instruction **in** agriculture and expand programs **about** agriculture.

Action Steps

- Demonstrate to all populations and policy makers that agricultural curriculum changes have occurred, and publicize those changes.
    - Actively market agriculture programs within each community.
- Articulate between secondary and postsecondary agriculture education.
- Facilitate *agricultural literacy* through all local agriculture programs.
    - Improve student access to secondary agriculture programs.
    - Promote Ag in the Classroom and similar literacy programs in every local school district.
    - Develop a core course for undergraduate students to be taught by the college of agriculture to educate students about agriculture.
- Assist each instructor to fill the role of resident expert in agriculture (become a resource in the community for agriculture).
    - Assure that preservice agricultural education programs prepare new teachers to teach new evolving agricultural subject matter (international marketing, biotechnology).
    - Implement a plan to obtain science endorsements for agriculture teachers.
- Provide agricultural applications for basic education principles.
- Develop a long range and short term action plan for teacher inservice.
- Communicate more effectively and cultivate partnerships with leaders in the industry of agriculture.

National Goal 2

To serve all people and groups equally and without discrimination.

Action Steps

- Avoid stereotyping of female and male agriculture students.
- Increase communications with business and industry regarding opportunities for minorities and special populations.
- Promote a "new image" for agriculture that goes beyond production.
- Involve minority populations in secondary agriculture and feature minority students in publications and video materials.

- Implement the findings of the Hispanic Task Force.
- Explore new ways of delivering vocational education to minority and other special populations that are consistent with the intent of the new federal Perkins legislation.

National Goal 3

To amplify and expand the "whole person" concept of education, including leadership, personal and interpersonal skills.

Action Steps

- Support the *Made For Excellence/Washington Conference Program.*
- Identify, incorporate and promote basic employability skills including FFA leadership, personal skills and interpersonal skills as integral parts of the curriculum.
    - Involve agricultural industries in promoting the importance of the *whole person* concept as it relates to success in future employment.
    - Develop an IVATA sponsored leadership camp for FFA members.
    - Expand FFA to include 7th and 8th grade students.
- Identify and support programs (K-12) that educate the whole person.
- Support and strengthen agricultural student organizations at all levels of education.
- Demand excellence in programs from teachers, administrators and students.

National Goal 4

To develop educational programs that continually and systematically respond to the trends and demands of the marketplace.

Action Steps

- Develop close working partnerships with leaders and businesses in the agricultural industry.
- Organize and utilize advisory committees representative of the industry.
    - Promote better use of advisory committees in program planning and development.
    - Provide training for advisory committees.
- Upgrade instruction to reflect current technologies and practices.
- Incorporate into our instruction examples of the impact of agriculture moving into the global economy.

National Goal 5

To provide the stimuli that will foster the spirit of free enterprise and develop creative entrepreneurship and innovation.

Action Steps

- Identify and promote examples of innovative entrepreneurship.
    - Promote, inform and communicate the message to all populations that agriculture is more than farming.
    - Develop an award program for innovative SAEP.
- Develop internships and other work related experiences in innovative and creative agriculture business settings.
- Provide entrepreneurial projects that require creative skills and that provide rewards to students.
- Encourage agriculture students to develop agricultural science projects and exhibit them in science fairs.
- Promote exciting in-school experiences that simulate the work environment i.e., greenhouse, land labs, etc.
- Make students accountable for time on task.
- Implement analytical and decision-making skills into the curriculum.
    - Promote basic employability skill development internally.
    - Use computers to enhance analytical and decision making skills; go beyond "video game" instruction.

National Goal 6

To provide leadership and cultivate strong partnerships in the total educational system.

Action Steps

- Develop a state-wide tool for communication, coordination and cooperation of all agricultural education groups.
- Promote a higher level of cooperation among agencies involved in agricultural education, i.e., public schools, county extension system and postsecondary institutions.
    - Involve all FFA sister groups in meeting the goals of the state tactical plan.
- Become partners in the total educational effort of the school system and support the basic skills education efforts of the school.
    - Encourage instructors in academic areas to participate in an effort to identify and incorporate agricultural applications for basic skills.
    - Promote integration of vocational and academic education.
    - Continue to develop and promote cross-credit applied courses which will qualify as

alternatives for traditional science courses.

- Implement articulation of secondary and post-secondary agricultural education programs within the state of Idaho.
- Become the community resource person or expert for agriculture.

National Goal 7

To elevate and extend our standards of excellence in classroom and laboratory instruction, supervised experience and student organizations.

Action Steps

- Recognize excellence in all levels of agricultural education on a state-wide basis. (Secondary, postsecondary, college/university)
- Identify new ways to apply the concepts of SAE to non-traditional students.
- Implement innovative teaching/learning activities for students during the summer.
    - Promote/expand credit for SAE summer participation.
    - Explore/promote earned credit in non-traditional ways, i.e., articulation, SAE, etc.
- Identify new standards for the Agricultural Science programs including curriculum, facilities, equipment, etc.
- Develop self-assessment instrument to help programs learn more about themselves and their communities and to assist in setting performance goals.