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Changing Purposes



of Agricultural Education

What is Our Purpose?

By Jamie Cano

Having never been a student of agricultural education in high school, and upon entering my first high school teaching assignment, I was totally lost. However, in no time at all, I was able to “function” as a first year teacher of agriculture. Granted that I had obtained my B.S. and M. S. degrees prior to my first teaching assignment, I quickly realized that what I had learned in college was not really what I needed to or wanted to be teaching.

I clearly remember one late fall afternoon sitting in my principal’s office complaining that the curriculum I was teaching was boring, not only to me, but most likely to my students. The principal’s response was pointed, yet on target. My principal responded: What are you going to do about it? Great question! I had no answer to provide as I was “expecting” my principal to tell me what I should be teaching; after all, he is the principal!

During my holiday break that year in 1985, I began to think about what was the “purpose” of my classroom instruction. Yes, I did have a core curriculum to follow, and yes, I did have the resources from the National FFA Organization, and the concept of SAE was still foreign to me. Sitting at home on my Apple IIe computer, I recall vividly how I began to piece together “semesterized” courses to teach.

After my holiday break, in January, 1986, I approached the principal with what I perceived to be my solution to the “boredom” that I was facing in the classroom. I proposed eight different semesterized courses.

I started to teach the “new” curriculum to my students immediately! WOW...what a difference it made...not only in my attitude towards teaching, but also in my student’s attitudes towards learning. The agricultural education program, no excuse me, the vocational agriculture program, at my high school was thus transformed to serve what I believed was the purposes of my instruction.

Anyone who lived through and taught in the 1980s, 1990s, can tell you that the two decades were full of challenges and forces in education and agriculture. As a result, the first “revolutionary” report on agricultural education was published in 1988 with the National Research Council’s *Understanding Agriculture: New Directions for Education*. The purpose of the report was to offer recommendations regarding the goals for instruction in agriculture; the subject matter and skills that should be stressed in curricula for different groups of students; and, policy changes needed at the local, state, and national levels to facilitate the new and revised agricultural education programs in secondary schools.

The ensuing results at the local level as a direct consequence of the National Research Council’s report is still debated today. Granted however, the report did cause lots of discussion and some changes within Agricultural Education programs in this country. Following the National Research Council’s report, a second report was issued in 2000. The second report entitled: *The National Strategic Plan and Action Agenda for Agricultural Education*, was also widely disseminated and discussed. Again, as with

the *Understanding Agriculture: New Directions for Education*, the ensuing results at the local level as a direct consequence of *The National Strategic Plan and Action Agenda for Agricultural Education* is still debated today.

Today, four years post the second national report on Agricultural Education, one may wonder why the question of what is the purpose of Agricultural Education is still being raised. One would venture to guess that the Smith – Hughes Act of 1917 created our purpose, and that subsequent legislation has further defined or refined our purposes.

However, why does Agricultural Education continue to let legislators dictate our purposes? If one takes a historical tour of legislation which has directly impacted Agricultural Education, it would be easy to conclude that laws issued down from Congress have been the main vehicle for changes in Agricultural Education. How much longer can we as a profession allow others to dictate what we believe ought to be our purposes? Perhaps it is time for a cohort group of agricultural educators who share a common vision for a national scope and direction for agricultural education to rise and shine! It is always stated that the “third time’s the charm!”

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The Blind Man, the Elephant, and Agricultural Education

By Gary Moore

There were six men of Indostan
To learning much inclined,
Who went to see the elephant
(Though all of them were blind),
That each by observation
Might satisfy his mind.

The first approached the elephant,
And, happening to fall
Against his broad and sturdy side,
At once began to bawl,
“God Bless me! But the elephant
Is very like a wall.”

The second, feeling of the tusk
Cried, “Ho, what have we here,
So very round and smooth and
sharp?
To me ’tis mighty clear,
This wonder of an elephant
Is very like a spear!”

The third approached the animal,
And happening to take
The squirming trunk within his
hands,
thus boldly up and spake:
“I see,” quoth he, “the elephant
Is very like a snake.”

The fourth reached out an eager
hand,
And felt above the knee;
“What most this wondrous beast is
like
Is mighty plain” quoth he,
“’Tis clear enough the elephant
Is very like a tree.”

The fifth who chanced to touch the
ear,
Said: “E’en the blindest man
Can tell what this resembles most
Deny the fact who can,
This marvel of an elephant
Is very like a fan!”

The sixth no sooner had begun
About the beast to grope,
Than, seizing on the swinging tail
That fell within his scope,
“I see,” quoth he, “the elephant
Is very like a rope.”

And so these men of Indostan
Disputed loud and long,
Each in his own opinion
Exceeding stiff and strong,
Though each was partly in the right,
And all were in the wrong!

*The Blind Men and the
Elephant*, John G. Saxe

The Purpose of Agricultural Education

If one were to ask six guidance counselors, principals, or people on the street corner about the purpose of agricultural education, one might get as many answers as the men who felt of the elephant. Even those in the profession may have a difference of opinion about the purpose of agricultural education. Let’s explore some of the possible answers we might get.

The purpose of agricultural education is to prepare people for work. The Smith-Hughes Act, the founding legislation for our field clearly stated in regards to vocational agriculture, “the controlling purpose of such education shall be to fit for useful employment.” Furthermore, this is the primary purpose identified in the national mission statement for agricultural education, “Agricultural education prepares students for successful careers and a lifetime of informed choices in the global agriculture, food, fiber, and natural resources systems” (The Council, 2004). So it is very plain that the purpose of agricultural education is to prepare people for work.

The purpose of agricultural education is to reinforce academic skills and prepare students for higher education. In the opening section of the President’s plan for the reauthorization of the Perkins legislation, one finds the statement, “...every U.S. student needs to complete high school with a high level of academic skills and be prepared to take advantage of education and train-

THE PURPOSES OF AGRICULTURAL EDUCATION

- ◆ To prepare people for work
- ◆ To reinforce academic skills and prepare students for higher education
- ◆ To serve special needs students
- ◆ To promote agricultural literacy
- ◆ To promote the development of leisure time
- ◆ To provide an alternative for students who do not do well in school

ing beyond high school.” (United States Department of Education, 2004) Clearly the administration believes the purpose of secondary vocational education is to help teach academic skills and get students ready for post-secondary education where they can learn work skills.

The purpose of agricultural education is to serve special needs students. The Carl Perkins Act of 1984 called for 57% of the state allocations for vocational education to be spent on special populations. Vocational education was specifically directed to work with the disadvantaged, handicapped, adults who need retraining, single parents, displaced homemakers, and the incarcerated. This legislation coupled with the IDEA Act (Individuals with Disabilities Education Act) of 1975, which brought about mainstreaming has shifted the focus of vocational education to serving special populations.

The purpose of agricultural education is to promote agricultural literacy. In 1988 the National Research Council’s report, *Understanding Agriculture: New Directions for Education*, suggested, “all students should receive at least some systematic instruction about agriculture beginning in kindergarten or first grade and continuing through twelfth grade.” With the changing demographics of America and the fact that less than two percent of the population lives on farms, this is where agricultural education needs to focus its efforts.

The purpose of agricultural education is to promote the development of leisure time interests (avocational skills). Some students enroll in agricultural education to learn more about flowers, horses, agricultural mechanics, etc. They do not plan to pursue careers in these areas nor study them in college. Yet, they enjoy the content

and may use what they learn as a hobby. This is certainly a legitimate reason for taking an agricultural course.

The purpose of agricultural education is to provide an alternative for students who do not do well in school. Can you spell D-U-M-P-I-N-G G-R-O-U-N-D? Unfortunately, there are some educators who believe that agricultural education is a dumping ground for the incorrigible, unmotivated, troublemakers of the school. What makes the matter worse is that some agriculture teachers operate agricultural education programs that reinforces this notion!

The real question is does Agricultural Education have to be one or the other or should it be all of the above (with the possible exception of the last

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November – December 2004 Issue

Theme: Professional Measurement

As a teacher, how do I know that I am making a difference in the profession? What can I use as a teacher to show that I am making a difference to the students that I teach? How can I as a teacher, verify to my administrators, that my program is of high quality? How does a beginning teacher, as opposed to a veteran teacher, begin to manage his/her time to ensure that all aspects of the program are carried out, yet still have personal time?

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Questioning Our Purpose

By Rob Terry

I'm not an answering machine, I'm a questioning machine. If we have all the answers, how come we're in such a mess?" — Douglas Cardinal, architect.

It seems that over the past few years professional Agricultural Educators and other interested parties have undertaken several efforts to define our purpose – Who are we? Who do we serve? What do we do? How do we do what we do? What is our future? So, after years of investigation, input from literally hundreds of people and the expenditure of over a million dollars, why do we need to have an issue of The Agricultural Education Magazine with a theme that asks, "What is the purpose of Agricultural Education?" Don't we know by now that the purpose of Agricultural Education is agricultural literacy?

What's the Difference?

Let's get this straight from the start ... The "agricultural literacy" focus and the "vocational" focus are *very* different. With a vocational focus, the goals of the program are to prepare students for specific careers related to agriculture. The outcome is a graduate who is ready to go to work or continue his/her education in a particular field in agriculture. With an agricultural literacy focus, the educational goal is to expose the learner to the symbiotic relationship they have with agriculture. The outcome is someone who has knowledge and accurate perceptions about agriculture. Put another way, a vocational approach to agriculture teaches

students how to grow corn while a literacy approach to agriculture teaches students how corn is grown and how the growing of corn impacts them.

How Did We Get Here?

So, where did this agricultural literacy versus vocational training debate come from anyway? History tells us that when federal support for the teaching of agriculture in public schools was created with the Smith-Hughes Act, vocational preparation was the focus.

Today, estimates of the number of people involved in farming and ranching range from 1% - 2% of our population.

The act stated that it was for people "who have entered upon or who are preparing to enter upon the work of the farm." Subsequent legislation expanded that vocational function to include "off-farm" agricultural jobs and directed the training to students with special needs. Strict adherence to the vocational agriculture model calls for students to identify a career path in agriculture and then select courses to

prepare them for that career. Students conducted a Supervised *Occupational Experience Program* (SOEP) to provide more individualized, specific vocational training.

I remember as a freshman in high school having to identify an agricultural career path in my FFA record book. I, like almost everyone in that class, selected "production agriculture." Dale, who sat down the row from me wanted to know what to put if he wanted to be a race car driver. According to the "vocational" model, my teacher should have counseled Dale to select a different career or a different class.

During this same time period, the percentage of Americans engaged in production agriculture was shrinking. Today, estimates of the number of people involved in farming and ranching range from 1% - 2% of our population. While a much greater percentage of our workforce can be counted in careers "related" to agriculture, the relationship of those related careers to the curriculum taught in high school agriculture classes is debatable.

On the other hand, there is no arguing the fact that all of us interact with agriculture, no matter how narrowly or broadly you define it, on a daily basis. The abundant availability of agricultural products for a multitude of purposes is critical to our way of life today. A strong case can be made for people understanding basic concepts of agriculture on the basis of consumer awareness. Furthermore, considering the fact that in our system of governance citizens have the opportunity to impact policy, it is in the best interest of agriculturists that people are agriculturally literate. Even Dale, the fu-

ture race car driver, should take agricultural literacy classes!

“The focus of agricultural education must change”

Want More Clarity?

In 1988, *nearly 16 years ago*, the Committee on Agricultural Education in Secondary School of the National Research Council’s Board on Agriculture concluded, “The focus of agricultural education must change” (p. 2). The report of the committee, Understanding agriculture: New directions in education (1988), went on to say, “Much of the focus and content of many vocational agriculture programs is outdated.” (p. 3)

Responding to the changes in population dynamics and changes in agriculture, efforts were made to update the labeling and even the content of various aspects of Agricultural Education programs. For example, Supervised Occupational Experience

Programs (SOEP) became Supervised Agricultural Experiences (SAE). Just as vocational agriculture is different from agricultural literacy, SAE is different from SOEP. In fact, SOEP is vocational training while SAE is agricultural literacy exploration.

The most recent quest of introspection by our discipline was the “Reinventing Agricultural Education for the Year 2020” project. The outcome of that multi-year, national endeavor was The National Strategic Plan and Action Agenda for Agricultural Education (The National Council for Agricultural Education, 2000). The vision articulated in that document says: “Agricultural education envisions a world where all people value and understand the vital role of agriculture...” (p. 3). That vision is a vision of agricultural literacy!

Why is This So Hard to Figure Out?

Okay, in all honesty, I do understand that there are several reasons we have not wholeheartedly embraced an exclusive focus of agricultural literacy for our discipline. Among these reasons is our relationship with other “vocational” education programs. Divorcing our program from the vocational education family would have huge implications for us and the other career and technical education divisions. Longstanding support and leadership structures would certainly be severed and it would be inappropriate for us to continue to tap into traditional, legislated funding sources that have been provided to Agricultural Education for decades.

On the other hand, is it not obvious that our future is something different

than our past? Do we not already see ourselves as something more than vocational education?

We have long touted the fact that many graduates of our program pursue higher education rather than entering the workforce. More and more of the curriculum materials being developed for Agricultural Education comes from sources other than those used by other career and technical education programs. In fact, some of the most popular new course titles that draw large numbers of students into local Agricultural Education programs have a distinct agricultural literacy focus.

If our program is vocational, then why do our professional groups no longer hold their conferences with other vocational educators?

How many students who take wild-life management classes in high school plan to pursue careers related to that area? How many will use the concepts they learn in hobbies related to

that area?

Want more examples of how we in Agricultural Education see ourselves as different from other vocational areas? If our program is vocational, then why do our professional groups no longer hold their conferences with other vocational educators? Why have Agricultural Education programs on several university campuses moved from divisions of career and technical education to new homes in colleges of agriculture? While the common thread that existed between agricultural education and vocational education has become frayed, why do we continue to look for excuses to hold on?

What could we be with an agricultural literacy purpose?

At the start of this article, I quoted renowned architect Douglas Cardinal. While he has won much acclaim for his designs of buildings, he has also been instrumental in designing other systems. In fact, he developed the master plan for education in Alberta. He says his approach in architecture, as well as in life, is to identify the needs of humans and develop systems to best serve those needs. To discover needs and create systems, we must ask questions. Therefore, as we think about the purpose of Agricultural Education, I propose we consider these questions:

- ◆ Are we satisfied that the vast majority of all students have little or no exposure to agriculture and how it impacts all of us in so many ways?
- ◆ What if we could create agricultural education programs that appeal to a broader range of students' interests and

needs?

- ◆ What if students could explore the diversity of agriculture and experience it, individually, under the supervision of their teacher rather than just focusing on one particular career area?
- ◆ What could agricultural education become if we pursued funding and support for an agricultural literacy focus, independent of the stipulations that go with the current vocational education funding?

What would move our discipline forward, increased focus upon voca-

tional training or increased focus on agricultural literacy development?

To find answers, we must first ask questions. In my opinion, when we ask questions about the purpose of Agricultural Education, we will find the answer is agricultural literacy.

Rob Terry is a Professor at the University of Missouri.



Students working in an agriscience laboratory. How have the purposes of agricultural laboratories changed over the years?

California's Road to Defining the Purpose of Agricultural Education

By Cary J. Trexler and
Lisa A. Leonardo

There is growing debate about the purpose and future direction of agricultural education in California. The University of California at Davis recently conducted a survey of agriculture teachers, state department of education consultants, and teacher educators about the future of agricultural education. The study found mounting tension about the underlying purpose of agricultural education, e.g. should Ag Ed focus on meeting college-prep academic requirements or focus on career-technical (vocational) preparation.

The study found mounting tension about the underlying purpose of agricultural education...

This tension is rooted in the history of agricultural education. In 1917 the Smith-Hughes Act provided permanent federal funding to the states that "created a system of vocational education of broad scope" (True, 1929). Vocational agriculture was one of three areas included in the original legislation. The Act intended vocational education to provide practical instruction in agriculture, trade, industrial, and home economics subjects for the purpose of preparing those of non-college age for useful employment (Smith-Hughes Act, 1917).

Throughout the years, agricultural education remained steadfast to its vocational roots until the report *A Nation at Risk* was released 1983. The report claimed U.S. public education was in peril and used as evidence standardized test comparisons with other counties (National Commission on Excellence in Education, 1983). To remedy this "dismal performance" by U.S. schools, the report recommended:

State and local high school graduation requirements be strengthened and that, at a minimum, all students seeking a diploma be required to lay the foundations in the Five New Basics by taking the following curriculum during their 4 years of high school: (a) 4 years of English; (b) 3 years of mathematics; (c) 3 years of science; (d) 3 years of social studies; and (e) one-half year of computer science. For the college-bound, 2 years of foreign language in high school are strongly recommended in addition to those taken earlier. (National Commission on Ex-

cellence in Education, 1983).

Across the nation a call sounded to reform public schools. California adopted new graduation standards and across the state agricultural education programs enrollments plummeted from a high of over 50,000 in the late 70's to a low 30,109 by 1988. Many argue that decline resulted because students were no longer able to fit agriculture courses into their schedules. Agricultural educators were faced with tremendous pressure to reorganize their curriculum to meet the increased academic requirements.

Many programs faced elimination because of under enrollment. To counter the potential demise of programs, many in California agricultural education began to integrate academic requirements into their existing courses, thereby satisfying local graduation requirements (e.g., an Animal Science course received science graduation credit). This shift toward academics was further solidified as many agriculture education courses were approved by the University of California (UC) as admissions requirements.

The UC is designed to accept only the top 12.5% of the states graduating seniors and, as a result, has very rigorous academic entrance requirements. To meet these standards, courses like Agricultural Biology were developed to satisfy UC laboratory science requirements. As much of California's curriculum has transformed (i.e., receive graduation credit and UC admission credit), agricultural education enrollments have moved upward, with

an all time high of 54,055 students in 2003. Certainly the move toward academic credit for agriculture courses is not the only reason for this upswing. Many industrial technology courses have moved under the direction of agriculture departments because there are few shop teachers being credentialed in the state. In many schools agriculture is the only viable career-based elective remaining.

Even though agricultural education in the state appears to be in good stead, current legislation (Senate Bill 1795) seeks to make the stringent UC entrance requirements the standard for all California students. Such a move could further decrease possibilities in a student's schedule by allowing only two elective courses in a four-year high school career. This requirement would limit even further the average length of time students spend in an agriculture program, currently those enrolled spend approximately one and half years in agriculture classes.

As almost a myopic view of academics drives the California educational system, the days of a four-year sequenced course of study in agriculture appear to be over for most students. To counter this trend, many schools have designed course for first year agriculture students that satisfy either a graduation or UC entrance requirement. As they progress further in the program, however, the likelihood of advanced courses meeting an academic requirement often decrease.

As California has moved to towards academics, many agricultural education programs now maintain dual tracks: a vocationally oriented course of study (e.g., Agricultural Mechanics and Ornamental Horticulture) and a college-prep academic one (e.g., Ag-

ricultural Biology and Agricultural Science Core I & II). Enrollment data provided in 2002 Table 1. sheds insight into the enrollment and courses offered in statewide.

With these dual tracks, have California's programs begun to define the "two" purposes of agricultural education? Conflict between these two purposes has become quite apparent in the study mentioned at the begin-

ning of this article. University of California at Davis researchers asked teachers do define the "top 10 most critical issues facing California agricultural education over the next 10 years." Over 80% of the teachers reported that meeting an academic requirement was a critical issue for them. Conversely, about 30%, were concerned about losing the vocational orientation for which agricultural education was originally designed. One teacher summarized the

Table 1

Statewide Student Enrollment in Agricultural Education Courses, 2002

Subject Area	Student Enrollment %	Periods Taught %
Ag Mechanics	24	26
Ag Core I	24	21
Ornamental Hort	14	13
Animal Science	7	8
Other Ag	6	7
Ag Biology	8	7
Ag Core II	7	7
Ag Bus Mgt	4	5
Plant/Soil Science	3	3
Forestry/NR	2	2

Source: CDE, R-2 Report, 2002

spirit of the group:

“We have the ability to be academic, but many students who take Ag are not heading for that 4 year university. If we are focused to become completely academic, we lose a great group of kids that are truly vocational and benefit from those type of classes.”

This tension between meeting the academic and vocational needs of students is reflected in many agricultural education departments as they struggle to maintain enrollment and develop curriculum that meets academics standards mandated by the state’s legislature. One agriculture teacher lamented:

I agree that Ag. Ed. needed to change and reflect more science and improve on the use of all core subject areas [from the California Content Standards in e.g., mathematics, English, and science]. However, in the increasing climate of academics we appear to be moving away from the vocational training.

California has often reflected future trends in agricultural education. As the state moves toward academics, either as a way to serve the college-bound student or as a way for agricultural education to fit into the increasingly academic public school, how can we continue to meet the needs of all students? Or should we? Not all students will be best served by preparing for a four-year degree and most careers today do not require a post-secondary degree.

On the other hand, many of the students who will help create a new agri-food system will require college. Much has changed since the passage of the Smith-Hughes Act, but agricul-



A preservice teacher talks to elementary students regarding the agricultural sciences and agricultural literacy. What should be agricultural education’s role in agricultural literacy?

tural education has been able to adapt more readily to the changing world than the other “traditional” vo-tech areas. As we adapted, the tension between the original purpose and now the dual purposes of agricultural education directly effect the future of the profession.

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Agricultural Education...EOE?

By Jodie Moffitt

When I was in my early teens, I began looking over the classified ads in the local newspaper, always hoping that perfect part-time job would be there staring up at me. As I browsed these job openings, most of which I was not qualified for, I became aware that most of them were followed with the letters EOE. One day I finally got curious enough to ask my dad, "What does EOE mean at the end of a job advertisement?" This was my first experience with Equal Opportunity Employers. It seemed logical to me that the same opportunities should be open to everyone as long as they were capable of doing the job. Does agricultural education create equal opportunity employees? Are we giving everyone the skills they need to be a capable employee?

As inclusion becomes more popular, educators have been challenged with teaching students with learning disabilities in regular classrooms. These students are noticeably different in terms of their academic ability in relation to their peers. They require more planning and more transition services in order to have a productive life after high school. It is our learning disabled students who could possibly benefit most from the things agricultural education has to offer. Career and technical education has the potential to give students concrete skills that they can use in the job market and hopefully have an equal opportunity at employment. Unfortunately, not all career and technical education is created equal when it comes to preparing disabled students

Career and technical education has the potential to give students concrete skills that they can use in the job market and hopefully have an equal opportunity at employment.

for jobs after high school.

There are four important federal laws that require us to provide an appropriate education for our students with disabilities (Wonacott 2001). Section 504 of the Rehabilitation Act of 1973 requires that any program that receives federal funding cannot discriminate against anyone based solely on their handicap or disability (Public Law 93-112). The Americans with Dis-

abilities Act of 1990 ensures that disabled persons have access to all public accommodations, employment, transportation, and other government services (Public Law 101-336).

One of the most well known laws in education is the Individuals with Disabilities Education Act. This law was originally signed in 1975 as the Education for all Handicapped Children Act. We are currently operating under the law as it was amended in 1997. IDEA guarantees a free and appropriate education for everyone with physical or mental disabilities. It helps fund the extra costs of educating disabled people and requires that each child being educated using IDEA funds have an Individualized Education Plan (IEP) that outlines the goals of his or her education (IDEA'97). The Carl D. Perkins Act of 1998 provided more funds for including special populations in all aspects of Career and Technical Education (Public Law 105-332).

Despite efforts to make finding a job easier, people with disabilities have a hard time finding and obtaining employment. If they do, it is often only part-time and low paying. Only three out of ten adults with disabilities ages 18 to 64 are employed full or part time compared to eight out of ten adults without disabilities (NOD 2000). Sixty-seven percent of people with disabilities who are not employed say they would rather be employed, and one study even found that less than half of their sample of disabled people who currently had a job was employed full time (Harvey 2001). Reviews of studies on the efficacy of career and technical education in helping disabled students successfully find employment repeatedly showed that general career and technical education was not enough

to improve job marketability (Wonacott 2001, Harvey 2001, Shapiro and Lentz 1991).

What can agricultural education do to improve the employability of our students with learning disabilities? Equal opportunity employers hire people who are capable of doing the job. Our disabled students are able and willing to do many things. We have to teach them and allow them to practice the skills that will make them a capable employee. Students who had training in occupationally specific career and technical education courses on average had better post school employment outcomes, even if the job they acquired wasn't related to the trade in which they were trained (Shapiro and Lentz 2001).

Research has shown that participating in career and technical education classes reduces disabled students' risk of dropping out and increases the likelihood that they will be employed after high school (Wonacott 2001). Harvey concluded that career and technical education made a "significant difference in post-school employment for students with disabilities when it was occupationally specific and directed at labor market needs" (2001).

Almost sixty percent of students with disabilities have taken career and technical education classes, a much higher rate than non-disabled students (Harvey 2001). We have the opportunity to see the same students return year to year in hopes of gaining more knowledge in a particular area. This gives students, parents, and teachers the chance to focus on what interests the student most and where he or she will fit best into those labor market needs.

Supervised Agricultural Experience (SAE) is a great way to provide special education students with individualized practice in real world agriculture. Since most agricultural teachers require an SAE project of their students anyway, this is an excellent opportunity to make sure students with learning disabilities have a chance to practice skills rather than simply receive classroom instruction.

Placement SAE projects offer

on-the-job training and could possibly lead to a job after high school. And do not rule out entrepreneurship SAE projects for special education students either! According to the National Organization on Disability (NOD), people with disabilities are twice as likely as the general population to be self-employed. For example, a student in an urban area might consider starting a pet sitting business as an SAE project, which could continue as post school employment.

Wonacott outlines several characteristics of successful career and technical education that improves disabled students' post-school employment potential: proactive, individualized, accommodating, driven by the student and parents, and continued assessment (2001). Communication between students, parents, and teachers is essential to making sure the student's agricultural education program is what he or she wants and needs.

Be proactive by constantly searching for Placement SAE opportunities and businesses that may be more accommodating to students with learning disabilities. Daughtry and Relf (1995) explain the importance of communication between educators and employers when finding opportunities for learning disabled students in the horticulture industry. This growing industry has many jobs that are minimum skilled, manual labor. Many employers in this industry are willing to hire disabled students but feel as if they need more information on training and working with those types of employees.

Just as I did as a teenager, learning disabled students often look through classified ads in the newspaper hoping to find employment. And just as I did,

Research has shown that participating in career and technical education classes reduces disabled students' risk of dropping out and increases the likelihood that they will be employed after high school.

they often find they do not have the skills that make them capable of applying for those jobs. It does not matter if the advertisement ends with the letters EOE. Equal opportunity employers will not hire someone who cannot do the job. Studies have shown that learning job specific skills, rather than just a general overview of job tasks, is more beneficial to students with disabilities when it comes time to find a job.

Giving them the opportunity to actually practice real world situations is more helpful in the long run. Even though many students find jobs unrelated to their training in vocational classes in high school, they can still benefit from those job skills. We have a tremendous resource in all of our students in agriculture education, including those with mental and physical disabilities. With careful, individualized planning, agricultural educators can give every student an equal opportunity to develop skills they will need to pursue a career in agriculture after high school.

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A teacher works with a small group of students in a horticulture laboratory. Related to special needs students, what active role should agricultural education play in meeting the needs of special needs students?

IDEA'97 <http://www.ed.gov/offices/OSERS/Policy/IDEA/index.html>

[d105query.html](http://www.ed.gov/offices/OSERS/Policy/IDEA/index.html)

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Dumping Grounds

By Barry Croom and Gary Moore

The stories about Mr. Watson¹ are legendary.

During the unit of instruction on welding, students in his class welded the tines of the garden tiller to a support post in the agriculture shop. When Mr. Watson tried to take it outside for use by his horticulture classes later, he found that he couldn't budge it. On another occasion, students took the agricultural mechanics textbooks in his classroom and sawed them up using the table saw in the agriculture shop. Students also locked him in the horticultural storage shed, and he was finally released after two hours when a passerby heard the sound of him beating on the doors of the shed.

Somewhere along the way, students gave him the nickname "hubcap". The origin of this nickname comes from students placing rocks inside the hubcaps to his personal automobile. You can imagine what this sounded like driving down the highway. Eventually, "Hubcap" Watson couldn't cure this obvious mechanical problem, and eventually sold the car because of it.

Old Hubcap had acquired a unique reputation at his school. Many students took his classes because it was an easy period during the day when they could kick back and avoid strenuous mental activity. Conversely, some students avoided his classes because they did not offer the challenge and rigor they desired. "Hubcap" Watson's classroom had become the dumping ground for the students who would not behave appropriately in other classes.

One of the worst things that can happen to an Agriscience program is for it to become a dumping ground for incorrigible and lazy students in a school. Agriscience programs are not some type of in-school suspension program that happens to have an agricultural motif. Agriscience is a bona fide part of the curriculum in many schools and should be treated as such.

Certainly the framers of vocational education had strong concerns about who should be enrolled in vocational education courses.

"The Federal Board desires to emphasize the fact that vocational schools and classes are not fostered under the Smith-Hughes Act for the purpose of giving instruction to the backward, deficient, incorrigible, or otherwise subnormal individuals; by that such schools and classes are to be established and maintained for the clearly avowed purpose of giving thorough vocational instruction to healthy, normal individuals to the end that they may be prepared for profitable and efficient employment. Such education should command the best efforts of normal boys and girls." (Federal Board for Vocational Education, 1917, p. 17)

Much has changed since the Federal Board for Vocational Education published those guidelines in Bulletin Number 1. In most cases, career and technical education programs have adapted readily to include special populations in education. The purpose of this article is not to focus on the education of students with special needs, for they should be welcome in every Agriscience program. To exclude them is a grave injustice and not in the best traditions of the teaching profession.

We must serve all students who enter our classrooms. Instead, the purpose of this article is to attack the premise that Agriscience programs are suitable "dumping grounds" for the incorrigible and lazy students within a school.

While some students are placed in Agriscience programs by some administrative action, the majority of students are in the classroom because of the reputation of the agriculture instructor. Even if the Agriscience teacher who served in the program before you did not do a good job, there comes a point when the responsibility for the

We must
serve all
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program becomes your own. As a colleague of ours often says, "After four years as an agriculture teacher, you get the type of students you deserve."

Incorrigible students are exasperating to the teacher and other students, and can often be a danger to themselves and others in the class. Student misbehavior becomes very important when one considers the type of environment in which instruction occurs. The Agriscience program in a school is unique from other academic programs because there are multiple learn-

ing environments such as classrooms, laboratories, and greenhouses. Students are taught the use of power tools that can cause serious injury if used improperly. Agricultural chemicals and pesticides that are used in the instructional program and can cause injury if students fail to heed safety warnings. Students enter the program with varying degrees of skill in using power tools and agricultural equipment, and in handling livestock.

In most cases, the Agriscience courses are electives. While many students take courses because of a serious interest in agriculture, some students take the course hoping to avoid a rigorous academic experience. In the unique environment of the Agriscience program how does a teacher become insulated from the risk of becoming a dumping ground for every social problem in a school?

A short-term solution to the problem is become involved politically within the school. Agriscience teachers who ingratiate themselves to the administration and work to establish relationships based primarily on personality are doomed to eventual failure. Today's school administrators are focused on measurable accountability, and teacher performance is valued more than the "good old boy" network.

The Teacher Is The Key

Good Teaching

There are a number of things that can effectively insulate the agriscience program from "dumping ground" status. One of the methods by which a teacher can reduce the risk of dumping ground" status is to be the best teacher possible. The best teachers work constantly to improve their teach-

ing skill and actively research new and better ways to help students learn. Good teachers know how to teach students and are restless with methods that do not yield results. Good teachers know the content they teach, and design instructional activities that teach this content in an interesting and relevant manner. (The Southeast Center For Teaching Quality, 2004)

“The best defense against student misbehavior is a well-planned and well-executed lesson presented by an enthusiastic teacher.” Roy

Eubanks, Retired Agriculture Teacher, North Lenoir High School, Kinston, NC

Individualized Instruction

The best teachers also recognize the importance of individualized instruction and are successful in teaching a diverse population of students. Learning is an individual process, and good teachers try to find ways to help the

individual student learn the material in a manner consistent with their learning style. The best teachers respect and care about their students. (The Southeast Center For Teaching Quality, 2004)

Challenging and Rigorous Instruction

The best teachers attract students who are motivated by challenging and rigorous learning experiences. Students who are looking for a free ride instead of a high quality learning experience either drop the class or conform to the teacher's standard of academic performance. Young people are quite capable of rising to a reasonable level of academic expectation. Accordingly, teachers should implement strategies that attract serious students of agriculture.

Some teachers start each year with a "tough love" type of lecture that goes something like this:

“This course is not required for graduation. This means that you should be in this course because you have an interest in agriculture. If you don't have an interest in agriculture, you should go see your guidance counselor immediately and get out of this course. This course is going to be fun and exciting, but it will be lots of work. We will have homework, papers to write, projects to complete and rigorous tests.”

The teacher then follows this up by passing out a rigorous course syllabus with a list of topics to be taught, assignments and grading procedures. Homework is then assigned for the next day. Students with a tendency to goof

off get the message very quickly that agricultural education is not a cakewalk.

Attracting good students means providing a high quality lesson for each class period. Teach from “bell to bell” in every class. Five minutes of free time in a class period will yield almost eight hours of free time in that class by the end of a semester. Research tells us that the best teachers are task-oriented. (Rosenshine and Furst, 1971) Focus on student learning. Give the impression that the most important thing in the world is that the students learn what you are teaching at that moment. Students can tell when the teacher is bored or disinterested in the lesson.

Don’t apologize or make excuses for giving homework or requiring students to take notes. Schools aren’t amusement parks, they are places for learning, and learning takes effort. Some Agriscience teachers do not give homework, coordinate meaningful lab activities, or administer many tests. Yet, these same teachers wonder why their program is a dumping ground.

Use laboratories for learning, not production assembly lines. The primary focus of Agriscience laboratories is to teach students. Too many labs have become production facilities where monetary income is generated for the Agriscience program, but very little student learning is generated.

In keeping with a rigorous academic schedule, it is important that student be accurately graded on the work they do. Grade inflation is a huge problem in schools; so do not hesitate to give students the grades they earn through their efforts. Do not hesitate to flunk students who fail to meet acceptable academic standards. If lazy students can easily pass a class, then

the teacher’s expectations of the students are too low.

One of the most important things that a teacher can do is to show the students that he or she respects them enough to give 100 percent effort everyday in the classroom. Students recognize good teaching when they experience it. Once students recognize that the agriculture teacher is serious about providing a quality program, students interested in agriculture careers will enroll in courses. If the teacher is lazy, the students will soon model this behavior.

“Have something for the students to do, or they will do something to you.”

Walter Jones, Veteran Agriculture Teacher at Southwest Edgecombe High School, Pinetops, North Carolina.

Develop high quality FFA experiences for students. Engage them in leading the FFA chapter through activities that teach the importance of

responsible behavior, commitment to a common goal, effective communication, and cooperation. Establish and maintain a high quality supervised agricultural experience (SAE) program that addresses the aspirations and career goals of students. Visit students as part of the SAE program and develop good working relationships with parents and students.

Recruitment

The prudent agriculture teacher will not leave future enrollment to chance, and will aggressively recruit good students. Students who are interested in agricultural careers or who have a sincere interest in improving their agricultural knowledge and literacy are fair game for the agriculture teacher’s recruitment efforts. Not all students are academically gifted, but that should not be the determining factor in recruiting the student.

Communicate with the Guidance Counselors

Develop a good working relationship with guidance counselors. Show them examples of the rigor in the courses you teach. If guidance counselors do not know that the Agriscience program is a quality learning experience for students, then the teacher has no cause for complaint about the influence of the guidance department in student enrollment. Effective teachers are proactive in working with guidance counselors.

Set the Tone Early

Effective teachers send a letter to incoming students to welcome them into the program. This letter should send the message that the Agriscience class will be interesting and exciting,

but will require the very best efforts of students. This letter should also point out that FFA membership and participation in the SAE program are also expected of every student. Parents will see this letter and most likely will be more willing to be partner with you in their child's education.

How We Are Measured

A former principal of one of the authors once said, "Agriculture teachers are only as strong as their weakest link." We are often measured by the actions of a very few poor teachers in the profession. Legislators, school board members, policy-makers often point to the few teachers who do not perform adequately in the classroom and use them as examples of how agriscience programs fail to achieve their purpose. They use our "weakest links" to describe who we are. The principal whose current Agriscience program is a dumping ground for every misbehavior problem in the school might just expect the same from your program when he or she becomes your principal. We are in the age of accountability in education. It is the challenge of the Agriscience teaching profession to encourage every teacher to establish a legacy of quality instruction and a professional and responsible attitude toward the students we serve.

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Footnote

¹ This is an actual teacher whose name has been changed to protect his identity.

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Avoiding Dumping Ground Status

1. Provide good teaching
2. Individualize your instruction
3. Use challenging and rigorous instruction
4. Recruit good students
5. Communicate with guidance counselors
6. Set the tone early

Food to Me: A Farm-toTable Program for Middle School Children

By Chris Cassel, Joseph Miller,
Todd Biddle, and Michael
Benner

With the publication of the National Research Council's report *Understanding Agriculture: New Directions for Education*¹, national, state, and local K-12 initiatives have forged a new vision of agricultural education². This new vision embraces a mission that is broader than traditional vocational programs and includes systematic instruction at all levels of the school system.

Critical to the success of this mission is the creative integration of food/fiber production, processing, nutrition, marketing, and other related topics into pre-secondary curricula.^{3,4} To help address this need, we designed and implemented a nine-week (one marking period) program to engage middle school students and to foster an understanding of the interdependence of agriculture, the environment, and human needs. Characteristics of the program, *Food and Me*, include:

- ◆ A focus on first-hand, experiential learning that utilize the School's rich agricultural resources;
- ◆ A curriculum that stimulates students' interest and creates a high level of motivation;
- ◆ A storyline that builds conceptual understanding over time through a logical sequence of related activities;

- ◆ Explicit connections to other areas of the middle school curriculum,
- ◆ Partnerships with middle school teachers.

About Milton Hershey School and the Agricultural and Environmental Education Program

Milton Hershey School (MHS) is a private, residential, pre-K-12 school founded in 1909 by chocolate industrialist Milton S. Hershey (www.mhs-pa.org). MHS now serves almost 1,300 racially diverse boys and girls and provides a home and an education free of cost for these children whose families are in financial and social need.

Through the Agricultural and Environmental Education (AEE) Program at MHS, students engage in applied and experiential learning projects that address not only agricultural and environmental literacy, but all academic subjects. In addition, the program provides a context for student home activities and therapeutic intervention. Students, teachers, and staff have access to resources managed through four centers: Horticultural Center, Environmental Center, Animal Center, and Dairy & Foods Processing Center. Each of these centers, coupled with the general agriculture operations that support them, utilizes a dedicated staff, facilities, and land laboratories to educate children in a standards-based system.

Enduring Understandings and

Curriculum Design

Learning goals are threefold: 1) students will learn that even if they don't live in a rural environment, they are linked to the land and agricultural practices through the food that they eat, 2) students will learn that our society utilized a wide range of modern agricultural practices for food production and that these practices have an impact on our environment, and 3) students will learn that there are several steps and numerous people involved in the production process of getting food from the farm to the table.

The *Food and Me* curriculum is designed as a series of program-long strands (horticulture, animal science, dairy & foods processing, environmental science, and general agriculture) that integrates concepts defined by the MHS AEE standards and benchmarks. Each week of the program, students are engaged in projects and/or activities in each of the vertical strands. This rotation is intended to maintain a high level of student interest while allowing students to see connections between our AEE Centers and "the bigger picture" of agricultural systems.

In addition to these vertical strands, we designed horizontal themes to engage students in a learning cycle that includes lessons to help students focus, explore, reflect, and apply their knowledge (Figure 1). Lessons addressing food processing were designed as one of these horizontal themes and are intended to show students that 1) there is a wide variety of processing mechanisms (e.g. heat, chemical) and, 2) agricultural commodities are used for the production of both food and non-

food products. In addition, lessons on food processing are linked to a lesson on food safety, emphasizing that the process by which foods move from farm to table must be safe and reliable.

Horticulture Strand

The Horticulture strand provides the context for students to investigate the origin and processing of fruit and vegetable crops, as well as the cycling of matter in ecosystems. Students consider: nutrient cycling in the field, the interdependence of organisms, the life cycle of plants, the path from field to table, and processing of agricultural products for increased shelf life. During the introductory horticulture lesson, students construct a hydroponics/aquarium system designed to accommodate germinating seeds, as well as, freshwater fish.

In subsequent lessons, students plant seeds in the system and discuss a wide range of seed-based agricultural products (e.g. cereals, oils, chocolate, and coffee). During the weeks in which the seedlings are developing, students visit the AEE apiary to explore the relationship between insects and plants, as well as, the AEE orchard to harvest apples and discuss marketing strategies. Lastly, students focus on food preservation as they prepare peach jam from fruit harvested in the orchard. This lesson is intended to link directly to activities in other vertical strands that address food processing, e.g. milling and making butter. Projects and activities in the horticulture strand are tightly connected to topics explored in the environmental strand (described below).

Environmental Science Strand

In the environmental science strand, students further explore their

hydroponics/aquarium systems by conducting chemical tests to determine the relative concentrations of nitrogen, potassium, and phosphates in soil and water. Multiple test days allow students to see changes over time and to discuss ramifications with respect to predicted plant growth. These activities connect to lessons in other strands that address soil fertility and nutrient management. Additional classroom-based environmental strand activities include:

- ◆ sources of common foods (plant vs. animals) and the interdependence of plants, animals and people⁵;
- ◆ building connections between raw and processed food items;
- ◆ origin of agricultural commodities used in food processing;
- ◆ the impact on transportation requirements and energy consumption.

Animal Science Strand

The animal science strand is designed around a research project in which students investigate the rate of weight gain in two groups of chicks: one group is raised on a medicated chicken feed while the other group is raised on an unmedicated feed. Prior to utilizing a traditional scientific method model, students learn breed characteristics of the birds, health requirements, housing requirements, equipment used for chicken care, and how to handle and sex the birds.

After students generate a hypothesis, they randomly assign twenty birds to one of two treatment groups (with equivalent cumulative starting weights). Rate of weight gain is calculated after

a four-five week growth period. During the four-five week period, students are engaged in additional activities that relate to their research project. In one lesson, students become familiar with the constituents of a chicken's diet and eating behavior of the bird. Other activities continue to highlight parallels in human and livestock diet and nutrition by examining the digestive system. Students review system relationships through discussion, models, and dissection. In addition, students explore:

- ◆ the nutrient value of chicken fecal matter and how farmers utilize these nutrients to increase soil fertility;
- ◆ the pathogen *Salmonella* and its prevention when preparing a cooked egg using food industry standards;
- ◆ how to objectively evaluate propaganda regarding farming practices and animal rights.

In this final lesson, students seek to “win the mind and not the argument” by responding to a hypothetical critic in an emotionally-charged dialog.

Dairy & Foods Processing Strand

The Dairy and Foods Processing strand provides the context for students to investigate not only the origin and processing of dairy products, but also food chemistry. Specifically, this strand helps students to develop a deeper understanding of how matter cycles through ecosystems by giving them first-hand experiences with the major biological macromolecules. An introductory tour of the MHS dairy allows students to see the characteristics of dairy cows and the operation of a milking plant. In subsequent lessons situ-

ated at the dairy laboratory, students gain concrete experiences with chemical tests⁶ that are used to determine the presence of macronutrients (carbohydrates, fats, and proteins). These activities connect to the animal science strand by expanding the conversation about the chemical composition of food. In the final activities in this strand, students learn how processing of agricultural products exploits our ability to manipulate food components by: 1) precipitating casein for the production of white glue and 2) removing fats from a cream emulsion for the production of butter.

General Agriculture Strand

The general agriculture strand provides the context for students to investigate:

- ◆ the sequence of production steps and the necessary resources (and careers) required to take a raw food from the field to the consumer;
- ◆ historical and projected world populations and implications for our finite agricultural resources, and;
- ◆ the processing of grains to make flour.

By combining classroom-based⁷ and field-based activities, students learn that components of processed food come from a wide range of commodities and represent a world-wide food system that is addressing the needs of an exponentially growing population. Activities addressing general agriculture are integral to two *Food and Me* horizontal themes: 1) “How can we sustain our harvests?” and, 2) “Applying what we know to

understand food processing.”

The culminating activity for *Food and Me* participants is a celebratory luncheon prepared by the school’s chef and designed to include ingredients for which the students had gained first-hand knowledge. This meal – together with the chef’s overview of ingredient origins and preparation – completes the farm-to-table program.

Program Assessment and Conclusions

The *Food and Me* program was designed to be implemented during our middle school “activity period.” Although students enrolled in activity period programs are not individually assessed or graded, we were interested in documented student learning for use in informal program assessment. Towards this end, we developed a number of classroom assessment strategies, including:

- ◆ background knowledge probes to serve as pre- and post-program assessments
- ◆ daily “one-minute papers” in which students respond to the question, “What was the most important thing that you learned during this class?”
- ◆ direct observation of student activities and dialog

This documentation has allowed us to chart progress towards agricultural literacy, as well as towards more positive attitudes regarding agricultural and environmental education among middle school children.

The *Food and Me* program represents only one of many AEE pro-

grams designed to offer a more comprehensive approach to learning through land use, animals, plants, and related resources for all students, from pre-kindergarten through grade 12. In addition to meeting agricultural and environmental standards and benchmarks, our integrated and experiential programming supports learning in all disciplines and is consistent with our understanding that knowledge is contextually situated and is fundamentally influenced by the activity, context, and culture in which it is used⁸. This expanded purpose of agricultural education – to provide an applied and authentic context across content areas – supports gains in student achievement, motivation, work habits, and responsibility.⁹

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⁴ Frick, M.J. 1993. Developing a National Framework for a Middle School Agricultural Education Curriculum. *Journal of Agricultural Education* 34: 77-84.

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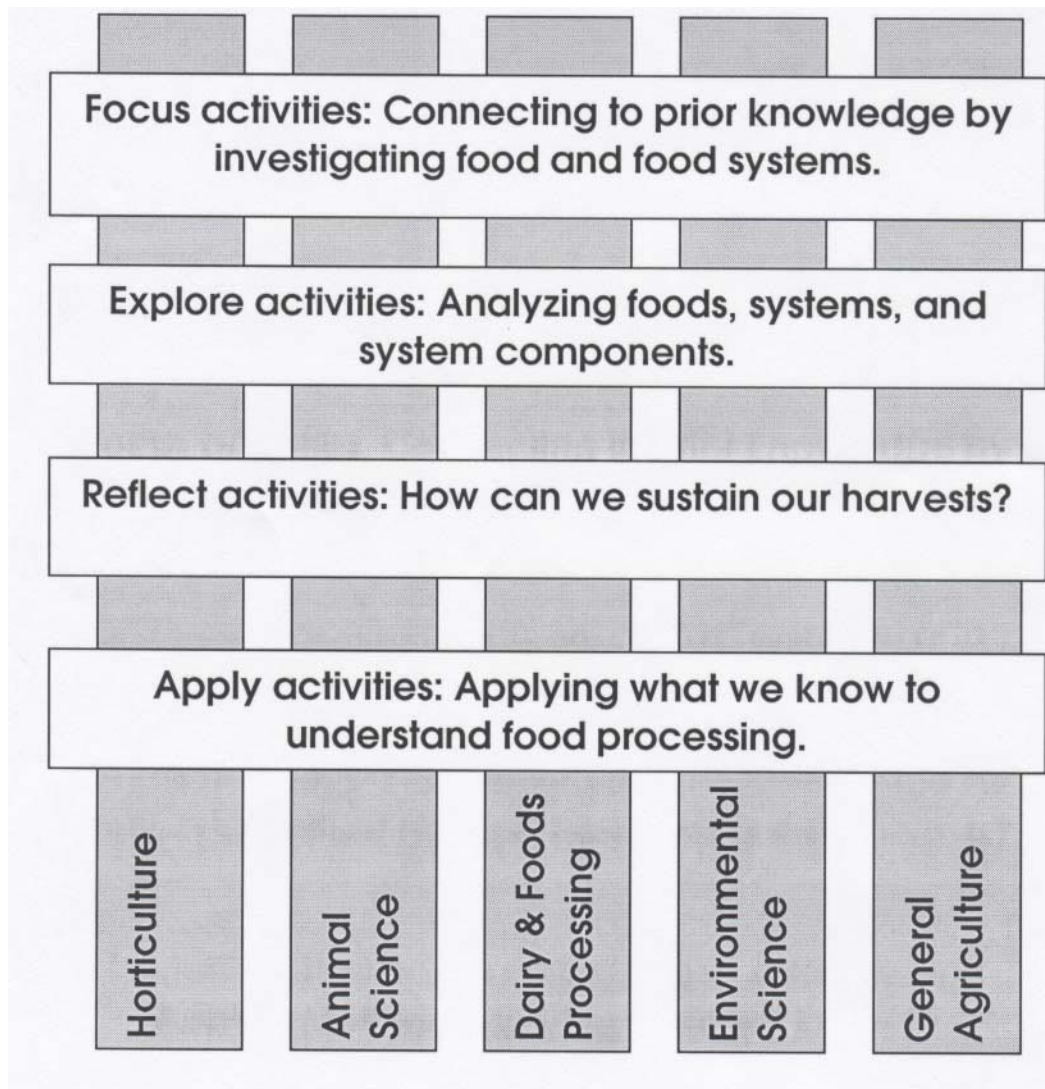


Figure 1: Vertical strands and horizontal (i.e. learning cycle) elements that connect *Food and Me* student activities and projects.

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Agricultural Education = Agricultural Literacy

By Kimberly A. Bellah, James E. Dyer, and Glen R. Casey

In early America, settlers were totally dependent upon their food source. If they produced their own food, they knew how to grow it, where to sell it, and how to process and preserve it so that it remained safe for consumption. If they did not produce their own food, they knew where to find the most reliable source, both in quality and quantity. They knew because their lives depended upon this knowledge.

Although most agriculturalists would argue that little has changed in our dependency upon a reliable source of quality food, most would also agree that the vast majority of Americans know very little about today's food and fiber system. Simply put, the majority of Americans seem to be agriculturally illiterate.

Webster defines literacy as being knowledgeable in a particular subject or field, in this case, agriculture. Webster also defines education as the process of developing that knowledge. IF we accept those definitions, what we do in agricultural education at the middle and secondary levels is to develop students into agriculturally literate citizens. If so, agricultural education equals agricultural literacy. However, the agricultural education profession has been slow to embrace agricultural education as an agricultural literacy program.

Research indicates conflicting results in the level of agricultural literacy. Rural students, despite their

backgrounds, lack understanding of agricultural concepts concerning food products (Meischen & Trexler, 2003). While Northwestern elementary teachers appreciate agricultural curriculum, their perceived lack of time to implement it tempers their enthusiasm (Balschweid, Thompson, & Cole, 1998).

Trexler and Suvedi (1998) demonstrated that principals were initially more positive about utilizing agricultural literacy programs as a method for teaching scientific concepts than were their teachers. When urban elemen-

The agricultural education profession has been slow to embrace agricultural education as an agricultural literacy program.

tary students were observed learning science process skills, the method shown to have the greatest effect on

developing those skills was one that employed agriculturally oriented, experiential activities (Mabie & Baker, 1996). Interestingly, much of the body of research in agricultural literacy is focused at the elementary and middle school levels – not the secondary level.

In the late 19th century, and for over three-quarters of the 20th century, agricultural education was primarily targeted at students who were already presumed to be agriculturally literate – those who already had an agricultural background. In the latter part of the century, however, education in agriculture shifted to include students with no previous agricultural experience. With the release in 1988 of the National Research Council's report, *Understanding Agriculture: New Directions for Education*, the need was pronounced that “all students should receive at least some systematic instruction about agriculture beginning in kindergarten or first grade and continuing through twelfth grade.” As a profession, we are making some progress toward this goal, though some would argue that it is only a fraction of what is possible.

The program *Reinventing Agricultural Education for the Year 2020* clearly indicates that not only should agricultural literacy be part of every student's education from kindergarten through high school, and beyond, but also that agricultural education must serve as the torchbearer in that effort. However, many would argue that we fall far short of accomplishing that goal – at the elementary, secondary, and post-secondary levels.

In elementary schools, the agricultural literacy role has been largely

relegated to the *Ag in the Classroom* program. At the secondary level and post-secondary levels, little to no effort is expending in teaching students about agriculture as an agricultural literacy program. Most agricultural education departments at colleges and universities still focus on the traditional role of preparing high school agriculture teachers, with agricultural literacy efforts as a fringe activity supported by grants and not yet institutionalized.

Agricultural literacy must be viewed as lifelong learning and regularly partner with both campus educators and industry. However, to do so means a conscious effort must be made to focus educational efforts into a literacy-producing program. This likely means that permanent funding must be in place, especially in the form of faculty to coordinate this program. Likewise, the repackaging of agricultural education will likely only materialize as successful agricultural literacy

and awareness projects are recognized for their value to the university as a whole, and are then institutionalized with state and industry support.

Should the primary focus of agricultural education be agricultural literacy? If agricultural education equals agricultural literacy, the answer seems clear. In this day and age, the two are one and the same. If high school agricultural education programs, along with teacher education institutions, fail to incorporate literacy components at all levels of education, the need for reauthorizing Carl Perkins funds will be a null issue.

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Agricultural education must be viewed as lifelong learning and regularly partner with all agencies within the community in an effort to serve all people.

Do You Believe in the Future of Agricultural Education?

By *Tim J. McDermott and
Neil A. Knobloch*

Do we dare say that every one who subscribes to *The Agricultural Education Magazine* “believes in the future of agriculture” (National FFA Organization, 2004), yet agricultural education’s future will be determined as you read this article. Agricultural education is facing difficult challenges as the United States focuses on its national education system. The profession is at a crossroads in planning where the future will take us. It is critical that the profession chooses a path that will help ensure continued and future success.

Not of Words, But of Deeds?

In 1988, the National Research Council called for reform in agricultural education based on innovative programmatic leadership at state and national levels to address the concerns about the declining profitability and international competitiveness of American agriculture, as well as concerns about declining enrollments, instructional content, and quality in agricultural education programs. Today, many of these same issues continue to exist like a plague on agricultural education. Current educational policy makers have questioned the value and necessity of agricultural education. The future of agricultural education rests in the hands and minds of its stakeholders, teachers, and leaders. In this article, we share three findings from a study con-

ducted in Washington, D.C., and strategies that can be carried out in local communities to invest in agricultural education’s future.

The Promise of Better Days Through Better Ways

Revitalized efforts are underway on the national scene to combat the challenges facing the profession. The National Council for Agricultural Education (NCAE) is taking the first steps to inform key leaders on Capitol Hill of the value of agricultural education. This is encouraging to see because a recent study (McDermott & Knobloch, 2003) found that national leaders, stakeholders, and policy makers did not match the national strategic initiatives for program and policy opportunities in agricultural education.

In visiting with key informants, three conclusions emerged from a four-month study in Washington, D.C. First, *programmatic changes* are needed at the state and local levels, and more focus is needed on *policy changes* at the state and national levels. National leaders, stakeholders, and policy makers highlighted changes needed in programs, policies, and budgets at the state and federal levels regarding agricultural education, yet little has been done regarding these needs in the profession’s strategic plans.

Second, *communication and funding initiatives* need to be established using clear channels of communication between national leaders in agricultural education and policy makers in Washington, D.C. At the time of this study, the NCAE organized

strategies to conduct congressional visits while policy makers expressed a need to know more about agricultural education activities and proposals.

Finally, *literacy and awareness* of agricultural education are the main issues that national stakeholders viewed as important for the future of agricultural education. Stakeholders can be a powerful influence for agricultural education. The presence of the stakeholders can help in building relationships with policy makers on Capitol Hill. However, if agricultural education does not continue to build the knowledge base and relations with stakeholders, the support of stakeholders could be in danger.

Leadership From Ourselves and Respect from Others

Interestingly, the findings of what leaders, stakeholders, and policy makers in Washington, D.C. thought about agricultural education have striking similarities with what needs to be done in local communities throughout the U.S. Implementing the recommendations from the national research study at the local level will present exciting opportunities for agricultural education.

First, leaders, stakeholders, and policy makers that influence education in local communities should be identified. A school and community analysis can help identify formal and informal leaders who have a stake in the local educational program and likely influence the policies that help shape local educational programs. Communications and relationships will need to be established to develop mutual respect and

understandings.

It is important to identify local policy makers. Local school board members and administrators influence local policies, and they should be included in planning of an agricultural education program. In a time when school budgets are being stretched, it is essential for a program to understand the expectations of the policy makers and what will influence their funding decisions. Local school policy makers will be the individuals who have the first decision if agricultural education programs will continue to be viable.

Stakeholders of the local agricultural education programs are far reaching. Nearly anyone in the local community can be considered a stakeholder in the local agricultural program. This group can be difficult to identify and include in planning, managing, and marketing the local program. However, it is necessary to consider the numerous points of view that stakeholders have of the agricultural education program. On the national level, stakeholders are lobbyists and directly impact where funding federal dollars are spent. At the local level, stakeholders are just as important to agricultural education. The stakeholders can be a program's best allies as long as they are included in the organization and activities of the program. On the other hand, stakeholders can be against a program if they are not informed or are not considered in the direction of the program. An advisory council or a support group can be used to organize a representative group of key stakeholders in a local community. The formation of a diverse advisory council will facilitate a wide variety of different stakeholders' views and will serve as a key component of the future planning of the agricultural education program.

Local leaders of agricultural education programs are easier to identify. Student leaders in the program along with the agriculture teachers are the main leaders of the local program. The leaders are ultimately responsible for seeking, understanding, and utilizing the initiatives of the local policy makers and stakeholders. In each program, the leaders are those who must bring all the components together for a successful program. At times, this will require extra effort from the leaders but this effort is becoming more important as the policy makers and stakeholders are critically evaluating every program in the school district.

I Can Exert an Influence

A unified voice from the local level to the national front is critical for the future of agricultural education. While the NCAE is making strides at the national level, there is much more that must be accomplished. If the profession solely relies on the efforts of a few on the national front, agricultural education will face a grim future. The messages and initiatives that are being presented by the Council must be echoed in practice at the local levels in order to ensure that the news and needs of agricultural education are being heard at several points of contacts.

The future of the profession will be strengthened if each agricultural educator takes the time to identify those individuals who are policy makers, stakeholders, and leaders in their community to include in the planning and work of the local agricultural education program. Once these groups of people are identified, the same issues facing the national challenges must be addressed. Agricultural edu-

cators need to examine the need for *programmatic changes* at the local level that will benefit the agricultural program, *initiate communications* among all those connected to the program, and *build literacy and awareness* of agriculture and agricultural education in the community. Agricultural educators should act on the challenge to reach new audiences and build relationships with diverse groups of policy makers, stakeholders, and leaders in local communities.

Will Stand Solid for My Part

The responsibility for programmatic changes rests on the shoulders of local leaders in agricultural education. Agricultural educators who believe in the National Association of Agricultural Educators teacher's creed "will work for the advancement of agricultural education and defend it in their community, state and nation." The responsibility for policy changes rests on the shoulders of state and national leaders in agricultural education. A unified team effort is needed across the local, state, and national levels change programs and policies in agricultural education.

Agricultural educators should not assume that someone else will fight to keep agricultural education in America's educational system. Leaders in every community, state, and national office need to unify their efforts in addresses the challenges facing agricultural education. The first responsibility starts in every local agricultural education program. There will be a new era in agricultural education if all agricultural educators exert an influence and do their part in the inspiring task of educating people about agriculture. Local agricultural education programs working with the NCAE in changing programs and policies will help agricultural education

pass through the current crossroads for a successful future. Do you believe in the future of agricultural education?

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The teaching of agriculture has changed. Therefore, the purposes of agricultural education must continue to change. As a profession, we must continually question what is our purpose.

