

**A PRACTITIONERS GUIDE TO IMPLEMENTING
THE 1998 FARM BILL**

BY

DAVID R. MACKENZIE

AND

ROSEMARY R. HAGGETT

MAY 1999

About the authors:

David R. MacKenzie is Executive Director of the Northeastern Regional Association of State Agricultural Experiment Station Directors, and is located at the University of Maryland, College Park. In this position he manages a large agricultural research portfolio of multi-state projects that are primarily conducted by the region's land-grant universities. Previous to this appointment he managed a biotechnology research and biosafety program as a National Program Director for the U.S. Department of Agriculture. He has been a university department head (Louisiana State University) and a professor (The Pennsylvania State University). He consults on strategic planning training and provides planning-process facilitation to public institutions. He has authored a book entitled Principles of Agricultural Research Management.

Rosemary R. Haggett is Dean of the College of Agriculture, Forestry, and Consumer Sciences and Professor of Animal and Veterinary Sciences at West Virginia University. She also serves as Director of the West Virginia Agricultural and Forestry Experiment Station. She was formerly a Division Director with the National Research Initiative and Acting Deputy Director of the Office of Grants and Program Systems for the U.S. Department of Agriculture. She has also been on the faculty at Loyola University of Chicago. She currently serves on the Board of Directors of A*DEC (a distance education consortium), and is the past Chair of the Administrative Heads of Agriculture.

TABLE OF CONTENTS

About the authors:	ii
INTRODUCTION.....	1
BACKGROUND.....	1
PLANNING DETERMINANTS	2
GETTING STARTED.....	4
TEN STEPS TO STRATEGIC PLANNING	5
SPECIAL CONSIDERATIONS.....	9
PRINCIPLES FOR STAKEHOLDER LISTENING.....	11
SOME HELPFUL HINTS.....	14
TEN STEPS TO A PLAN OF WORK.....	18
CONCLUSIONS.....	23
APPENDIX 1.....	24
APPENDIX 2.....	42
APPENDIX 3.....	52
APPENDIX 4.....	57
APPENDIX 5.....	59
APPENDIX 6.....	63

A Practitioners Guide to Implementing the 1998 Farm Bill

INTRODUCTION

The federal “Agricultural Research, Extension, and Education Reform Act of 1998”, also known as the “1998 Farm Bill”, sets out new expectations for organizing stakeholder-oriented Plans of Work (POW) for those institutions receiving federal-formula funding. The POWs are to plan for integrated activities between research and extension functions, as well as conduct multi-state collaborations. POWs are not new to the extension community, having done them for more than a decade. But no equivalent work planning has heretofore been required of the State Agricultural Experiment Stations, the entities that are eligible to receive federal-formula funding for research. This practitioners guide is intended to assist first time efforts in organizing institutional strategies and research work plans in an academic setting.

BACKGROUND

In the summer of 1998, the College of Agriculture, Forestry, and Consumer Sciences at West Virginia University completed a year-long strategic planning process leading to the development of a Plan of Work. This effort was exemplary in that the process efficiently used faculty time, directly involved stakeholders, and resulted in a focused strategic plan and POW that not only meets the requirements of the 1998 Farm Bill, but also the recently published USDA guidelines for POW development and reporting. Visit the [CSREES Web Site](http://www.reeusda.gov/areera/) (<http://www.reeusda.gov/areera/>) a copy of the POW Guidelines.

This manual has been put together by the facilitators of that WVU planning exercise to describe the products, the appropriate applications of the process, and the benefits of planning. We have purposefully written this document to make it applicable to POW development, but we recognize that major portions of this manual are also applicable to planning at the department, laboratory, college, or institute level of an academic institution. It is our intention to improve current practices in strategy and work planning in an academic setting, and thus avoid the failed efforts (and wasted paper) associated with inappropriate or misdirected planning efforts.

PLANNING DETERMINANTS

The approach you select to planning depends on what is driving your decision to develop a plan (see box). When one views an institution as a pyramid, planning can be:

- 1) Top down (mostly driven by your administration).
- 2) Bottom up (mostly driven by your faculty).
- 3) Customer-based (mostly driven by users of your products and services).

In addition to considering your approach to strategic planning, there is need to consider the time horizon available for developing your plan. Time horizons are defined in terms of:

- 1) Immediate (a crisis is looming).
- 2) Mid-term (threat rests somewhere ‘around the corner’).
- 3) Long-term (planning can be a little more relaxed, and visionary).

Serious consideration of these points needs to precede any attempt to organize a planning process.

Following are ten questions to ask before starting the planning process.

Question 1: Who is commissioning the strategic plan?

Answers to this question will help to determine who gets to be heard in the process of setting your goals and priorities.

Question 2: How much time do we have to complete the plan?

Answers to this question will help to determine how thorough you can be in developing your plan.

Question 3: Why are we planning?

Answering this will determine the type of plan that you will develop. It might be a crisis response, a desire for better decision making, or a new federal requirement for reporting your results.

Question 4: Is there a history of failed attempts to plan?

Resolving this will determine how much resistance you will face in getting individuals to participate in the planning process. Too much resistance may doom your planning project.

Question 5: Who do you want to participate in the planning process?

Addressing this may very well determine the quality of plan developed, and the resulting acceptance.

Question 6: How will you get buy-in to the final plan?

Obtaining extensive buy-in to the final plan may come at the cost of excessive compromise, and thus planning in this instance may not be worthwhile.

Question 7: Who is the intended audience for the plan?

The style and content of your plan needs to be purposely directed at the intended audience.

Question 8: Do you have (or can you find) the resources needed to complete the planning steps?

The costs of planning are real and need to be budgeted, if the planning process is to be completed successfully.

Question 9: Does the planning process have the support of administration?

The faculty? There needs to be initial support for the planning process, or otherwise the commitment to plan, and the acceptance of the final plan, will be in jeopardy.

Question 10: Will the product of planning be worth the effort?

Only a good guess can answer this question. Many times faculty want a promise that they will benefit from any planning process. It would be managerially unwise to pledge :

- *benefits to individuals before the plan is developed; and*
- *that no harm will come to their projects because of strategic planning, as some programmatic changes may be necessary*

However, to lessen individual fears over the consequences of strategic planning, in some cases it may be wise, as an administrator, to sincerely pledge that no harm will come to any employee as a result of strategic planning. Otherwise, the process may be greatly resisted, if not thwarted.

GETTING STARTED

It is important to get early agreement on the type of planning, and the processes that will be used for planning. This will determine who gets to decide on the options. It will also determine the degree of ownership of the final product. Additionally, it will help to establish initial buy-in for the obligations and responsibilities assigned in the plan. And, it will help to establish the likelihood of product acceptance by those who are the intended readers of the final plan.

However, in the final analysis, as was noted by former president and Army General Dwight D. Eisenhower, “Plans are nothing, planning is everything”. By this he was understood to express the notion that the process of planning in-and-of-itself is what is worthwhile. It brings about agreement and consensus on what is to be done.

Your reasons for choosing a ‘top down’, ‘bottom up’, or ‘customer-based’ approach to planning needs to be understood very early on in the process. And, that decision needs to be communicated clearly and early to all concerned, especially to those who will be directly impacted by the implementation of the resulting plan.

Finally, attention will need to be given to the focus of the plan. Institutional planning can be focused one or more of the following:

- 1) Organization,
- 2) Processes,
- 3) Strategies, and/or
- 4) Work.

If the plan is to address an institution’s organization or structure, (such as combining departments, or closing field stations) that type of planning is called reorganization. When developing a plan to reorganize an academic unit, attention must be given to identifying who will be the planning participants. Those who will be disadvantaged by the decisions are very unlikely to be good participants. They have a vested interest to protect. Attention must be given to some fundamental principles of human nature when attempting to come up with an acceptable reorganization plan (see Appendix 4, ‘Seven Steps to Reorganization’).

Fixing institutional processes is called reengineering. If a college is experiencing low enrollments because the process of student recruitment is flawed,

does the process of recruitment need to be reengineered? If the quality of new research faculty hires is below expectations, does the process of faculty recruitment and retention need to be reengineered? These are not questions of strategies, but questions of processes, and they are subject to reengineering (see Appendix 5, ‘Six Steps to Reengineering’).

Strategic planning is the process of developing strategies for an institution. Strategic planning can be an effective process for envisioning an institution’s future, and planning the strategies for getting there. POWs are instruments that describe the intended outputs (a.k.a. results) and outcomes (a.k.a. impacts) that will come from broad institutional programs. POWs follow nicely from strategic plans, in that the implementation of a strategic plan can be “operationalized” through a POW.

Thus, each type of institutional planning has a distinct purpose, and therefore each needs a different process for deriving a planning document. The remainder of this manual looks at the steps in developing strategic plans and plans of work.

TEN STEPS TO STRATEGIC PLANNING

All planning should begin with a decision to make a sincere commitment to develop the plan. However, the motivation to plan institutional strategies may be completely different. But each should follow a sequence of about 10 steps.

Step 1. Select the Planners

As with all other forms of planning it is important to first identify the individuals who will contribute to that process. Factors that should be considered in appointing a planning team are:

- Who is requesting the plan?
- What is the amount of time available for the planning process?
- What are the needs for representation and diversity?
- Can you accommodate the dynamics of a diverse group?

Considerable attention is needed for balancing doers, users, supporters, leaders and critics, if time is sufficient. Diversity will bring to the planning process divergent perspectives and counterbalancing opinions. These perspectives are valuable, but they will come at a cost. You will need to seek a balance of these inefficiencies.

In the strategic planning process at West Virginia University, a Steering Committee of twelve individuals made up the core planning team but many others contributed to the process through working teams. This allowed the opportunity for diverse opinions and viewpoints to be part of the planning process.

Step 2. Agree on a Process

Once the planners have been appointed it is important to get them to agree on the process for planning the strategies. If sufficient planning time is available an interactive process that begins with visioning and agreement on the plan's time-horizon (i.e., is it to be 5 years? 10 years?) is entirely appropriate. By stating the vision for the institutional unit, the various components of the plan (see below) can be revisited, and the vision adjusted and readjusted until desire approaches reality.

Step 3. Training the Planners

The next step in the strategic planning process is to train the participants. Very few individuals are sufficiently intuitive and/or experienced enough to have developed the skills and methods necessary for consensus building, benchmarking, priority setting, and team building, etc. Some professional facilitation of this training may be desirable.

Step 4. Listening to Your Stakeholders

This step in strategic planning, listening to the intended stakeholders requires considerable commitment of your time, energy and resources. The key to the process, whether it is the identification of your users' issues, the measurement of your customers' satisfaction, or agreement on criteria for measuring impact for your patrons, is the need to listen-not lecture-and listening to hear rather than listening to respond. Experiences with dean's advisory councils, county-level listening sessions, advocacy workshops and similar methods of "communication", as commonly practiced within contemporary colleges, are characteristically monologues, offered by the dean. An invitation to a farm couple to attend a regional "listening session" in Philadelphia brought the following response: "We decided not to attend. We are tired of listening to your university." This expression captures the failure of all too many institutions who do not listen, but lecture to their stakeholders.

We have purposefully segmented stakeholders into interest groups; an action necessary to understand how to approach stakeholders. Each group of stakeholders has a different perspective on their needs, and what they see as the problems. All too often these stakeholder groups do not communicate with each other. This can

spell trouble for you, especially when you think you are meeting the needs of one group, and another group becomes dissatisfied with what you are doing. Thus there is a need to segment your stakeholders into categories in order to better listen to their sometimes divergent expectations.

The terms we are using for segmented groups of stakeholder (i.e., user, customer, and patron) are not synonymous, although many individuals incorrectly substitute the terms. We need to distinguish among them, as each group has distinct contributions to make to the different types of strategic planning. Here are some definitions.

Users- The intended audience for the products and services that are to be provided by your institution. The value of user input into the strategic planning process is in identifying their problems (e.g., poor profits) and needs (e.g., better cultivars). These problems and needs can then be rendered into sets of issues (e.g., the need to enhance our regional competitiveness). Listening to users is fundamental to certain types of strategic planning, if the identification of user-relevant issues is seen as important for identifying institutional strategies that can then be matched to your available resources.

Customers - The individuals who are the customers of the products and services provided by your institution, such as consumers of food or wood products. In the sense of total quality management (TQM) the measurement of the quality of an institution's products and services is defined by "customer satisfaction". In this usage, measuring success is done through assessing customer satisfaction, either through user surveys, evidence of "repeat business" or expressions of appreciation. Institutional strategies are then built on making your 'customers' satisfied, or even delighted.

Patrons - The individuals and institutions that fund the activities at public institutions leading to the institution's products and services rightfully expect an accounting for the funds provided. Patrons are directly interested in the outcomes and benefits of their 'investments'. When giving an accounting to a patron, it is the impact that may need to be measured directly, or sometimes indirectly through some indicators. The notion here is that the patrons know what they want to achieve with their money, and they expect to get a report on the results. Strategies should then be selected to target intended outcomes, impacts, and benefits.

Step 5. Select an Outline

It helps to have an agreed upon strategic plan outline so that the components of the plan can be worked on, sorted and resorted, decided and undecided, changed

and changed again. In Appendix 6 we have provided a sample outline for a strategic plan that may represent a good start for an institution, but certainly it should be modified to meet your particular need.

Step 6. Draft the Vision and Mission Statements

Once an agreement has been reached on the strategic plan's outline, the next step is to start developing a vision and mission statement. This should be done with the proviso that many modifications may be necessary to keep it consistent with evolving views, changing strategies, and shifting perspectives.

Step 7. Set Your Targets

The next step is to organize your user/customer/patron information resources, and make some choices on what is 'doable', and what is deliverable. This requires some goal setting. This is the essence of the strategic planning process. Because each choice is linked to every other choice it is important to allow enough time to encourage iterative target development. And, it is best to keep the final decisions to the end of the process.

Step 8. Form Process Action Teams

Once the goals of the plan have started to gel the next step is to form process action teams (PATs). PATs can take one or more components of the outline as assignments for drafting and presentation back to the planning committee. PATs represent an opportunity to bring in, through their extended memberships, views not necessarily reflected on the whole planning committee. It also represents an opportunity to spread the workload over a large group of people without having an unnecessarily large planning committee. The PATs should be given specific charges and task completion dates. A timetable of the PATs' activities should be worked out by the planning committee. Quite often the products of one action team are necessary for another PAT to begin. Understanding these sequences and coping with them is important to successful strategic planning. Examples of some PATs are; environmental scanning; resource inventories; and listing potential strategic partners. Each activity can be done as a unit, and each PAT report contributes a product useful to the planning process.

Step 9. Draft the Plan

The next step in the process of strategic planning is to draft the plan itself. The reports from the PATs should be considered as background information, to be used in preparing the final document. If the final plan is simply an aggregation of the

action teams reports, the document may suffer from lack of clarity, redundancy and extraneous material. This can be distracting for the people to whom you wish to communicate. It is highly advisable that one person be given the task of drafting the strategic plan, based on the PATs' reports. The draft should be structured according to the agreed strategic plan outline, but written in a coherent, focused, and in a to-the-point style of writing. Try setting a target of, say 10 to 15 pages of text. Keep it brief!

Step 10. Obtaining Buy-in

The final step in developing the strategic planning document is obtaining buy-in to the plan. This is best done by offering the draft strategic plan to ever widening circles of interested individuals and institutions. The document should be represented as a draft, with revisions being made with each cycle of review. Eventually, through compromise and adjustments, the strategic plan will develop a wide circle of acceptance.¹

SPECIAL CONSIDERATIONS

Planning in the Face of a Crisis: Visionary strategic planning without time constraints is often a luxury. Sometimes a crisis may occur, such as budget cuts, or declining human resources caused by retirements and downsizing. A crisis may require an academic institution to rapidly engage in a strategic planning effort to avoid the consequences of the crisis. Inasmuch as time is of the essence, the use of listening sessions, multiple iterations of a draft, and consensus-building may not be possible. Under these circumstances, planning may have to move forward based on the best available information. In these situations, it is important to understand the critical assumptions that are being made when putting the plan together. In fact, these critical assumptions should become a part of the plan, especially if they are critical to the plan's success. This is because, if one of the assumptions was to change, or had been misunderstood, the plan would need to be redrafted or abandoned.

Sometimes a crisis may result as a consequence of shifts in users/customers/patron needs. Commodity price downturns, changes in

¹ This process is best exemplified by a recent national strategic planning document that endured 14 revisions before finally being accepted unanimously. Although frustrating for the authors, the delay gave time for broad buy-in to the plan, with consensus being developed through reiteration. In the end it was worth the time invested.

environmental regulations, outbreaks of food borne illnesses and similar unanticipated events may require an institution to rethink its strategic plan, or to develop a special, parallel plan to deal with an emerging crisis. Such interim responses are often done with little time or factual information available. But such plans can be of immense value for decision making, program creation, and management decision making.

At other times the crisis that prompts an institution to create an adjunct plan may be the result of an internal crisis (even internal to the college or a department). Or it may be external to the unit but within the parent organization. In these instances, some flexibility in strategic planning may be necessary. But discarding an otherwise valuable strategic plan may not be wise. An amended plan may be sufficient to get through the crisis.

Mandated Strategic Planning: When strategic planning is required by an institution's top officials, it often comes with an expectation for accommodating overarching organizational goals, or some standards for accountability. These standards are then to be implemented through the requested plan.

In these instances, listening to your stakeholders may not be a wise approach to strategic planning. This is because through the listening sessions certain stakeholder expectations may be established, when in fact the key decisions are already made. This is true if the mandates are handed down from a state legislature, board of trustees, or some similar authority. And this becomes especially complex when issue-based strategic planning collides with institutionally assigned goals. Your stakeholders will feel abandoned if their issues cannot be addressed.

Planning with Constrained Resources: It is axiomatic that when conducting listening sessions with your stakeholders, their collective needs will almost always exceed the resources available to your college. This axiom is compounded by the heterogeneity of the stakeholders of today's colleges of agriculture. Contemporary colleges of agriculture must attend to a broad mix of direct users of the college's products and services; attend to the expectations of the intended customers (often indirect consumers) of those products and services; and be responsive to the expectations of those patrons who provide the resources to carry out the projects, programs and activities of your college. These component claimants do not always share the same expectations or agendas. Today, the term "stakeholder" is a complex of individuals, institutions and associations, each with differing expectations. Ignoring the complexity of the group called stakeholders confuses

the process of listening to your stakeholders, and in turn, can derail strategic planning in an academic setting.

In addition to this consideration, most colleges have found that their mission has been significantly broadened in the past few decades. This has occurred mostly in the face of declining resources. This collision is what is driving institutional needs to focus their activities. Today institutions need clearly articulated missions. They must forgo the temptation to be all things to all people. They need to plan strategically.

Strategic planning in the face of constrained resources is particularly challenging. Care must be exercised when conducting listening sessions so as not to create the expectation that all of the problems voiced are going to result in some action taken to correct them.

You will need to provide a ‘reality check’ for your strategic planning process. Honesty in dealing with your institution’s capacity (human, fiscal, physical, and political) is very necessary.

PRINCIPLES FOR STAKEHOLDER LISTENING

Some initial decisions need to be made regarding the selection of approaches to strategic planning to determine which stakeholders to listen to, using whatever mechanism(s). Will the strategic planning process be based on issues, quality improvement, or accountability? All three forms of strategic planning are valid. But how each type of strategic planning is approached is quite different. Sometimes a hybrid, or a mixture, of approaches is most appropriate. This requires matching your listening approaches and appropriate strategies.

Issues-based Strategic Planning: Issues-based strategic planning² begins with listening to the needs of the users of your institutions’ products and services. If issues-based strategic planning is to be pursued it will be important to define the institution’s users very early in the strategic planning process, especially if they are to be consulted as to their needs.

² An example of a strategic issue is the consumer concern for pesticide residues in their foods. The problem is the health considerations of consuming foods that are contaminated with pesticides. The strategy might be growing crops that do not require pesticides, because they are genetically resistant to pests and diseases. The research approach might then be to produce replacement cultivars that perform agronomically as well as the current cultivars, while needing fewer pesticide treatments.

Quality Improvement Strategic Planning: Strategic planning for quality improvement begins by listening to one's 'customers'. This is a fundamental tenant of Total Quality Management (TQM). The basic concept in TQM is quite simple. In TQM the attribute of product quality and/or service quality is defined by the extent of customer satisfaction. For a business this is expressed as bottom-line profits, repeat business, and positive customer satisfaction survey results. In an academic setting "customer satisfaction" needs some translation. Are the products and services offered by the college appreciated by the intended "customers"? Are the consumers of the marketed agricultural products satisfied? Are students satisfied with their education, after graduation? Are farm communities satisfied with the programs of their county extension agents? Are employers satisfied with the quality of the university's graduates? To answer this type of question you must reach out and ask them.

Accountability Strategic Planning: Accountability strategic planning begins with listening to the patrons of the institution's programs, to understand what they expect to get for their 'investments'. Agreement on intended outputs, outcomes, impacts, and benefits needs to precede strategic goal-setting and program development. If this is not the case, be grateful. You've got yourself a rare patron.

Clearly, strategic planning approaches will differ depending upon whether you wish to identify issues, improve the quality of institutional programs or provide better measures of accountability for the goods and services provided. Thus, a clear decision is needed on the constituency with which an institution will be working to initiate its strategic planning.

The College of Agriculture, Forestry and Consumer Sciences at West Virginia University worked with this consideration for its strategic planning activities. In a series of eight county-based listening sessions the dean, other college administrators and selected faculty met with diverse groups of users. The intention was to identify user-based issues that the college could address through its program. But the dean went not to lecture, but to listen. The meetings typically began at 6:30 p.m., and ended at 9:00 p.m., at which time the responses had to be cut off. The participant stakeholders were fully engaged, and very able to express their needs to the dean. Face-to-face meetings, altogether totaling twenty-four hours, held around the state, identified a long list of problems that were rendered into a comprehensive list of issues (see Appendix 3).

If the strategic planning process used by the dean at West Virginia University was intended to be quality improvement, the listening session would have been quite different. The initial question would have been:

“In the past five years we have provided you with the following goods and services. How satisfied were you with what we delivered, and what can we do to improve upon our success?”

This would, of course, require the dean to provide some targeted information to a known sample of “customers”, to focus on some selected products and services such as: improved cultivars, better animal-feed mixtures, improved water quality, or more employable graduates. If, for instance, the responses were “we liked the technical training that your graduates now get, especially in computer software,” this may indicate the opportunity to do an even better job in computer science training.

If the intention of the dean was to develop a strategic plan for the college that focused on accountability, the audience would have been comprised of resource providers, and the initial question might have been:

“How much difference would it make to the success of our state’s enterprises (or the quality of rural life) (or the success of your communities) if we invested more of our resources in developing new cultivars? Or, in food safety research? Or, in developing WWW marketing pages for small enterprises in our state?”

There are fundamentally two ways of gathering information from one’s stakeholders. You can go out into the community to hold meetings for the purposes of listening. Or, alternatively, you can form an advisory committee which is invited to your campus to express its views.

We express no preference for one over the other. We do recommend that whatever process is selected should match your institution’s mission, your leadership style, and the communities’ expectations for the listening method. Moreover, there is absolutely nothing to prevent an institution from having both community meetings and advisory committees.

The “message” sent by holding community meetings is that you are reaching out to your stakeholders proactively. In doing so you are expressing, by your action, a sincere interest in the information that is being gathered and in the communities you visit.

On the other hand, advisory committees have the advantage that they are usually made up of community leaders who, as representatives, have an issues-amplifying effect when expressing opinions and a multiplier effect in gathering support. Advisory committee members may also make excellent participants on a strategic planning committee. But then, so could at-large community members.

In a perfectly organized listening process (no matter whether done as community meetings or as visiting committees), input should be obtained from users in ways to identify issues, get ideas for quality improvement from customers, and determine accountability measures from patrons. By tactfully wording the questions, and carefully sorting the answers, a strategic plan can be developed that is built on issues, or that provides quality improvement, or that gives accountability to your investors.

But all of this is very hard to do in an open public meeting with an unstructured agenda. It is, however, important to allow any and all users/customers/patrons to express their concerns and to explain what they like and do not like about the current activities of your institution. Successful listening sessions start the process of generating buy-in for the eventual plan. Holding the meetings around various parts of the state allow important regional concerns to be voiced that might be missed in statewide meetings. The bottom line is just this: listening means a lot to your users/customers/patrons. They deserve the attention.

SOME HELPFUL HINTS

Gleaning the Issues: When holding community meetings it is important to have several members of the strategic planning committee attend the meetings, and to subsequently compare their notes in a process of translating what they thought they heard. After several community meetings, there will be a need to sift out the larger needs shared by all of the stakeholders. The significant needs can then be separated from the minor annoyances and pet peeves that may also be expressed. Stating these significant needs as issues requires some effort, but it is critically important for translating what your stakeholders need, into what you as an institution can do.

Drafting a Vision Statement: There are certain characteristics of an acceptable vision statement that need to be considered. A vision statement should define “what we want to be when we grow up.” It is admittedly an idealized statement; perhaps it is not even attainable. But, in any form, it should be memorable. A vision statement should set out ‘where we want to be, when, and what our world is going to look like when we get there.’”

Drafting a Mission Statement: The mission statement should answer the questions who, what, when, where, why, how, and for whom. It should explain what you will do, how you will do it, and it will give the context in which it will be done. Mission statements tend to be longer than vision statements, but exceeding a paragraph for a mission statement should require some sort of special dispensation.

Scoping the Plan: It is important when conceptualizing the strategic plan to set out the plan's scope. The stated scope should indicate the time horizon (e.g., a duration of five years), what the plan covers (e.g., only research is covered here) and what it does not cover (e.g., technology transfer has not been included).

Guiding Principles: The plan should have a section on your institution's guiding principles and/or core values. The plan should state what is important to the unit, its shared values, and what gives it its identity.

Environmental Scan: An analysis of the strengths, weaknesses, opportunities, and threats to the unit (SWOT analysis) is critical to any strategic planning. A SWOT analysis helps planners to define the internal and external environmental factors that need to be considered when planning.

Stating the Priorities: The plan should state the priorities of the institutional unit. These priorities should be derived from the items identified by listening to your stakeholders (i.e., the users' needs, or the customers' desires for quality, or the patrons' expectations for impacts). And these priorities should be instantly recognizable by your stakeholders upon reading your plan. Or at least they should be recognizable through some explanatory notes.

Strategic Goals and Objectives: The plan's goals and objectives should align with the plan's priorities. The plan should give, for a user-oriented plan, clear indications of what is intended as accomplishments for the users. Alternatively, if a customer focus is preferred, measures of quality improvement should be indicated. But these too should have some associated goals and objectives. And, if the purpose of your strategic planning is for patron accountability, the intended outcomes and impacts should be stated. Again, outcomes and impacts should also have some associated goals and objectives.

As your unit plans, you will find yourself assessing not only what you do but also how you do it. West Virginia University's College of Agriculture, Forestry and Consumer Sciences strategic plan separated goals into "operational goals" (e.g., invest in and maximize the College's human resources; aggressively enhance and grow resources) and "programmatic goals" (e.g., agricultural and forest production systems that are highly competitive in the global economy; enhanced economic opportunity and quality of life for citizens and communities).

In a hybrid plan, one would expect to find priorities and/or quality indicators and/or outcomes and impacts, in some mixture. Organizing these with the goals and objectives may be editorially complicated. Thus there will be a need to limit this dimension, or select another strategic planning approach.

Programs and Projects: From your statements of goals and objectives there will naturally emerge a set of programs and projects that will help your institution complete its targets. In the early stages of strategic planning your goals and objectives will be evolving, and this process of evolution should be encouraged.

Typically, several projects contribute to a program and thus, in this way, there is a nested, hierarchical structure. In many institutions, programs do not exist because of the absence of organizational structure, or a lack of intentional team building. There are advantages, however, in forming programs that can leverage projects and provide synergy among activities. This may encounter some resistance because, in some institutions for some faculty, there would be a perceived loss of individual autonomy. Therefore, some rewards may be necessary to provide incentives for program development and participation, if they are indeed of strategic interest to your institution.

Strategies: Surprisingly, many strategic plans do not have a section on strategies, and this is a major oversight. In order to bring about the desired outcomes of any strategic plan there should be a set of selected strategies. These might include strategic partnerships, strategic activities and strategic choices that are selected to allow the plan to succeed. Stating these strategies helps to spell out how the plan will come together, and how it will operate.

Assumptions: Stating the specific assumptions that underlie a strategic plan is critically important for two reasons. First, inventorying the assumptions is valuable to understanding the plan's stability. Second, it is wise to continuously review these assumptions, for if one of the strategic assumptions is later proved false, or if conditions change, the strategic plan may be in jeopardy. Knowing the plan's assumptions helps to avoid such failures.

Inventory of Resources: The success of any strategic plan is contingent upon the availability of adequate resources for its implementation. An inventory of the current and projected human, fiscal and physical resources available to support the programs of the plan is critically important. Sometimes it is the unknowns (e.g., future budgets) that may jeopardize the planning process, or frustrate the planners. To deal with this, strategic plans commonly have scenarios (usually limited to three) that provide a low, medium, and high projection, for purposes of planning. For the plan, if future budgets should come in on the low side, only certain objectives will be addressed. If future budgets turned out to be in the medium-range, additional objectives could be assumed. And if a high budget were to be realized, the full plan will be implemented. The use of budget scenarios has some interesting advantages when used creatively. Decision makers reviewing your plan

may be tempted to award budget increases, just to realize your additional objectives. Similarly, scenarios can be developed for additional levels of human resources, additional facilities, or perhaps even additional equipment.

Some strategies may need to be developed for making resource allocation decisions. Some process for priority setting is critically important for making resource allocations, if you are going to match your resources to the purposes of the strategic plan. Sometimes this is done through an internal competitive grants program. At other times reallocation is done through the use of established milestones which are used to monitor the progress of projects. In this case, if milestones are missed, projects are terminated early and the resources are reallocated.

Timetable: Every strategic plan should have a timetable, setting out how the various activities will be implemented, and making clear when outcomes can be expected.

Anticipated Outcomes/Measures of Success: A plan should also have a set of anticipated outcomes that will result from implementation of the plan. These outcomes should be complemented with measures of success designed in ways to show that the plan is having its desired effect.

Implementing the Plan: When your strategic plan is completed and buy-in is broad based you will need to develop an action plan for its implementation. This is sometimes done as a separate document. At other times it is a section found within the strategic plan proper.

There are several ways of implementing a strategic plan. The most direct method is the identification of the action items that are necessary to bring about the desired activities. In a strategic plan action items should be declarations of intended changes judged to be of significant importance-the choices that make things happen. An action item might be:

- Convert 50% of our formula funds to an internal competitive grants program by December.
- Recruit two faculty members in animal waste management by July 1.
- Establish an MOU with the USDA's Agricultural Research Service by March 1.

Action items might be sorted into targeted areas which may or may not align with strategic programs, strategic goals or strategic priorities. The purpose of

identifying target areas and action items is to lay out an agenda of activities that will make the strategic plan happen.

Deciding When to Revise Your Plan: As noted earlier, if a strategic plan's assumptions were to change, or if circumstances are altered in ways that would affect the expectations for the plan's success, a new or revised strategic plan may be indicated. A new or revised plan should also be considered if access to resources were to change or priorities were to shift. A strategic plan that anticipates constrained resources, but all of a sudden has additional finances deserves to have a second look. And if a strategic plan's priorities should change, a complete revision may be justified.

TEN STEPS TO A PLAN OF WORK

Implementation of a strategic plan may be done through a Plan of Work (POW). As noted above, POWs are new to research management, but they are common to Cooperative Extension Service managers who have for some time reported program-level activities as a POW.

New federal requirements mandate the development of a POW for all institutions receiving federal formula funds. POWs are to contain information on issues to be addressed, program performance goals, organization of programmatic components, linkages, audiences, duration, and planned resource allocations. Organizing a POW can be done in steps, like other forms of planning.

Step 1. Organize Your Portfolio into Programs

Most research institutions are organized into many individually managed projects. This is necessary for intellectually creative purposes, but it creates a mess for reporting accomplishments to the patrons of public programs.

By grouping many projects into a few programs a 'bigger picture' can be described, and reported on for impacts. This relieves the burden from the individual investigators, and focuses the reporting into major areas of accomplishment. Typically, 20 or 40 projects may make up a program. These projects are grouped together under one program name, for example, "To improve this state's agricultural competitiveness in a global economy".

Well conceived strategic planning can set the stage for a quick exercise in work planning. A properly organized strategic plan should have already identified the programs of a college, institute, or academic department.

Step 2. Assemble the Needed Data

To complete a POW the drafting team will need access to data on internal and external linkages and the resources allocated to the various programs. A spread sheet analysis of current and future fiscal, human, and physical resources will be needed by the plan's drafting committee.

Step 3. Appoint a Drafting Committee

Aim to keep the drafting committee small in number (a committee of one is sometimes best). A drafting committee should be charged with taking the available information and drafting a POW for consideration by others familiar with the academic unit or function. If time is very short, the committee may need to be a 'committee of one'.

Step 4. Agree on an Outline

The drafting committee will need to design an outline, if one has not already been prescribed for the POW. The POW will need to include, for each program, a statement of the issue(s) to be addressed and the performance goals that represent the targets for the program. Much of this can be adapted from the unit's strategic plan.

Step 5. Set the Performance Goals

Performance goals are the targets for the planned activities. They should be complemented with output and outcome measures, or surrogate indicators.

The following table is proposed as a logical framework for conceptualizing the reporting of performance goals. The ✓ indicates our judgements on the appropriateness of reporting outputs, outcomes and impacts by these various methods. It should be noted that not all reporting is quantitative, and not all measures can be quantified directly.

Table 1. Logical Framework for Performance Assessments

Method	Outputs	Outcomes	Impacts³
Quantitative			
Direct Measures	✓	✓	✓
Indicators		✓	✓
Qualitative⁴			
Descriptions	✓	✓	✓
Opinion Surveys			✓
Testimonials			✓
Case Studies			✓

There are a number of accepted analytical approaches that can be used to express programmatic impacts. These include cost-benefit ratios, returns on investments, etc. But benefits often depend on the actions of others. For example, Extension Service agents often transfer research results, but private companies may then further develop the discoveries. Thus, a ‘plausible association’ may need to be drawn for the impacts and benefits that have been derived from earlier public investments. Moreover, the time scale for technical developments often spans decades, and this too must be accommodated in any impact assessment.

For some management purposes it may be desirable to use milestones as a means to monitor progress toward a program’s performance goals. Milestones are those significant tasks that must be achieved before another task can be addressed. For example, if genetic transformation of a crop species must be reduced to practice before one could genetically engineer the crop for the desired trait, then mastering the transformation method would be a milestone in a larger biotechnology program. The management applications are obvious. Whether or

³ These could be economic, environmental, and/or social.

⁴ These might be factors of utility, relevance, or satisfaction.

not these milestones are periodically reported to stakeholders is another matter worthy of considerable debate.

Some examples of programmatic outputs, outcomes, and impacts (with some given as indicators) are:

Animal waste management

Output: A prediction model is available for interpreting the environmental consequences of various nitrogen application rates to forage crops by 2002.

Outcome Indicator: More than half of the state's dairy farmers adopt strategies for nitrogen fertilizer management based on prediction modeling by 2005.

Impact Indicator: Water quality in samples from groundwater and in surface water areas will be improved.

Food safety (*E. coli*)

Output: Rapid detection method for *E. coli* is perfected using PCR by 2002.

Outcome Indicator: Twenty beef processing plants in six states have adopted the new detection method for implementing HACCP by 2004.

Impact: The incidence of food-borne illnesses and deaths by *E. coli* in beef will be significantly reduced.

Crop protection

Output: Three popular potato cultivars of the region are transformed with Bt resistance to Colorado potato beetle by 1999.

Outcome Indicator: More than fifty percent of the state's potato growers are growing Bt transformed cultivars by 2004, with a subsequent thirty percent reduction in insecticide applications.

Impact: Less pesticide exposure for farm workers; less costs of production for potato growers; and fewer hazards to potato consumers will occur.

Workforce preparation and training

Output: Training manual is published by a partner state agency by 1999.

Outcome Indicator: More than ten percent of the initially enrolled students are employed one year after completing the training course, using the new publication.

Impact Indicator: Improved job skills will stimulate business success in the region and provide local communities with increased likelihood for strengthened economies.

Value-added products

Output: Three potentially commercially viable, value-added corn products are developed by 1999.

Outcome Indicator: One of these three products is commercially successful, as judged by common market standards, by 2005.

Impact Indicator: Business success with the anticipated value-added corn product will create demand for corn, thus providing measurable economic benefits for the corn growers of the region.

Environmental policy research

Output: A report is prepared on the economic and environmental impacts of the 1996 Farm Bill by 1999.

Outcome Indicator: Congress addresses the issues identified in the report through changes made in the 2002 Farm Bill.

Impact Indicator: Federal farm policy improvements will be expressed through better protection of the environment; greater agricultural productivity; and measurably enhanced farm/ranch profitability.

Step 6. Identify Key Program Components

The key components of the various programs that make up the academic unit's portfolio should be identified. As examples, these might be groups of projects, technologies and capacities that will be contributing to the program's activities.

Step 7. Identify the Target Audiences

The stakeholders of your institution should somehow be identified as the target audience(s). These audiences should flow directly from your strategic plan. The POW should identify your institution's commitments to facilitating equality, ease of access and efforts to reach out to underserved and diverse populations.

Step 8. Obtain Stakeholder Input

A description of the actions taken to obtain user/customer/patron input should be included in the POW. How these groups and individuals were identified also should be noted. Adoption of the input by reference to your strategic plan and appending your strategic plan to the POW would be appropriate.

Step 9. Plans for Merit and Peer Reviews

A description of the processes that will be used to assess the scientific quality and relevance of the projects and activities of the institution also should be included in the POW. A process action team might address this component of your POW planning, and report back a set of recommended procedures to the POW drafting committee. An administrator authorized to manage federal funds should do certification of the merit and peer review processes, if appropriate.

Step 10. Plan to Report on Accomplishments

By creating your output, outcome, and impact measures and indicators the POW will provide you with a logical framework for the annual reporting of accomplishments for each of your programs. Minimal intrusion into individual projects should be a goal of planning your work. By organizing activities into programs the ‘bigger picture’ of institutional activities and accomplishments can be reported.

For institutions that are federally formula funded by the USDA, POWs are now a requirement. But, POWs are also a good organizing tool for helping to market institutional successes.

CONCLUSIONS

Strategic planning, done properly, can be an invigorating experience when successful. It is hoped that this booklet will help individuals and institutions understand when to plan, how to plan, and what pitfalls to avoid. Good luck..

APPENDIX 1

WEST VIRGINIA UNIVERSITY

**COLLEGE OF AGRICULTURE,
FORESTRY AND CONSUMER
SCIENCES**

Strategic Plan

1998-2003



CONTENTS

Preface.....	26
Introduction.....	26
Vision Statement.....	27
Mission Statement.....	27
Guiding Principles.....	27
Environmental Assessments	28
The External Environment	28
The Internal Environment	29
Strategic Issues.....	30
Strategic Goals	31
Operational Goals	31
Programmatic Goals.....	33
Mechanisms for Resource Allocation	35
Factors influencing Allocations.....	35
Guiding Principles for Resource Allocation	38
Criteria for evaluation of programs and resource allocation.....	38
Strategic Partnerships	39
Rewards and Incentives	40
Strategic Planning Steering Committee and Process Action Team (PAT) members	41

Preface

Efforts for this strategic plan for the College of Agriculture, Forestry and Consumer Sciences were initiated in early 1997. It has been developed with input from residents of the state, alumni, visiting committee members, faculty, staff, and students. The plan is envisioned to be a working plan, dynamic enough to address changes that may occur and specific enough to provide direction and be the basis for future decision making. The College plan will fit within and support the University's strategic plan. The structure of the College plan will permit the Divisions to develop supportive strategies.

David MacKenzie notes that "Strategic planning is strategic thinking. It does not deal with the nuts and bolts of how to get things done: it figures out how to using existing or accessible resources, comparative advantages, strengths, and opportunities to get things done."

This plan addresses the opportunities, constraints, and realities of conditions that may influence the College in coming years.

In order "to get things done" the faculty, staff, and administration of the College will be developing action plans for specific topics or issues that have been addressed in the strategic plan. These action plans, occurring over the next few years, will describe the nuts and bolts needed to move towards the goals of this strategic plan. Action planning will involve, as appropriate, students, staff, faculty, administrators, and stakeholders.

Introduction

Many changes have occurred in the past decade at West Virginia University and in the environment in which the College operates. Higher education overall is dramatically changing. Many reports in the last few years have analyzed the role land grant institutions should play in the twenty-first century. For example the Kellogg Commission on the Future of State and Land-Grant Universities reviewed critical issues facing land grant universities. These include: access to universities in the face of dramatic demographic changes and fiscal challenges; partnerships between universities and the society they serve; the societal need for lifelong learning; and reward and recognition of the creative work of faculty.

The College and the West Virginia Agricultural and Forestry Experiment Station participate in the federal-state public agricultural research, education and extension partnership that also faces dramatic changes. Funding levels, how funding should be distributed, and what types of research and institutions federal funding should support continue to be points of discussion.

At West Virginia University, President Hardesty has emphasized that we are a student-centered institution and has also called upon us to provide broader service to the State. In January 1997, the university's Research Task Force concluded that all faculty should be involved in research or other creative scholarly activity. These recommendations place demands on our time and resources and we need to examine the activities of the College in light of them.

Today's context includes West Virginia Senate Bill 547 (SB 547) that requires the University to reallocate \$32 million at the Morgantown campus by the year 2001 to allow salary increases for all WVU employees. Additional reallocation will be necessary to make funds available to invest in promising new projects and activities. Systems, programs and services that are outdated need to be identified and procedures to revise, alter or discontinue them must be developed.

The College has and will continue to change in response to this changing internal and external environment. The strategic plan presented here will help guide us into the next century.

Vision Statement

The vision of the College of Agriculture, Forestry and Consumer Sciences is to be a highly regarded institution that imparts knowledge, generates new information, anticipates societal needs, provides leadership in solving problems, maintains linkages with citizens, and improves the quality of life for all people of the State.

Mission Statement

The mission of the College of Agriculture, Forestry and Consumer Sciences is to provide high quality undergraduate and graduate education, conduct basic and applied research, engage in other creative and scholarly activities, and perform public outreach and service. The future presents tremendous scientific, economic and social challenges due to a globalization of the economy, increasing population and the growing importance of environmental and consumer issues. Society expects increased benefits from its public-supported institutions. College administrators, faculty, staff, and students are responsive to these expectations through interdisciplinary programs designed to impart knowledge, promote leadership, build problem-solving teams, address critical issues and enrich the lives of citizens of West Virginia, while protecting the environment in which we live. These programs range from local to international in scope and promote the wise use of natural, renewable, and human resources.

Guiding Principles

The faculty and staff of the College of Agriculture, Forestry and Consumer Sciences adopt the following principles to guide their teaching, research, and outreach activities towards our Mission:

- We are a service-oriented branch of West Virginia University. We will respond as appropriate to the needs of West Virginia residents, U.S. citizens, and the worldwide community.

- We will promote the use of multidisciplinary approaches and will seek innovative solutions to current problems in agriculture, natural resources, and family and consumer affairs.
- The well-being of natural, community, and family resources is inseparably linked to our mission and goals.
- We will adhere to a strict code of ethical conduct, honesty, integrity, and fairness in our teaching, research and service and we will work to instill these values in our students.
- Creativity and resourcefulness are essential to us as we work to remain productive in a future environment that we believe will be characterized by increasing competition for students, staffing, support funds, and infrastructure development and maintenance.
- We will be open to individual and cultural differences and create a learning and working environment that is conducive to the expression of multi-cultural traditions and values.
- We are committed to excellence and productivity in scholarship and creative endeavors and will engage in teaching and research that is relevant and visionary.
- We will provide leadership on pertinent issues of state and regional significance.

Environmental Assessments

The administrative, political, and social milieu of the College influences, even determines, the opportunities and restraints for realizing our plans. The key external and internal factors of the College environment are identified.

The External Environment

Several external factors affect the College of Agriculture, Forestry and Consumer Sciences and include the following:

- State support

- Senate Bill 547 has resulted in downsizing of College faculty and staff and has affected teaching and research.
- A very low ratio of state matching funds to federal funds in comparison to other states results in limited resources.
- The WV congressional delegation has been supportive of College programs in the past and should be sought out for opportunities to enhance support for College programs.
- Good opportunities exist for increased collaboration among the College and State agencies, such as the Department of Tourism, Department of Agriculture, and the Department of Natural Resources, in the way of outreach. However, redundancies of programs in agriculture and natural resources between the College and State agencies create ineffective use of dollars and human resources.
- Strong high school agriculture programs in the State can provide a good base for recruiting students.
- Federal formula funding (Hatch and McIntire-Stennis), which has been the mainstay of the College research programs, has become more precarious.
- West Virginia's diverse geography and economy present more challenges for research and teaching than the College will be able to cover. West Virginia University has had a poor presence in the southern-most ten counties.
- Some industries relevant to the College are among those with the most rapid growth and development. These include: forest products, tourism, animal products (poultry, beef, aquaculture), and horticulture industries (greenhouses and nurseries).
- We are faced with a period of declining number of graduates from West Virginia high schools and thus increased competition for these students.

The Internal Environment

Internal environment includes those factors within the University system, but external to the College. These include:

- More than thirty departments deliver required courses in the College's curricula. Linkages of College faculty with other faculty for inter- and multi-disciplinary research are many, involving nearly every other College of the University. Opportunities for cross-department and cross-college teaching can be enhanced.
- A climate of central control of decision making by University administration is evident; many decisions appear to be beyond the realm of influence and input by the College. Opportunity for budgetary input on initiatives important to the College is extremely limited. Some improvements in administrative support are noted but additional improvement would be beneficial.
- A perception exists that those outside the College poorly understand its land grant history and mission. Thus, the unique role of the College's farms and forests as field laboratories for many of our courses and for our research is not appreciated. This fosters a tense environment in which the College must operate.

Strategic Issues

In view of the environmental factors that are, and will, affect the College, certain issues appear to be significant ones for strategic planning:

- Downsizing/fewer faculty (resulting from SB 547) creates challenges especially related to an expanding knowledge base and the balance of teaching and research.
- Student concerns/issues such as advising students, internships, summer jobs, permanent employment, and support of extracurricular activities (clubs, judging teams, etc.) are evident.
- Alternative funding sources must be sought in light of the continuing trend of decreasing federal support.
- New programs and focus areas relevant to evolving future needs of a changing clientele must be addressed in the face of resistance to change.
- The image of the College and its undergraduate and graduate programs, research and service activities, must continue to be enhanced.

Strategic Goals

Strategic goals are the targets at which we aim our resources. The goals may not be entirely attainable, but they are of such importance that they must be addressed. Goals are accomplished, in whole or in part, by designing specific objectives for attention. Objectives will be the subject of the action plans that will be developed within each goal area.

Operational Goals

Assessing the effectiveness of the College's efforts and finding ways to meet operational goals is a continuous process. To maximize our effectiveness, the College of Agriculture, Forestry and Consumer Sciences will:

- ***Become proactive in helping to determine the future of agriculture, forestry and rural communities in West Virginia.***
 - Solicit stakeholder input on the priorities and goals of the College annually.
 - Engage faculty and staff in decision making and accomplishing the operational goals of the College.
- ***Establish a culture of trust and community in the College.***
 - Emphasize fair and equitable treatment of all faculty and staff.
 - Eliminate unnecessary competition among faculty, programs, and Divisions and remove other barriers to teamwork and cooperation.
 - Enhance communication throughout the College.
- ***Enhance resource utilization.***
 - Explore synergies among programs and across Division boundaries.
 - Manage physical resources efficiently. Generate new revenues.
- ***Invest in and maximize the College's human resources.***

- Provide incentives and opportunities for additional training and professional development in order to take advantage of new programmatic opportunities.
- Establish a mentor program for junior faculty.
- Establish clear standards of performance for faculty, staff and students and provide prompt feedback that includes advice and guidance.
- Align faculty goals in teaching, research, and service with the goals and mission of the program, Division, and College.
- Recruit and retain the best academic students.
- ***Eliminate administrative barriers wherever possible to unleash capacity of College faculty and staff.***
 - Evaluate College personnel, purchasing, and other administrative practices with a view to improving efficiency, motivation, and productivity.
- ***Aggressively increase financial resources.***
 - Increase external funding from grants and contracts.
 - Increase support by alumni, friends of the College, foundations, industries and other sources of private giving.
- ***Accomplish excellence in teaching.***
 - Encourage faculty participation in development activities related to teaching.
 - Maintain high standards for student advising.
 - Explore alternative methods for delivery of on- and off-campus instruction.

- Reward successful teaching innovation.
- ***Maximize operational effectiveness of the College.***
 - Seek support for consolidation of all on-campus College programs into one building.
 - Reexamine the administrative structure of the College in view of changing conditions of staffing, funding and priorities among the teaching, research, and outreach programs.

Programmatic Goals

The College of Agriculture, Forestry and Consumer Sciences will build strong, competitive programs supporting the following goals (Allocation of 1998 resources are shown for each goal):

- ***Agricultural and forest production systems that will compete successfully in the global economy.***
Current resource allocation: research = 46 projects, \$5,475,000; teaching = 21.14 FTE, \$1,780,000; total = \$7,255,000.
 - Develop productive and sustainable forest practices and forest stewardship programs that emphasize multiple usage of forested lands.
 - Develop profitable and sustainable plant and animal agricultural enterprises in West Virginia.
 - Pursue strategies that will decrease costs for producers and increase profits.
 - Develop new value-added products and products that meet consumer needs.
- ***A safe, secure food and fiber system that ensures healthy, well-nourished children, youth and families.***
Current resource allocation: research = 5 projects, \$128,000; teaching = 4.30 FTE, \$329,000; total = \$457,000.

- Develop information that will aid in the management of pests, diseases, and predators.
 - Generate relevant, up-to-date food safety information for the producer and the consumer.
 - Contribute to food and nutritional information that define the relationship between diet, lifestyle and health and enhances the public understanding of diet's role in lifelong health.
- ***Greater harmony between agricultural and forest practices and the environment.***

Current resource allocation: research = 20 projects, \$1,639,000; teaching = 14.94 FTE, \$1,088,000, total = \$2,727,000.

- Promote sustainable agricultural and forest production and enhance environmental quality by developing cost-effective, environmentally friendly production practices.
- Improve water quality by developing improved management practices and through remediation.
- Promote sound environmental and natural resource management.

Enhanced economic opportunity and quality of life for citizens and communities.

Current resource allocation: research = 13 projects, \$900,000; teaching = 23.37 FTE, \$1,566,000; total = \$2,466,000.

- Enhance the understanding of the economic importance of agriculture and forestry in West Virginia and the conditions that promote rural and regional development.
- Develop programs that promote new business and growth in existing business, including farms.
- Support quality of life issues for rural West Virginians and strong child, youth and family development.

Education of society-ready graduates.

Cuts across other programmatic goals; current resources reported as assigned to other programmatic goals.

- Ensure practical experience for our students through internships and other on-the-job experiences and prepare students to enter the workforce.
- Provide personal guidance to our students by continuing outstanding student advising.
- Enhance the use of information technology and distance learning in program delivery and develop avenues for “just-in-time” learning for the non-traditional student.

Mechanisms for Resource Allocation

Allocation of the College's human, physical, and fiscal resources is an on-going feature of College administration. New opportunities and constraints on resources may result in altered views of the optimal ways for the deployment of resources to meet goals.

Factors influencing Allocations

- **Assumptions on sources of current income**
 - Senate Bill 547 will have a definite impact on the University appropriation (54% of current income) through fiscal year 2001. Based on current projections, the College and Experiment Station will be short on their reversion assessment at the end of FY 2001. Funds for operating costs have remained constant over the last five years and will remain flat or decrease, losing purchasing power to inflation. The worst case scenario would require the College and Experiment Station to reduce its budget by 3% per year.
 - Based on current information, formula funds (Hatch, McIntire-Stennis, Animal Health; 19% of current income) could at best remain constant or face a cut of 3% (or greater) per year for the next five years with emphasis

being shifted by USDA to competitive grants.

- Grants and contracts (Federal, State, Private; 16% of current income) have been increasing over the last five years and should continue to increase in the next five years with emphasis changing from formula funding to competitive grant funding although these are not expected to increase sufficiently to offset the potential losses from other sources unless intensified efforts are undertaken to enhance the faculty's capabilities in obtaining grants.
- Sales (Farms and Forest; 8% of current budget) have been decreasing over the last five years. They currently do not produce enough income to offset the cost of paying the non-personal service costs of the facilities. If the current operations of the farms and forests continue, additional funding will be needed from other sources to operate those activities at their current levels or ways to increase efficiency need to be pursued.
- Miscellaneous income (Overhead, Nursery School, Off-campus Education, Fees; 3% of current budget) should increase during the next five years with increased grant activities (overhead) and additional off-campus courses being offered.
- **Potential areas to increase income**
 - Increase enrollment in undergraduate and graduate courses.
 - Provide additional service courses for both College and non-college students.
 - Increase offerings of summer and/or adult education classes.
 - Increase grants and contracts.
 - Increase direct appropriations from State or Federal legislatures in support of College programs.
 - Increase support from private giving.

- Increase allied-industry support.
- Increase sale of and profit generated by items produced by the College/Experiment Station.
- Charge for traditionally free services (e.g., soil testing).
- Special fees for laboratories requiring higher-than-normal resources to teach.
- **Potential changes in expenditure patterns**
 - Potential retirement of 25% of the faculty in the next five years will create a pool of resources that could be redirected to high priority areas.
 - Expenditure budget allocations need to be reviewed to determine if reallocation can be made to redirect resources to high priority areas. All College and Experiment Station operations, including the farms and forests, need to be reviewed carefully to improve their efficiency while reducing costs.
 - A research resources allocation strategy for formula funds needs to be developed to direct these resources to high priority areas, increase flexibility of these funds to respond to research opportunities and address new initiatives and support research-building efforts of new faculty.
- **Best Case Scenario**

State and Federal appropriations remain constant with grants and new income absorbing some increased operating costs. Total budgeted personnel positions would remain at the current level. Changes could be made with the reallocation of resources and the redistribution of positions from retirements to high priority areas. However, reviewing all operations also is essential, including the farms and forests, to reduce inefficiencies and to accrue savings that would enhance achieving the College and Experiment Station missions.

- **Worst Case Scenario**

State appropriations would be reduced by 3%, and Federal allocation would be reduced by 15%. Increases in grants and other income areas could not offset the State and Federal reductions because they could not be used for long-term commitments. Two examples of cost reduction measures that could be implemented: 1) Reduce off-campus farming operations, and 2) eliminate at least four faculty positions, along with support staff and related operating expenses. The College average cost per faculty is approximately \$106,000 (FTE = 50% instruction and 50% research) which includes the cost of the faculty member, support staff, and operating expenses. Changes would have to be made by reducing programs and reallocating resources to high priority areas.

Guiding Principles for Resource Allocation

- Allocations should support a minimum of one strategic goal.
- Allocations should support maintenance and/or development of a “core of expertise” or “critical mass” to meet student demand for academic programs, to conduct research, and to provide public service to address issues important to citizens of West Virginia.
- Allocation processes should be flexible to support development of new programs identified as priorities through the planning process.
- Allocations should be used to encourage greater participation in interdisciplinary programs.

Criteria for evaluation of programs and resource allocation

Programs that meet most of the following criteria will be emphasized:

- Make a significant contribution to the College missions.
- Enjoy good student interest as measured by enrollment.
- Have significant internal and external availability of funding.

- Have a record of past success and established strengths.
- Support a Ph.D. program or programs.
- Provide job opportunities for graduates.
- Are relatively unique in the State and region.
- Focus on opportunities that are relatively unique to West Virginia.
- Are cost effective.

Strategic Partnerships

Clearly, the College working alone cannot meet all of our programmatic goals. Thus, we will need to form strategic partnerships with a variety of organizations and institutions to get the job done. A successful partnership must be win-win, i.e., both parties must gain from the relationship. Strategic partners include groups to cooperate with, groups to collaborate with, and, potentially, a combination of the two.

The College develops partnerships for a variety of purposes. These include:

- To develop sources for additional financial resources
- To promote a means of increasing programmatic potential.
- To garner political support
- To increase job potential for graduates and to create internships and cooperative opportunities.
- To facilitate regionalization of efforts and allow resources to be mutually leveraged to better serve our clientele.

Some examples of possible strategic partners include:

- State and federal agencies.
- Other colleges and units at WVU, other colleges and universities within West Virginia, and other universities in the land grant system, particularly in the surrounding states and the Northeast.
- Industry, trade/commodity organizations and professional organizations.
- Foundations and non-governmental organizations (NGOs).

Rewards and Incentives

Significant changes in College operations are likely to occur as a result of external pressures as well as efforts generated by the College as the strategic plan is implemented. People will achieve the goals and objectives, and people should have incentives for working on improvements and should be rewarded for contributions that are successful. To carry out this strategic plan, the College will strive to:

- Show appreciation through acknowledgment of individual contributions and positive reinforcement of actions and activities supportive of the strategic plan.
- Ensure the presence of an environment in which employees are empowered and that nurtures an atmosphere of trust and respect among all employees.
- Provide a user friendly physical work environment.
- Encourage and facilitate enhanced communication.
- Foster professional development of all employees.

Strategic Planning Steering Committee and Process Action Team (PAT) members

Strategic Planning Steering
Committee:

Barton Baker
Gary Bissonnette
Jack Coster
Bob Dailey
Jerald Fletcher
Rosemary Haggett
Ron Hungate
Denise Hunnell
Jamie Kiszka
Joe McNeel
Kerry Odell
Peter Schaeffer
Tony Tomkowski
John Warren
Jan Yeager

External Consultant:

David MacKenzie

PAT Members:

Jim Armstrong
Rajeev Arora
Barton Baker
John Balasko
Devinder Bhumbra
Gary Bissonnette
Bill Bryan
Alan Collins
Dale Colyer
Jack Coster
Bob Dailey
Donna DeWitt
Mary Ann Fajvan
Jerald Fletcher
Wanda Franz
Stacy Gartin
Bill Grafton
Linda Gribko
Rosemary Haggett
Kelly Heldreth
Ray Hicks
John Hinz
Steve Hollenhorst
Ron Hungate
Denise Hunnell
Curt Hassler
Mary Head
Loretta Hoover
Keith Inskeep
Bill Jones
Brett Kenney
John Killefer
Jamie Kiszka
Hillar Klandorf
Layle Lawrence
Paul Lewis
Marian Liddell

Steve McBride

Nora MacDonald
Carol Markstrom
Will McClung
Louis McDonald
Joe McNeel
Leah Messer
Danny Montgomery
Kerry Odell
Dan Panaccione
Joy Patterson
Tim Phipps
Ed Prigge
Dottie Rauch
Rich Russell
Dave Samuel
Peter Schaeffer
Steve Selin
John Sencindiver
Tony Tomkowski
Theresa Wang
John Warren
Tammy Webster
David Welsh
Jan Yeager

*PAT reports and other
resource materials are
available on file*

APPENDIX 2

PLAN OF WORK

West Virginia University

College of Agriculture,

Forestry

and

Consumer Sciences



**West Virginia Agricultural
and Forestry Experiment Station**

DRAFT

Not Approved by CSREES

Federal Fiscal Years

2000 to 2004

**Plan of Work for the College of Agriculture, Forestry and
Consumer Sciences, West Virginia University**

Introduction:

The College of Agriculture, Forestry, and Consumer Sciences at West Virginia University, headquartered in Morgantown, West Virginia is comprised of the West Virginia Agricultural and Forestry Experiment Station and the College's academic programs in undergraduate and graduate studies. It does not include the West Virginia Cooperative Extension Service.

This Plan of Work is a comprehensive statement of the College's intended research activities for the next five years, as required by the Agricultural Research, Extension, and Education Reform Act of 1998 (AREERA), and as allowed under the USDA's "Guidelines for Land Grant Institution Plan of Work". This Plan is based on the College's current Strategic Plan (see appendix A) and was developed in conjunction with our Cooperative Extension's Plan of Work.

Point of Contact:

All correspondence regarding this plan should be directed to:

The Dean and Director
 West Virginia Agricultural and Forestry Experiment Station
 P.O. Box 6108
 West Virginia University
 Morgantown, WV 26506
 Voice: 304-293-2395
 FAX: 304-293-3740
 e-mail: agdean@wvnm.wvnet.edu

Adoptions by Reference :

1. We adopt by reference the national Coordinated Multi-state Research Framework for fulfillment of our obligations to the AREERA's multi-state, multi-disciplinary and integrated activities (see <http://www.agnr.umd.edu/users/NERA/workshop/RPAFramework.html>). Accomplishments reporting on our multi-state, multi-disciplinary, and integrated activities for our Station will be through the annual Northeast impact statements and the Northeast results reported through institutionally integrated AD-421s. Financial statements on expenditures will come directly from this station as AD-419s.

2. We adopt by reference the West Virginia University's procedures for reporting Civil Rights compliance and Equal Employment Opportunity

requirements. These reports will be filled through the West Virginia University's Office of the President to the U.S. Department of Education.

3. We adopt by reference the National Standards for Peer Review (see <http://www.agnr.umd.edu/users/NERA/workshop/peerreviewstandards.html>).

Planned Programs:

Function	Goal 1	Goal 2	Goal 3	Goal 4	Goal 5
1862 Research	Program 1	Program 2(a)	Program 2(b)	Program 3	Program 4

Program 1: Globally competitive agricultural and forestry production systems.

Issue(s): As domestic agricultural and forest product markets become more open to foreign businesses, and as opportunities expand to market agricultural and forest products in foreign markets, West Virginia agricultural and forest product producers must have access to technologies and knowledge that enhance their competitiveness.

Performance Goal(s): Increased market shares for targeted agricultural and forest products of West Virginia.

Output Indicators:

1. Value-added agricultural and forest products.
2. Results of market research for selected agricultural and forest products.

Outcome Indicators:

1. Increased trade opportunities for West Virginia products.
2. Greater domestic-marketshare opportunities for West Virginia products.

Key Program Component(s): Research project activities will focus on:

- enhanced profitability of agricultural and forest production methods;
- value-added technologies applied through processing and packaging; and
- niche-market identification through economic and consumer studies.

Internal and External Linkages: Partnership will be continued with extension, federal labs, other universities, and the private sector, as appropriate to this performance goal. We will focus on shared responsibilities for the agreed research

objectives of projects and we will use joint ventures with industry to facilitate technology transfer.

Target Audiences: We will be focusing on agricultural and forest product producers and processors with emphasis on small and medium sized enterprises. Special attention will be devoted to traditionally underserved sectors, such as rural poor. Care will be given to meet the needs of the geographically disadvantaged.

Program Duration: This program of approximately 46 projects will continue for the five year life of this plan.

Allocated Resources: (\$ x 1000; [SY=units])

Current (1998)	FFY 2000	FFY 2001	FFY 2002	FFY 2003	FFY 2004
\$ 5,475 [22]	\$ 5,600 [23]	\$ 5,800 [23]	\$ 6,000 [24]	\$ 6,200 [25]	\$ 6,400 [25]

Program 2 (a and b): A healthy, well-nourished population that has access to an adequate, safe and secure food system.

Issue(s): Stakeholder listening sessions held throughout the State of West Virginia during 1997 and 1998 have pointed out citizen concerns for their access to a nutritious, safe and secure supply of foods.

Performance Goal(s): Increased consumer access to targeted agricultural and forest products of West Virginia that provide enhanced nourishment, greater assurances for safety, and better access through lower costs, added nutritional components, extended shelf-life, and better product distribution systems.

Output Indicators:

1. Better detection methods for food-borne illnesses (a).
2. Genetic and biochemical modification of locally produced foods (b).
3. Marketing and distribution research results for selected agricultural products (b).
4. Processing research results for extended shelf life of agricultural products (a and b).

Outcome Indicators:

1. Increased access to food for West Virginia consumers (b).

2. Greater consumer confidence in West Virginia produced and/or processed foods (a and b).
3. Reduced malnutrition in rural and urban poor populations (b).

Key Program Component(s): Research projects will focus on:

- Enhanced safety for West Virginia’s agricultural products through detection and treatment;
- Shelf-life-extending technologies applied through food processing and packaging; and
- Better market distribution methods, identified through economic and consumer studies.

Internal and External Linkages: Partnership will be continued with extension, federal labs, other universities, and the private sector, as appropriate to this performance goal. We will focus on shared responsibilities for the agreed research objectives of projects, and we will use joint ventures with industry to facilitate technology transfer, when appropriate.

Target Audiences: We will be focusing on the consumers of West Virginia produced agricultural products, with attention given to all citizens. When appropriate, special attention will be devoted to traditionally underserved sectors, such as rural and urban poor.

Program Duration: This program of approximately 5 projects will continue for the five year life of this plan.

Allocated Resources (\$ x 1000; [SY=units]):

Current(1998)	FFY 2000	FFY 2001	FFY 2002	FFY 2003	FFY 2004
\$ 128 [2]	\$ 130 [2]	\$ 132 [3]	\$ 134 [3]	\$ 136 [3]	\$ 138 [3]

Program 3: Greater harmony between agricultural and forest practices and the environment.

Issue(s): To be sustainable, any development strategy requires production practices that balance technologies that are both profitable and productive in the long term. All too often producers have too few options available to match economic necessity with environmental imperatives. Research strategies need to assure adequate options are available to producers for better decision making.

Performance Goal(s): Increase technology options available to agricultural and forest producers in ways to support sustainable development.

Output Indicators:

1. Methods for animal waste management that protect the environment.
2. Agricultural harvesting and forest logging practices that are compatible with economic and environmental goals.
3. Production practices options for reducing over-reliance on chemicals.

Outcome Indicators:

1. Reduced water pollution attributed to farm animals.
2. Less destruction of land as a result of harvest practices.
3. More rational uses of agricultural chemicals by producers.

Key Program Component(s): Research projects will focus on:

- New, alternative technologies for managing animal wastes;
- Development of options for harvesting methods that are environmentally sound and sustainable; and
- Improved pest, disease, and soil nutrient management systems.

Internal and External Linkages: Partnership will be continued with extension, federal labs, other universities, and the private sector, as appropriate to this performance goal. We will focus on shared responsibilities for the agreed research objectives of projects, and we will use joint ventures with industry to facilitate technology transfer, when appropriate.

Target Audiences:

We will be focussing on the most serious environmental problems of the State of West Virginia, as determined through local listening sessions, surveys, and through the Dean's Visiting Committee (see below). As a consequence, selected environmental sectors will receive our attention, but the intention is to have the greatest impact possible, with our limited resources. Indirect benefits will accrue to all citizens of the State through an improved environment and sustained development of our State's natural resources.

Program Duration: This program of approximately 20 projects will continue for the five year life of this plan.

Allocated Resources (\$ x 1000; [SY=units]):

Current (1998)	FFY 2000	FFY 2001	FFY 2002	FFY 2003	FFY 2004
\$ 1, 639 [7]	\$ 1,800 [8]	\$ 1,900 [8]	\$ 2,000 [9]	\$ 2,100 [9]	\$ 2,200 [9]

Program 4: Enhanced economic opportunity and quality of life for citizens and communities.

Issue(s): Rural and urban poor communities need to have more options for economic development and the improvement of live quality. Research is required that is both economically and culturally sensitive to the needs of these traditionally underserved groups.

Performance Goal(s): Increase the economic opportunity and quality of life options available to all citizens.

Output Indicators:

1. Technologies that expand family income streams.
2. Greater understanding of workforce limitations and constraints.
3. Better intervention methods for quality-of-life improvements.

Outcome Indicators:

1. Economically improved rural and urban communities.
2. Opportunities for reduced unemployment.
3. A more employable workforce.
4. Qualitative improvements in life quality for some previously underserved sectors.

Key Program Component(s): Research projects will focus on:

- Supplemental income strategies, especially for low income families;
- Better methods for characterizing employee skills and employer needs; and
- Improved methods to measure and assess the quality of life in West Virginia.

Internal and External Linkages: Partnership will be continued with extension, federal labs, other universities, and the private sector, as appropriate to this

performance goal. We will focus on shared responsibilities for the agreed research objectives of individual projects.

Target Audiences: We will be focussing on the most economically disadvantaged citizens of our State. Particular attention will be given to the traditional underserved populations in our rural communities.

Program Duration: This program of approximately 13 projects will continue for the five year life of this plan.

Allocated Resources (\$ x 1000; [SY=units]):

Current (1998)	FFY 2000	FFY 2001	FFY 2002	FFY 2003	FFY 2004
\$ 900 [4]	\$ 1,000 [4]	\$ 1,100 [4]	\$ 1,200 [5]	\$ 1,300 [5]	\$ 1,400 [5]

Stakeholder Input:

Listening Sessions: Each year the Dean and selected administrative staff and faculty will, in collaboration with West Virginia’s Cooperative Extension Service, hold six or more open-to-the-public, out-in-the-State listening sessions. The purpose of these sessions will be to gather stakeholder input and comments on past achievements, current activities, and proposed plans for our research programs. All listening sessions will be publicly announced through local and regional newspapers, appropriate newsletters, and through our county Cooperative Extension offices in that local. To better ensure attendance by traditionally underserved populations, our special contacts with trade groups, commodity associations, agricultural and forestry suppliers, and state agencies will be used to request their assistance in extending invitations to a very broad community of stakeholders.

Dean’s Visiting Committee: In addition the College will continue to sponsor the Dean’s Visiting Committee. Membership on this council is purposefully balances to represent the diversity of agriculture and forestry in West Virginia today, and consumers of those products. The membership will remain at the present size of 10 members. Meetings of the Visiting Committee will be semi-annual. Additional meeting may be called at the discretion of the Dean. Additional *ad hoc* members may be added for any meeting, especially for an agenda that focuses on a special topic.

Appendices: (Please request from WVU)

- A. College of Agriculture, Forestry, and Consumer Sciences Strategic Plan (1998 - 2002)
- B. NE Plan of Work
- C. National Standards for Merit and Peer Review

APPENDIX 3

Results of the WVU-CAFCS Listening Sessions

To gather input from our stakeholders, we held eight community meetings at strategic locations throughout the State. We invited a total of 693 people from 51 different counties in West Virginia to the community meetings. A total of 147 individuals from 33 different counties attended the eight meetings. The Dean and at least one member of the College administration facilitated the meetings. The Dean made a brief presentation that gave an overview of the College and the teaching and research programs and set the stage for the discussion by asking those present the following three questions: 1) What products or services that we currently supply are important to you?; 2) How can we improve what we are currently doing?; 3) What new priorities do you see in the next five to 10 years that we need to address?

A discussion period, usually lasting 1-1 ½ hours, followed in which questions were answered and issues discussed.

Issues Raised by Stakeholders

We can conveniently organize the issues raised by stakeholder under the following headings.

- **An Agricultural System that is Highly Competitive in the Global Economy**

Stakeholders need continuing support of the agricultural enterprises of West Virginia. These include beef cattle, dairy, sheep, poultry and fruit and vegetable production. Specific services identified were an enhanced soil testing program, forage testing, basic animal husbandry programs and expertise of weed and horticultural specialists.

A similar type of support was requested for development and adoption of sound forest stewardship programs that emphasize multiple usage of forested lands. Strong forest management expertise was requested and better integration of wildlife and fisheries management and forest management was suggested.

There are major concerns about the profitability of farming and forest operations. Stakeholders want the College to pursue research that will decrease costs for producers such as the development of less costly alternative feed for

livestock. Research that results in new value-added product development, such as value-added animal and wood products, and products that will meet consumer needs is needed. Stakeholders also requested help with marketing and highlighted the need for economic analysis studies. Some stakeholders felt that producers should be involved in articulating the research agenda for the Experiment Station.

In summary, information that will improve productivity and marketability, develop new and enhanced commercial products, and expand foreign and domestic market opportunities is needed.

- **A Safe and Secure Food and Fiber System**

Stakeholders requested information that would aid in the management of pests, diseases, and predators. Management of the State's deer population and the cost of deer damage to agriculture and forestry were a topic at most of the meetings. Research on wildlife damage to agriculture and tree regeneration and on the costs of predation on livestock was requested. IPM programs for disease and insect control and pesticide research were mentioned as needs. Control of poultry diseases and the decimation of wild bees because of mites were used as examples of problems facing producers.

Stakeholders recognize the need for improved food safety. They requested programs that will generate relevant, updated food safety information for the producer and the consumer.

Research on the impact of federal policies and guidelines regarding food safety on food production and processing, including small scale, value-added food products, is needed.

- **Healthy, Well-Nourished Children, Youth and Family**

Stakeholders asked for more information that will support healthy, well-nourished children, youth and families. Food and nutritional information that define the relationship between diet, lifestyle and health and enhance public understanding of diet's role in lifelong health is needed.

- **Greater Harmony Between Agriculture and the Environment**

Stakeholders wish to promote sustainable agricultural production and enhance environmental quality by developing cost-effective, environmentally friendly production practices. Precision agriculture, grazing land initiatives, and other sustainable farming practices were specifically mentioned.

Water quality is a major issue throughout the State and was a central topic of discussion at several of our meetings. Baseline data on the impact of production practices, such as the application of poultry litter and livestock feeding operations, logging, mining, construction, etc. on water quality are needed. Poultry producers requested help with nutrient management plans and alternative uses for poultry litter. Water quality is an important issue on both grass lands and forest lands and also for the food processing industry.

- **Enhanced Economic Opportunity and Quality of Life for Citizens and Communities**

Stakeholders asked the College to take steps to help promote the economic importance of agriculture and forestry in West Virginia. They also called for research that enhances the understanding of the conditions that promote economic opportunity and identifies rural needs.

Stakeholders identified the need to promote new businesses and growth in existing businesses, including farms. Research and education programs are needed that would support food industry development. Specialty crops such as medicinal herbs, other alternative crops, hydroponics, and aquaculture were frequently mentioned by stakeholders as ways to diversify West Virginia agriculture. Developing our programs to support the horse industry and greenhouse horticulture were also suggested.

Stakeholders asked the College to support quality of life issues for rural West Virginians. These would include at-risk children, youth and families. West Virginians face many changes as welfare reform programs are implemented. They will need basic information and support materials as those affected by these changes cope with them.

Farmland preservation, growth and the rural economy, and rural economic development in the face of increasing development and loss of farmland were raised as issues at several community meetings. Stakeholders are also concerned about the next generation of farmers. A request was made to the College to develop programs that would support second generation transfer of

farmlands in an economically viable way. The development of targeted educational programs that would enable college students to adapt sustainable technology on their own land as part of their academic program was suggested.

- **Education of Society-Ready Graduates**

Stakeholders recognize the need for the College to have a sufficient number of faculty who are adequately paid and rewarded. Faculty need to keep at the cutting edge of their disciplines and use the latest information technology in their instruction.

Student education is enhanced when it occurs in state-of-the-art facilities. Concerns were raised by stakeholders at several community meetings about the condition of the Agricultural Sciences Building.

Stakeholders are concerned that graduates will be able to find employment. The issue of student internships was mentioned at several meetings and strongly encouraged by stakeholders. An "on the farm" internship program was suggested with many stakeholders expressing an interest in participating. The College was also encouraged to teach students about entrepreneurial skills.

Stakeholders complimented the College for our reputation for outstanding student advising. They emphasized the importance of good student advising, and the College was encouraged to continue this strong tradition.

The use of information technology, distance learning and the need to develop "just-in-time" learning for the non-traditional student were highlighted by stakeholders. The College was encouraged to pursue these vigorously.

- **General Comments**

Stakeholders challenged the College to become more proactive in setting the future of agriculture and forestry in West Virginia. The need for the College to provide unbiased, apolitical information on controversial topics was identified. The College plays an important role in collecting baseline data to contribute to these discussions.

Stakeholders called on the College to form strategic partnerships with local communities and boards, industry, Extension (in the counties and at WVU), other Colleges at West Virginia University, other universities, experiment

stations, and state and federal agencies and organization. These partnerships will be critical in meeting the needs of our stakeholders.

Stakeholders asked the College to become more visible in the State. It was suggested several times that we do experiments out in the State, not just in Morgantown or at our Experiment Station farms. Stakeholders were enthusiastic about the community meetings and saw them as a first step. The Dean has promised that there will be annual community meetings to keep communication channels open with our stakeholder.

APPENDIX 4

SEVEN STEPS TO REORGANIZATION

Moving around the component pieces of an institution is called reorganization. For the most part the effort is disruptive, and it often meets with strong resistance. Thus, any attempt to reorganize an academic institution should be carefully considered before initiation. Will the benefits of reorganization justify the disruption? If the answer is yes, then the following steps might be useful in undertaking a reorganization.

Step 1. Identify the Players

If the purpose of the proposed reorganization is to combine departments, close a research farm, modify curriculum, or shrink the college's administration, extraordinary care is needed to reduce conflicts of interest while maintaining effective communication. The identification of the players in the reorganization planning process should seek to establish a balance between sharing information while perfecting decisions⁵.

Step 2. Decide on the Boundaries

The second step when developing an organizational plan is to decide on the boundaries and the purposes of the plan itself. These boundaries are necessary to make sure that all of the players (i.e., the planners) know the area within which they should operate in order to eliminate the overstepping of bounds.

⁵ When the Clinton Administration first came to Washington, there was a high level decision (read, the White House) to reorganize the U. S. Department of Agriculture. Several options were put forward for the then two agencies (one for research and one for Extension) that provided federal funding to the land-grant universities. It was finally decided to combine the two agencies, which were then asked to prepare a reorganization plan. Not so surprisingly, the administrators from the two agencies came back with a plan that was simply the sum of the administration for the two previous agencies. The perfect plan. No one was out of a job.

However, the Office of the Secretary of Agriculture (OSA) rejected this perfect plan. Some administrative downsizing was expected. The OSA subsequently internalized the planning process and cut management jobs. They probably should have started in the Secretary's Office anyway. Survival is fundamental to human nature, so why fight it?

Step 3. Develop a Set of Options

The next step in reorganization planning is to develop a set of options that will deal with the identified organizational problems. Options might include delayering (i.e., flattening the hierarchical structure of the institution), downsizing (which may be accomplished through reassignments, leaving open positions vacant, or by removing people) or by reorganization (such as forming new departments by combining old ones).

Step 4. Evaluate the Possible Consequences

Each of the options should be explored for their intended and unintended consequences through a formal assessment process. It is preferable, at this point, to keep everyone informed as to the options that are being considered and the consequences of the various choices. Receiving feedback from the people that may be impacted would be wise, but this information must be filtered, given their perspectives.

Step 5. Make the Choices

The next step is to formally make the choices for reorganizing the unit(s). In most cases this work is best done by administrative fiat. This process should be followed by announcing the decisions at the time of the release of the plan for reorganization.

Step 6. Set a Timetable

A timetable for implementation of the plan should be prepared, along with a plan for monitoring progress and difficulties.

Step 7. Follow-up

Finally, there should be a mechanism in place for adjusting any deficiencies of the plan and fixing any unintended consequences that will interfere with the success of the reorganization plan.

APPENDIX 5

SIX STEPS TO REENGINEERING

Universities must provide certain institutional processes if things are ever to get done. But academic institutions are often rife with outdated, clumsy and bureaucratic ways of doing things. This frustrates employees, students and the public. Often these 'rules' delay getting things done. Sometimes the institution's management does not know why things are done the way they are. Reengineering is a planning process for fixing these sources of frustration.

Step 1. Identify the Failed Process

Oftentimes failed processes are not obvious. Employees are accustomed to the old way of doing things, and don't question the time, cost, or poor performance of the processes. Managers must be constantly vigilant for failed or inefficient processes.

Comparing benchmarks with other institutions can help you identify potential areas for process improvement. Better yet, managers should get directly involved in the processes they manage, and think about better ways to do the job. How many deans of a college could complete a university travel request? Fill out a purchase order? Pay an employee? Get the point? Get involved.

Step 2. Charge the Working Group

Developing a plan for reengineering a process should start with the formation of a working group that is given a specific charge to fix the failed or flawed process. This group should have at its disposal all necessary factual information and analytical support.

All too often, an academic institution's working group appointments are based on consideration of academic degrees, rather than experience or expertise. It is wise, however, when fixing failed or flawed processes to involve the people who know the process, what is wrong, and can suggest intelligent solutions. Often these are the clerical or semi-professional staff, because they deal daily with the process. The principle is this --- the makeup of the work group should be entirely dependent on the process to be reengineered.

Consider the example of student enrollment. If your institution has an antiquated process of dealing with enrollment records and would like to reengineer it for the 21st Century, you should involve the individuals who truly know the

process. In addition, providing experts in database management, consultants on data retrieval and the Internet might provide the proper mix of creative solutions that would otherwise not be available from a standard committee of university faculty.

Step 3. Work up Some Alternatives

The next step is to develop alternative processes to do the job better. In a Work-Out Session (these were made popular by Jack Welch, the CEO of General Electric), the assignment is given directly by the management to the Work-Out Group. Management then leaves the group alone for the appropriate amount of time (a day or two). The Work-Out Group then prepares its recommended fixes and reports them back to the responsible manager at the end of the Work-Out Session. This is true employee empowerment. “Here’s the problem. Fix it if you can.” This example demonstrates great leadership style. Jack Welch’s style is studied in every graduate business school in the U.S.

Step 4. Pilot Test the Alternatives

Once some alternatives have been developed, there is a need to move cautiously. Pilot testing is an extremely effective way of evaluating alternatives, and then selecting the best one(s). In the case of fixing the process of managing student enrollment records, piloting a small database as an innovation is far safer and more acceptable than attempting to convert the whole record system, only to discover that it is more difficult than it was first perceived.

Most people are, unfortunately, resistant to change. It is uncomfortable for them to adjust to new ways or things. There are, however, some approaches that can be used to reduce someone’s resistance to change. These approaches are:

1. *Perceived advantage*: The user of a proposed innovation should be able to easily see an advantage in implementing the change. Plan to tell them about it.
2. *Compatibility*: The more a new idea is perceived to fit in with what is already being done, the better it is accepted. You should point out how the innovation is compatible with what is already being done, if that is true.
3. *Simplicity*: Keep all of the supporting activities that are needed for the successful use of the innovation as simple as possible. Describe to those who will be affected the simplicity of the innovation.

4. *Divisibility*: The more the innovation can be tried one piece at a time the easier it is to accept. Try out the parts first.
5. *Communicability*: Try not to complicate the acceptance of change with new terminology. If you can use old vocabulary to describe the new idea, you make it easier for others to accept.
6. *Reversibility*: If things do not go well it must be easy for the user(s) to withdraw with a minimum of pain and cost. Don't get 'painted into a corner'.
7. *Relative Cost*: The long-term cost (time, money, power, emotion) of the innovation should be less than what it is replacing.
8. *Reliability*: The innovation must work the way it is promised the first time, every time.
9. *Credibility*: The innovators must be seen as trustworthy. Are they reputed to deliver as promised? This is where administrative support for the Work-Out Group plays into your success.
10. *Consequences of Failure*: The user(s) of the innovation must understand the consequences of failure, including the potential for injury, if things do not go as planned. Indemnifying them, as early adopters, against the consequences of failure might be a wise strategy for getting them to test the innovation.

It is important to remember that the key to successful adoption is how the innovation user perceives the impact of the innovation, not how you, the innovator, perceives it.

Step 5. Full Implementation

Once the final alternative for the reengineered process has been selected, full implementation of the innovation should be widely announced, and fully supported by the administration.

Step 6. Follow-up

Once implemented there should be a follow-up process to monitor and assess the innovation against some agreed upon performance standards. This assures that the 'fix' is really working.

Very rarely does a true innovation work the first time, every time. But don't worry about that principle, you will be reminded throughout the process by your critics.

APPENDIX 6

STRATEGIC PLAN OUTLINE

The following components of a strategic plan are suggestions for content, not for the order of the items. For instance, many authors prefer to have the plan's assumptions made 'up front' in the document, and thus very visible. The point here is, individuals reading your strategic plan will expect to find, somewhere in the plan, the items listed below.

A VISION STATEMENT

A one sentence description of what the future will look like, so you will know when you get there.

Example: To be able to grow potatoes anywhere in the world without the use of pesticides.

A MISSION STATEMENT

A paragraph that tells others who, what, when, why, how, and for whom are the planned activities.

Example: Our program is internationally responsible for helping our collaborators field test potato germplasm under the severe conditions of Toluca Valley, to determine the most disease resistant materials for further testing or commercialization.

SCOPE OF THE PLAN

What is to be included and what is to be excluded?

i.e., will the program exclude certain technologies?

CORE VALUES

What are the core values (moral, ethical, professional, etc...) that will be used to make your future choices? Core values are often related to guiding principles (see below), which can, in turn, lead to the identification of strategies.

The core values of an institution might be its commitment to: protecting environmental quality; enhancing agricultural productivity; assuring farm

profitability; making agricultural production more sustainable; enhancing the competitiveness of local, regional or national commodity groups; providing options for better farm safety; adding value to harvested crops; or creating more options for producers.

GUIDING PRINCIPLES

Some examples of guiding principles are:

- *An agricultural research program must maintain science quality without compromise.*
- *A publicly funded agricultural research program must be responsive to public need, be accountable, and be equitable.*
- *Publicly funded agricultural research must be relevant to be sustained.*

PRIORITIES

What are the plan's stated priorities (i.e., what is important), and will *these* priorities change with circumstances? How were these priorities set?

GOALS

These are the bigger targets of a program, many of which are not necessarily attainable.

Example: Our goal is to reduce global pesticide use by 50% in the next ten years.

OBJECTIVES

Specifically stated attainable project outcomes that can be reasonably expected as producing the identified deliverables.

Example: Replacement cultivars with durable resistance to the major diseases and pests of this crop will be developed and made ready for commercial distribution in the next 6 years.

PROGRAM DESCRIPTIONS

A collection of cohesive projects aligned in such a way to contribute to an institution's stated goals.

PROJECT DESCRIPTIONS

Individual investigator, or small team-lead activities that work in areas related to an over-all program s purpose, and contribute to programmatic success through additive and multiplicative contributions through collaborations. Projects are characterized by having specifically defined objectives.

Note: Goals often align with programs as they are intended to set out the destination of the plan, while the objectives of the component projects serve as the attainable targets. Sets of related projects form programs. As a consequence, many strategic plans have their objectives nested within goals, as well as projects nested within programs. This symmetry is not a requirement, but an interesting geometry that often emerges form a well thought out strategic plan.

STRATEGIES

A description of the strategies that will be used to obtain the desired goals and objectives, such as: strategic partnerships; contracting for research services; multiple site testing; etc.

Example: Collaborations with other research-strong institutions will allow our programs to form strong partnerships in research, and thus allow us to get things done that would not otherwise be possible by ourselves.

ASSUMPTIONS

A record of the assumptions that have been made in the process of completing the plan. If these assumptions change, is the plan still valid?

Example: The development and deployment of pest and disease resistant potato cultivars will lead to their adoption by growers, who will in turn, become less dependent on chemical control practices, thus lessening the aggregate use of these hazardous compounds in agriculture and the food supply.

BUDGET

The anticipated financial, human, and physical resources needed to accomplish the proposed strategic plan.

BUDGET SCENARIOS

A set of likely future situations (usually three), such as possible budget levels, that cannot be accurately predicted in the out years, but will determine how the plan will be deployed. Budget levels are commonly set as "low", "medium", and "high" estimates. Certain activities "kick in" at defined levels of funding. This approach is a very good way to get decision-makers to buy-into a plan with more money--- because they can see how the additional funds would be invested.

RESOURCE ALLOCATIONS

How will the resources of the plan be allocated among priorities? How will participants in the strategic plan share in the resources available? And who decides?

TIMETABLE

The time horizons for activities stating what happens, and in what order.

OUTCOMES

What are the expected deliverables or products of the plan's implementation.

MEASURES OF SUCCESS

Outcomes are very important for establishing the expected returns on investment in this plan, over alternative and competing plans.

What will be the metrics used to judge the success of the plan? Will it be the number of students taught? The number of students completing the degree program? Will it be a better environment? Or cleaner drinking water? Will it mean more jobs? Will it make the U.S.. more competitive in the global market place? Will it mean safer food? Or will it mean better profits for farmers? Or better pay for laborers?

In the near future resource allocation decisions for science, and probably for all types of publicly supported programs, will depend on the answers to such questions. Thus, these questions have a legitimate place in the public institution's planning process.