1981-1983 Biennial Plan for the Organic Farm,
The Evergreen State College
Olympia, Washington

compiled and edited by:
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Kathleen Granger
Faith Hagenhofer
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Editor's Preface

As we come to the close of a decade's activity at the Farm, we are calling for a number of actions which further the institutionalization process of this facility, moving it from appendix to digital, in respect to the college's body proper. We realize that the institutionalization of the Farm brings with it some things worth considering, before moving on in this way.

The Organic Farm has served another purpose than those most obvious at first look, and one that has not been looked at carefully. We have never questioned why Farm programs have drawn people to them so successfully, making them over-enrolled many quarters. The energy to bring the entire project into being has been there, using resources of the kind that go beyond money. Why? What need has this served for those involved with it?

The call for an image change, for institutional legitimization of the Farm, and a move away from the reputation of the Farm as a place where students "pray in the dirt" have all been tossed around. Some see the need for a wedding between the Organic Farm and TESC campus proper without seeing the beauty in just what that bastard child has been. In fact, one need that the Farm has consistently, though silently, served has been a spiritual one.

We are a culture which increasingly separates us from our world, our needed natural ally. We mediate our experiences of the world and nature's power with a growing stockpile of highly technological machinery. We come to be utterly fluid in our use of machines, and clumsy at best in connecting with or learning anything from the elements themselves. In a society of consumption, our creativity is continually stripped from us.

At the Organic Farm the acts of digging a garden bed, sowing seed, tending seedlings through maturation and finally feasting upon the bounty of the season and the fruits, or in this case, vegetables of one's labor, can be very spiritually enriching for those involved in them. How often we have heard of gardens being the work of love. The knowledge gained through this hands-on contact is planted at a humanly fulfilling level, and engenders deep respect for the life processes. It well complements the intellectual and academic work done in Farm programs. In this place, the recreation of an abundance of food each year has been the show of continuity and of one kind of need well answered.

This need can continue to be met, whether we choose to focus on making the Farm a model for self-reliance, or choose to move in the direction of furthering experimentation and research in the field of organic and ecological practices.

This is because our means, our overall agricultural and management practices will dictate it. We will need to look at how to maintain this integrity when we consider questions of development for the Organic Farm.

The maturation process has brought the hiring of a full-time faculty person for the farm programs, and the implementation of and commitment to a long-term permaculture project. It brings an even greater need for accurate record-keeping and a possible lessening of capricious spontaneity at the Farm. It brings some of the commitments of a maturing relationship and the firmness of such a base, a root, from which to grow and explore. It has brought us to the clarification of the social responsibility of the Farm to the community--local, student and agricultural--and it has brought further clarification of staff roles and responsibilities at the Farm, as well as clearer delineation of fiscal responsibilities and a process by which planning and other decisions for the Farm may be made--the Farm Board. All these are designed to enable the Farm to better take on its social responsibility.

We need to do everything possible to see that this maturing process maintains the multifacetedness of the Farm, the integrity of our practices, and the room for the fresh input and ideas of new people.

P.S. Special Thanks go to all who have contributed to this piece of work! There are too many to mention here, but you know who you are, and we thank you. Of special mention here are Fred Stone—Thanks and goodbye, Jane Lorenzo—for typing this hulk of paper, Kurt Danison and Tim O'Connor—for much support and help along the way. The editors were Kathleen Granger, Felicia, and Faith Hagenhofer.
To the Reader:

This 1981 Biennial Farm Plan is the result of a year-long research effort. This research consisted of collecting data to analyze the progress of the TESC Organic Farm and its academic programs since the last evaluation in 1979, and it has led to the formation of proposals for the future use of the Farm. It has become standard procedure that at two-year intervals a farm plan is written for the next biennium.

During winter quarter the information was collected and the analysis process began. Many people within the Small Scale Agriculture program wrote sections of the first draft of the Farm Plan, making proposals which we thought would benefit future programs and the Farm itself. For further information public forums were held and faculty members were interviewed. The final compilation and analysis of all the data and writing of the plan was done during the spring by a few students. The first draft was then reviewed by the Farm Board, students in the farm program, and faculty members. The general public was given the opportunity and did review the plan at several public forums. Thus the following pages of this text, and proposals made within, are the result of information and opinions collected through various means from all those interested in contributing to the formation of a master plan for the Organic Farm.

STATEMENT OF PURPOSE

The Evergreen State College is one of the few liberal arts colleges in the country where ecological small-scale agriculture can be studied and researched through experimentation. Academic farm programs provide the opportunity for students to study agriculture as culture, including the history and economics of agriculture, food politics, and the components of ecological farming: soil science, plant physiology, pest identification and management, land use planning, and other agricultural-related subjects. In the future, these subjects may include forestry (woodlot management), animal husbandry, and alternative farm technology.

The Organic Farm is a learning laboratory for ecological agriculture, allowing students to learn applied agricultural and horticultural skills through "hands-on" experience, and to develop new ideas and techniques pertinent to small-scale farming.

With the completion of the farmhouse, the realm of activity at the Farm has expanded to include more recreational as well as academic uses. The Farm has become an important community resource center for lectures, workshops, and entertainment, in addition to its established role as an example of ecological agriculture on a small scale.

This plan aims at providing both policy and development guidelines for the management of the Farm, keeping previous developments in mind, and providing some direction for the future use of the Farm. The question of precise direction has been raised over the course of the past biennium: is the Farm to become a research-oriented facility or a working model of a small scale farm, using practices that include as much self-reliance as possible? This question will need to be addressed over the course of the next biennium. It is the purpose of this plan to ensure that the Organic Farm's basic identity as a learning resource center for ecological small-scale agriculture remains the central focus of the Farm, and that it continues to provide avenues for compatible multiple uses.
HISTORY

What follows appeared in the 1979 Biennial Plan and evaluation for the Organic Farm.

"The history has been compiled and condensed from previous reports and interviews with persons involved with the Farm.

1971

"In the fall of 1971 a group of students in the Environmental Design Program discovered that the Lewis Road Farm was Evergreen State College property and that it was available for use by interested students. A study group was formed which met weekly to determine guidelines for the management of the farm. A general consensus of guidelines came from these meetings.

1) The Farm was to be a college project involving everyone at Evergreen and not just one coordinated studies program.

2) The Farm would attempt to involve community help as much as possible.

3) The Farm was to be run in strict accordance with ecological principles: It was to be an organic farm.

4) The Farm was to be governed by a general consensus of the entire group. There would be room for individual projects of any compatible sort, but the entire operation would not be run by any one person.

5) The Farm was to be completely run on human and animal power. No gasoline or electrical machines were to be used at the farm. The last point was hotly debated at all of the meetings. Although it was finally agreed upon, it was eventually thrown out due to the large size of the farm.

1972

"The farm planning group formulated a proposal which was well-received by the Board of Trustees. Money was allocated to the farm and restoration began. The farmhouse was renovated and Jimmy Kagan and Frida Habbick moved in during the summer. The garden was started and much of the crop was donated to the community. A pregnant Guernsey cow was given to the farm. She gave birth in July. Stumps were removed from the main garden and a chicken coop was built. The well was certified and irrigation pipes were laid. Eight hundred and fifty dollars was allocated by the Services and Activities Board for the coming year.

1973

"Planning occurred during the winter and the bio-dynamic gardening method was selected. A perennial flower garden was also planned near Lewis Rd. A group contract was organized in the spring. Faculty was Carolyn Dobbs. The farm also acquired twelve laying hens in the spring. The farmhouse was remodeled with funding from the Services and Activities Board. The construction of a low cost glass greenhouse was begun. A hive of bees was purchased and a rooster acquired. The new caretakers took over in October.

1974

"The program, 'Matter of Survival,' along with the Friends of the Farm, started plans for a new farmhouse. Originally, a log cabin was planned but the plan changed so that the logs were milled to get more lumber. A second bee hive was added during the year. In the spring students under contract with Pris Bowerman with assistance from Carolyn Dobbs did the first farm plan. Marc Ross was the caretaker at this time.

1975

"A building permit for the new farmhouse was secured and the foundation construction started in the spring. From the spring to the fall Niels Skov led the Good Earth I Program. Land was cleared to the north of the house and garden and orchard was planted there. Blueberries were donated to the farm from the Eberhardt Blueberry Farm and they were planted just west of the garden.

1976

"Two new caretakers began in the fall, David Yates and Micheal Barron. The garden had declined prior to this fall. The framing of the new farmhouse was started. For some reason, the orchard was turned under in the spring and was planted in rye in the fall to prepare it for the community gardens. The cow was also sold in the spring and the pasture was given to community gardens.

1977

"Back to the Land was the program from winter through summer in 1977. Bob Filmer was the faculty.
"The small glass greenhouse was falling apart and was replaced by the present plastic greenhouse. This was accomplished by the Back to the Land Program. Raspberries were planted next to the greenhouse. Claudia McCarthy and Rachael Nathanson started as caretakers in the winter. Roofing and framing of the farmhouse was a continuing project. Funding for tools and two work study positions were acquired this year due to the efforts of David Yates. The formal bed system was laid out with the central herb garden and biodynamic French intensive beds radiating from it.

1978

"The solar greenhouse began in the winter under a group contract with Jake Romero as faculty. A row of apple trees was planted in the main garden just east of the bed E-1. They were budded and grafted during the spring.

"In the summer of 1978, Organic Gardening was a group contract at the Farm. Carolyn Dobbs and Kaye V. Ladd as faculty led the contract through a practical look at organic gardening. Workshops on a variety of topics, book seminars, and observation through field journals rounded out the practical work in the garden.

Daniel Tolfree started as a caretaker during the winter and carried over into the fall. David Yates, Claudia and Rachael left after the summer. Three new people, Grant Logg, Sara Obern, and Miles Sherts began in the fall. Somehow the work study positions were lost at this time.

1979

"As You Sow started in the winter and continued through the summer. It dealt with the practical aspects of gardening, as well as studying the politics of land use planning and the economics of a small farm. (See appendix U.)

"A third hive was added to the farm. One hen emerged from the wood in the springtime with fifteen chicks. They are all doing well and will be full grown in the fall. The hens were moved from their spot on the hill and a new chicken house was built near the garden. The solar greenhouse is nearing completion and should be completed in the fall by a group contract studying the greenhouse. The plastic greenhouse was re-covered this winter. There is now a small geodesic greenhouse (6' 8" radius) built during the program to help with future winter gardening. A solar food dryer was also completed during the summer, and the farm acquired a cider press."
In September 1980, the Farm sponsored the first annual Harvest Fair, a smashing success, attended by over 800 people. It included a salmon bake, led by the Nisqually Indians, a home-grown corn roast, an organic vegetable contest, a geoduck-calling contest and a number of workshops.

Fall, 1980 saw the beginning of the Small Scale Agriculture (SSA) program coordinated by Fred Stone. Over the year 1980-81 the Farm has sponsored other successful community events: a barter fair, a conference on pest management, a conference on direct marketing, speaker Peter Caddy, co-founder of Findhorn, various speakers and films, and a panel discussion on regional self-reliance in agriculture during Earth Week, 1981.

Community Garden plots continued to be in high demand. For this reason a new section of garden, with twenty-two plots was opened up.

This Spring, 1981, a revision of the Joel Walker plan has been proposed and acted on with longer range planning considered. (See maps, orchard section, recommendation for interim use and maintenance.) Tree stock has been provided by Raintree Nursery in Morton, Washington in exchange for labor.

Three SSA students spent spring quarter teaching two classes at Garfield Elementary School on the basic rudiments of a raised-bed garden. Ethan Schatz, Giovanni Shore, and Donna Goodman, with the Garfield students, have established a compost system, a cold frame, and a large raised garden on the Garfield School grounds.

Spring quarter, 1980, saw the end of Fred Stone's three academic years of dedicated teaching. Pat Labine has been hired as the first permanent farm program faculty, and will be starting in Fall quarter, 1981. Spring quarter also saw the provision for a new work study position: Farm Program Aide.

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FARM MANAGEMENT

Purpose: The Farm exists as a physical piece of property and as an entity, with principles and policies guiding the use of that property. These have been outlined in the statement of purpose and are enlarged upon throughout this document.

The Farm is operated by staff from facilities, academics and S&A. This staff is representative of the three funding sources, and is there to facilitate students' academic and recreational activities. This staff is responsible to the Farm Board for particular kinds of decision making (see p. 12). Therefore the Farm Board, an explanation of which follows, serves as the management body for the entity and property called the Organic Farm.

The Farm is a separate facility from those on campus due to the particular scope of activity and the distance from the campus core. It therefore needs separate consideration. The purpose in having a separate management body, the Farm Board, is for the convergence and communication of the various staff and representatives from the funding sources, so that decisions made in relation to the Farm be in accord with our basic principles, and be satisfactorily spoken to by all groups affected by and affecting the Farm.

FARM MANAGEMENT—DECISION MAKING

I. Policy Statement: There are four policies which should form a basis for decisions at the Farm in the future. Some of these policies were formulated in the 1974 Farm Plan and still represent the basis upon which the Farm is managed. The first three policies have been expanded to include the fourth, in order to suit the present and future needs of the Farm.

1. It is most important that the Farm always be an organic farm. It shall be used to improve and experiment with organic methods of food production, biological pest control, companion planting, and for related research during all phases of development.

2. It is very important that the Farm continue to be open to use and input by varied groups and programs from Evergreen and the interested community, and that it not develop into an inflexible institution, or its use be dominated by one group or concern. It is however also suggested that the agricultural programs be given priority use of the Main Garden and the greenhouses, because of their maintenance of and direct learning from them.
3. Equally important is that there be a policy for live-in student caretakers as an integral part of Farm operations.

4. A main concern for all Farm users should be consideration for continuity in research, crop rotation and record keeping. In considering continuity for the Farm’s management overlapping of hiring time-lines must be used.

II. Farm Board: This decision-making body for the Farm is comprised of representatives from among those most closely involved with the Farm each year. They also represent the areas funding the operation and any possible expansion of the facility. This board will address medium to long-range issues such as farm land use, project approval and coordination, budget design, revenue generation, and periodic Farm evaluation. The membership of the Farm Board consists of two types: regular and ex officio. As seen in the accompanying diagram (Farm Board Organization), each of the major funding sources has three regular representatives and one ex officio representative. Following is a complete list of the Farm Board members:

Regular
- 1 Farm Coordinator
- 1 Community Gardens Rep.
- 1 Member-at-large
- 1 Academics Rep. (LAB Manager)
- 1 Program Rep. (Student)
- 1 Program Faculty
- 1 Facilities Rep.
- 2 Caretakers
- 9 Total

Ex officio
- 1 Academic Dean
- 1 Director of Facilities
- 1 Associate Director for Student Activites
- 3 Total

Selection of regular Farm Board members will be made by the group being represented, except in the case of those positions hired by separate means (Farm Coordinator, Program Faculty, Academic Reps, and Caretakers). The Member-at-large position will be selected through a community forum or other similar gathering as initiated by the Farm Coordinator.

The basic responsibilities expected of regular Farm Board members will be to:
1. Attend all meetings and abide by the Farm Board guidelines as proposed in this document.

The Ex officio members will serve as advisors to the Farm Board. They will be informed of and encouraged to attend all meetings, but will not be directly involved in the actual decision making of the Farm Board.

The method of decision making practiced by the Farm Board will be consensus of all present regular members. A backup system of majority voting will be used only as a last resort. Although all Farm Board meetings are open to the public, only the regular members will participate in decision making.

This body will serve an advisory function. Final approval of any Farm Board decision is necessary from the appropriate administrators. It is hoped, however, that the decisions made by the Farm Board will for the most part be considered policy, since each of the administrative and budgetary interests are being represented.

The Farm Board will be primarily concerned with policy recommendation and duty delegation. Specific tasks recognized by the Board will be assigned to the appropriate responsible person or group.

The issues to be addressed by the Farm Board will meet at least one of the following criteria:

2. Be aware of the issues and activities of the Farm.
3. Communicate as needed with the group or interest being represented:
   - and Faculty-Academics, and Farm users as described above.
1. any change in Farm policy;
2. any decision regarding directing;
3. medium to long range land use decisions;
4. any decision affecting use of more funding sources.

The Farm Coordinator will be responsible for determining when a given issue meets one of these guidelines, and is therefore to be placed on the agenda. As stated the Farm Board will deal with only medium to long range plans and issues, while the day-to-day farm operations decisions will be made by the Farm personnel (Farm Coordinator and Caretakers).

The role of the Farm Coordinator in the Farm Board will be that of convenor. This person will post the agenda and any available details of issues to be addressed, one week to three days prior to the Farm Board meetings. As facilitator, the Farm Coordinator will ask for consensus when needed, and has the prerogative as representative of S and A to block consensus when necessary. This person, as other Board members, may call for the use of voting, but may only cast a vote in the event of a tie.

It is recommended that the Farm Board meet at least once a month. Frequency of meetings may increase during the first few months or during busy seasons at the Farm. The meetings will be the first Wednesday of each month unless otherwise notified.

1. "A formal evaluation will be done during the winter quarter of the second year of each biennium. A Farm Management Group, composed of representatives of students, faculty, and staff most actively involved with the Farm during that time and space will carry out the evaluation." Organic Farm Plan and Evaluation, Spring, 1974, pp. 13.

FARM COORDINATOR

The Farm Coordinator will carry out those organizational and managerial tasks most directly related to S and A supported activities. As the title suggests, this position will be primarily concerned with coordination of the various Farm activities. See below for the Farm Coordinator job description.

Hiring of the Farm Coordinator will be a two-step process:
1. Screening by a representative committee of farm interests and users (Farm Board).
2. Final selection by the Associate Director for Students and Activities (Lynn Garner).

The screening committee will consist of current members of the Farm Board. This committee will perform preliminary interviews with the prospective applicants and make recommendations for hiring to the Associate Director for Students and Activities.

JOB DESCRIPTION: Farm Coordinator

Starting Pay: Hourly at 3.35 $, raise to 3.60 $ after 400 hours.
Number of Hours: Paid: 12 hours per week, 12 weeks per quarter, 4 quarters per year.
Non-Paid: 10 to 25 additional hours, possibly through an internship.
Starting Date: July 1st of each year.
Length of Commitment: Minimum of six months, maximum of one year. A full year commitment is preferred.
Previous Experience: One year or equivalent in coordination or managerial work. One year of gardening, small farming or greenhouse experience or comparable college education. Background in organic farming/gardening. Involvement in the direct marketing of produce.
Skills Required: Coordination skills for the management of farm activities. Firm, working knowledge of organic farming/gardening. Budgetary skills. Knowledge of marketing. Ability to communicate efficaciously.
Responsibilities:
- Manage S and A Farm budget.
- Responsible for generating revenue.
- Coordinate community gardens, workshop and outreach efforts.
- Convene the Farm Board.
- Carry out relevant policies and projects decided on by the Farm Board, either by direct work or through delegation of work.
- Promote outreach activities.

CARETAKER POLICY
THE ORGANIC FARM

The policy was revised for Management Reorganization Plan, June 25, 1980. With a few additions, the following document comes from that plan.

GENERAL:
Each Caretaker will be primarily responsible for one area of the Farm facilities (buildings, grounds, Farmhouse). Cooperation is necessary for the completion of these designated tasks. Having a responsible person is important for accountability, but should not hinder communication regarding the various Farm activities and projects.

Prime responsibility for facility maintenance and custodial care rests with the Facilities Office; responsibility for coordination of all academic Farm or garden programs rests with Academics; and responsibility for student activities rests with the Associate Director for Students and Activities.

Hiring of Caretakers will be performed by the Director of Facilities based on the recommendations of a screening committee consisting of the Farm Board.
Caretakers will report to the Director of Facilities or his/her designee in the performance of their duties. They will work cooperatively with the Director of Facilities, the Farm Faculty, the Farm Coordinator, and the Associate Director for Students and Activities.

Caretaker positions will run for one year, with a full year commitment preferred. The positions will rotate in such a way as to ensure at least one experienced Caretaker always present. This system of rotation is designed to avoid discontinuity. It is strongly encouraged that outgoing Caretakers spend ample time acquainting the new Caretakers with the important ongoing duties and continuous Farm activities. A positive working relationship with Facilities from the onset is vital for effective caretaking.

Caretaker positions will consist of both resident and nonresident positions. At least one of the positions will be a resident. There will be three 19 hours per week positions funded through the College Work Study program, or as student employees. Caretakers will be paid on an hourly basis for services performed. Caretakers should consider the possibility of internships and other methods of spending more time at the Farm. It is through a high level of staff commitment that the goals of creating a viable agricultural learning center will be met.

DUTIES:
I. Farm House Caretaker
A. Custodial
1. The custodial care of the farmhouse must meet the same custodial standards required for the main campus. Custodial Supervisor Yuki Chancellor will review these requirements with the resident caretaker(s), and perform inspections to ensure that the Farmhouse is kept in a neat and orderly fashion. Duties apply to both the residence and the public areas.

2. Caretakers will make any preparation which might be necessary prior to a group's activity as well as any cleaning necessary as a result of an activity. Individual groups utilizing the Farmhouse shall clean up any mess created from their use and therefor the Caretaker's responsibility is to make sure that this is carried through, not to serve as "maid."

B. Maintenance
1. All maintenance to the facilities and grounds is to be performed under the supervision of the Buildings and Grounds Supervisor. The Farm House Caretaker will be responsible for minor maintenance and repair of the Farmhouse and adjacent grounds. Requests for major projects should be processed on the Facilities Job Order Request Form.

2. Wood for use in the stoves shall be neatly stacked in the designated areas.

3. An inventory shall be maintained of all property contained in the house.

C. Scheduling
1. Scheduling of all College facilities is the responsibility of the Space Analyst, Office of Facilities. The Farm House Caretaker will work with the Space Analyst in coordinating the scheduling of activities to take place at the Farmhouse.

2. Building hours: The building hours and scheduling priorities for the public areas of the Farmhouse are as follows:

<table>
<thead>
<tr>
<th>Time</th>
<th>Primary Priority</th>
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<tbody>
<tr>
<td>Sun. - Thurs. 5 p.m. - 10:30 p.m.</td>
<td>Academics</td>
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<tr>
<td>Fri. - Sat. 5 p.m. - midnight</td>
<td>S &amp; A Activities</td>
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3. The Farm House Caretaker will maintain records of all activities held at the Farmhouse in terms of date and type of use to serve as a scheduling aid and for future reference.

D. Other Duties
1) Serve as member of the Farm Board.
2) Serve as security for the Farm against vandalism and other such damages. The Security Office should be notified immediately upon the detection of any fire, theft or damage.
3) Be responsible for the carrying out of physical tasks that pertain to the Farm as designated by the Farm Board.
4) Maintain the grounds around the house, including flower beds and lawn.

II. Grounds Caretaker
A. Maintenance
1) Maintain the trail from the main campus, keeping it clear of fallen trees, branches and other objects.
2) Maintain an outhouse. This includes digging new holes, liming and covering old holes as needed.

B. Other Duties
1) Provide evening, weekend and holiday support for ongoing academic programs. This includes watering, weeding, harvesting, selling produce, etc.
2) Provide guided tours of the Farm and keep maps and other visitor aids in current and presentable condition.
3) Provide support for Coordinator activities.
4) Maintain records on all garden and farm activities, including outside weather data.
5) Do a quarterly inventory of tools, include damage and losses.
6) Serve as an information course for Farm activities and garden practices.
7) Provide security for the Farm.
8) Serve as a member of the Farm Board.

III. Buildings Caretaker
A. Maintenance
1) Be responsible for maintenance and repair of solar and plastic greenhouses, toolshed, and red barn, and other Farm structures.
2) Maintain all gates and fences for protecting against deer and other animals. Build any new fences as needed.
3) Keep all out buildings in a clean and organized fashion.

B. Other Duties
1) Provide evening, weekend and holiday support for Farm activities.
20

2) Be responsible for support of greenhouses, including maintenance of temperature control in solar greenhouse, watering of plants, feeding of fish, and record keeping of greenhouse microclimate weather data.

3) Maintain an inventory and check-out system for tools used on the Farm. Perform any tool maintenance needed.

4) Provide for Farm security.

5) Serve as a member of the Farm Board.

As of June, 1981, there are only two Farm caretakers—one for the maintenance of buildings, the other for maintenance of grounds. There being three caretakers depends on funding from Office of Facilities. It is recommended that there be three caretakers where possible.

Farm Program Aide Job Description:
The Farm Program Aide will carry out those organizational tasks most directly related to the program's on-Farm activities.

This position was established for Spring quarter '81, and helped the Farm enormously, since one caretaker position had been lost in January '81. We have found that, because of the close connection with the current Farm Program, the gardens have benefited greatly by the work of a Farm Program Aide. Having such a person balances the staff at the Farm and we recommend its continuation.

Hiring the Farm Program Aide is a two-step process:
- Screening of applicants by Farm Board
- Final selection by Program faculty person

Job Description:
Starting pay: $3.35 hour.
Number of hours: 19 per week.
Starting date: At the beginning of the Farm's academic year or at the beginning of a quarter.
Length of commitment: Prefer commitment for entire academic year, although quarter by quarter will be considered.
Previous experience: - Gardening (organic) experience.
Skills required: - Some managerial skills to help with record keeping.

Responsibilities:
- Willingness to work closely, in a leadership role with Farm program; coordinating garden activities.
- Willingness to attend all program meetings and Farm Board meetings.
- Help caretakers in providing weekend and vacation support for garden activities.
- Liaison between Farm coordinator and program.
- Be a catalyst for revenue generating garden activities, i.e. Market garden, growing starts, etc.

Recommendations For Management Improvement:
Lack of continuity, being the largest contributor to confusion and/or inertia at the Organic Farm, ought to be among the first problems tackled in the new biennium. Two suggestions for ways of arriving at greater continuity follow.
1. Hire a Farm Manager
2. Provide continuity for current staff

1. Hiring a Farm Manager:
A Farm Manager would complement the work of existing staff extremely well, and provide for year-round continuity, year-round working knowledge of the Farm's activities. This is essential for the successful operation of an outdoor, season-dependent Farm lab facility.

Farm manager would be a resource person and instructional aid for the farming/gardening classes and for research work in organic and ecological agriculture. The Farm Manager would be responsible for making the facility academically accessible to students. This person would not take over the work that students do in the planning and raising of gardens.

This person would, with Farm coordinator, share responsibility for the creation and maintenance of a uniform record keeping system, and for maintaining an outreach office at the Farm. The purpose of this "office" is for the collection, assessment, and disbursement of research data obtained at the Farm, and for the networking work between TESC and other colleges and institutions involved in similar studies.

For best internal planning, the Farm Manager would have to serve on the Farm Board, or at least be a committed attender, as well as be able to work cooperatively with other Organic Farm staff persons: three caretakers, Farm coordinator, present faculty person(s), and with Farm users.
It would be a full-time staff position (40 hours/week, 50 weeks/year), structured like other facility aid positions on campus. A Farm Manager must have background in Organic farming and gardening above all, with an interest in the problems of regional self-reliance. Background in the related sciences (soils, agronomy, botany, plant physiology, ecology, nutrition, pest management or entymology) are desirable.

There is Academics support for this additional staff person at the Farm, though funding for such a position to commence in Fall '81 is not forthcoming. Funds for the hiring of a Farm Manager are hoped for in the coming biennium. In order to make this position a reality as soon as possible, we need to look at a variety of alternate sources for funds. We may begin by researching grant money possibilities.

2. Continuity for current staff:

Problem: There is a history of a lack of continuity regarding faculty and student staff at the Farm. During some years, the Farm has been empty of program, faculty or support staff for an entire quarter (3 months). This leaves the facility without maintenance, and it makes for a gap in communication. Records of harvest, for example, do not get recorded. A new group of people must guess where the last group left off. On top of this the new group arrives to find the garden overrun with weeds!

Solution: With the absence of any full-time non-student/non-faculty staff bringing continuity to the Farm, we must make better use of what we have. A staggering of present position hiring/working times is appropriate. This would mean that a new Farm caretaker would be hired for the period of a year at each: Spring quarter, Summer quarter and Fall quarter. This overlap would provide for some training to new caretakers by those already working. Farm coordinator would stay at a June through June schedule. It is suggested that persons interested in Farm coordinator position begin working with Farm coordinator during Spring quarter (preferably during budget allocations time), thereby receiving training for that position. Hiring should occur in May. This would ensure that the incoming coordinator helps with and is acquainted with the Farm's S & A budget.

Assignment times for faculty to the Farm should be staggered as well. Beginning with Winter quarter, one faculty person would be assigned to the Farm, with the expectation that their assignment would go through Summer quarter. At Spring quarter a second faculty person would come into the program, expecting to be there through Fall quarter, and so on. The first summer session would have three faculty members (two part-time, one full-time), but once this pattern has been established, the Farm would be provided with two full-time faculty persons year-round, on a rotating basis. The Farm program would also gain a full year schedule which better coincides with the growing seasons than the present academic year; and the Farm itself would benefit by greater personnel continuity.

Additional Development Recommendation:

The Farm Board has been operating for the past year. It was evaluated at its June 1981 meeting, and the suggestion was made that every effort be made to approve this committee within the Evergreen Advisory Code. Proposals to that effect are being constructed at this time. It is recommended that the Farm Board's operation be formally codified under the EAC, as the managing body for the Farm.
FUNDING SOURCES FOR THE FARM:

There are three funding sources for the Farm: a Facilities budget, an Academics budget, and an S&A budget.

The Facilities budget covers many items that maintain the Farmhouse, the solar greenhouse, other outbuildings, and general grounds (lawns, some fencing, etc.). It also covers the salaries of caretakers, the utility charges for the Farm, telephone service and major grounds projects like rotovating the fields when asked.

The Academics budget has, until 1981, been basically the program's budget, calculated at a set rate per student in the program. This budget covered some miscellaneous purchases of seeds and tools, but was predominantly spent on office supplies, printing and xeroxing, and film and developing. Also covered through the Academics budget has been the motorpool charges for the Farm truck. These have been shared equally between Academics and S&A. In 1981 (81-82 budget allocations) requests were made, mandated by the S&A board, that Academics increase its budget for the Farm to reflect the needs of the Farm in relation to the actual percentages of program use of tools, seeds and fertilizers, etc. The requested budget was submitted, along with the budget requests for other lab facilities, reflecting this situation.

The S&A budget has covered the operating expenses of the Farm until this year, when that cost was split between Academics lab budgets and the S&A budget on a 75 percent/25 percent basis. This percentage breakdown was arrived at roughly. It is recommended that accurate percentages of use and support be determined before the budget allocations process begins in April 1982. The S&A budget for 1981/82 is expected to cover recreational programming and some outreach at the Farm.

Outlines of the particular budgets for the past year follow. The last two years are shown for the S&A budgets.
SMALL SCALE AGRICULTURE: PROGRAM BUDGET

7/1/80 - 4/30/81

<table>
<thead>
<tr>
<th>Category</th>
<th>Budget</th>
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</thead>
<tbody>
<tr>
<td>Office supplies</td>
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</tr>
<tr>
<td>Lab, research, instruction, and media supplies</td>
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<tr>
<td>Photographic and graphic supplies</td>
<td>25.84</td>
</tr>
<tr>
<td>Campus stores</td>
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<td>On-campus printing</td>
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<td>Xeroxing</td>
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<td>Travel</td>
<td>159.16</td>
</tr>
<tr>
<td><strong>TOTAL:</strong></td>
<td><strong>502.06</strong></td>
</tr>
</tbody>
</table>

More information (i.e. April-June transactions) may be had through Dee Van Brunt's office.

ACADEMIC INVOLVEMENT AT THE ORGANIC FARM

Historically, academic use of the Organic Farm has been the major justification for its existence. The agriculture program, under various titles—group contracts, cluster contracts, and individual contracts—has been the main way in which the Farm has been and continues to be used academically.

Studies at the Farm offer an alternative approach to agriculture to that of the more traditional land grant colleges. The theme of these studies is as follows: "The theory and practice of small scale farming with particular emphasis on understanding the science of organic and ecological methods and the place of small farms in the present and future social order." (Taken from Agricultural Studies at Evergreen, by Rob Knapp).

Long Range Goals for Agricultural Studies (taken from Agricultural Studies at Evergreen, by Rob Knapp, Feb. 1978)

"In order of importance:

1. To educate and train practitioners of an appropriate agriculture, people who will be: responsible stewards of the land; productive and successful farmers; investigators who will continue to develop an appropriate agricultural science; and effectively progressive members of their communities.

2. To discover and promote an ecologically adapted agriculture for this special region, Southwestern Washington.

3. To study the biological dynamics of the transition from chemical farming to organic farming, and the connections between soil management practices, plant nutrition, and human health.

4. To apply academic talents to aid small farmers and homesteaders.

(The implementation of these goals is dependent upon an expansion of present resources in terms of faculty, staff, and facilities.)"

Specific Purpose, Activities and Responsibilities of the Agricultural Programs in Using the Farm:

Purpose I: EDUCATION:

A major part of the learning occurs in a "learning by doing/hands-on" process.

A. Farm as Field Laboratory - The Farm is used for field study of soils, composting, plant physiology and nutrient deficiencies, insect and weed
identification and pest management methods.

B. Garden Growing and Planning - This involves learning organic horticultural and agricultural practices and skills through direct planning and care of the garden, greenhouses, grainfields, orchard, and livestock and construction projects in ways that are consistent with the overall Farm policies. This involves a commitment on the part of students in the Farm program of one to two days per week (8-16 hours).

C. Specific Farming Skills - Workshops are held periodically which teach specific skills of organic gardening practices, composting, mulching, transplanting, and farming skills such as bee keeping, raising small livestock, canning and preserving food, tool maintenance and repair, and orchard care. Workshops and field trips are also held which deal with such topics as land use planning, how to buy a farm, etc.

Other skills are gained in relation to work at the Farm as well:

A. Writing and communication skills - Students are involved in writing research papers, articles on the Farm for different publications, and planning documents for the Farm (like this one!)

B. Teaching - Students often lead Farm tours, participate in leading leisure education classes, and conduct workshops for each other

C. Farm management skills - Students participate in Farm Board meetings, and do ALL garden planning. The division of chores and tasks on the Farm is also a part of this.

Development Recommendations:

1. The Farm requires at least two faculty members each quarter in order to give the students the broad understanding of agriculture necessary for a liberal education, combined with the in-depth study of a specialty area. (See p. for faculty rotation recommendation.)

2. Have the Farm operate academically on a year-round basis. (This is quoted from the '79 Biennial plan, and is still applicable.) "The successful operation of the Organic Farm (especially the garden) involves a cooperative effort on the part of staff and the current academic program based at the Farm. The completion of responsibilities necessary to maintain the garden... depends largely on the work of the academic programs. This setup has thus far been successful; however, during quarters when there is no agriculture program being offered, it is difficult for the caretakers to adequately maintain the Farm and garden. Because of this situation, there is a need for additional help during these time periods.

This help could be obtained by extending the academic program to run a full year (four quarters)... Internships or work-study positions are other possibilities, if sufficient funds are available. Thus, the Farm could provide more learning opportunities while securing the necessary help it needs to function effectively the rest of the time."

3. The Farm program needs to have at least two years, or levels of study: an introductory level emphasizing applied knowledge and academic foundations, and an advanced level emphasizing upper level academic work and research.

4. Advanced cluster contracts should be developed regularly to allow students to continue and expand their basic learning (examples: elementary school gardening project becoming environmental education contract; advanced pest management contract).

5. Other areas of study could be included at the Farm, either as part of the agricultural program or in connection with other academic programs at Evergreen. Particular subject areas have been suggested and supported. This list comes from information gathered at public forums and through informal surveys and interviews.

- Small Scale Farming
- Field Biology
- Woodlot Management and Land Use Planning
- Ecological Forestry
- Alternative Technology for Farming
- Permaculture and Orcharding Study
- Integrated Pest Management

There continues to be enormous support for Organic Gardening studies and Ecological Agricultural practices. All of these areas of study have been supported for research, full and part-time study and workshop attention. The Farm could not function without the input of the students in the Farm programs. They supply ideas and labor which enable the Farm to run effectively and efficiently.

Purpose II: RESEARCH

The Organic Farm is a natural place for community and academic interests to interface. An activity for which the Farm is vital, is research by Evergreen faculty and students. Valuable information has already been generated by research at the Farm over past years. (See student research files, reference section of the Library on campus.) The potential exists for much additional research of improving methods of growing plants organically under the climatic and soil
conditions of the Northwest. The need has been expressed, and research undertaken should be targeted toward satisfying some of the needs of small scale and/or organic farmers of this area. A research station for organic, ecological agriculture, which Evergreen could provide, is absolutely necessary.

Student research projects at the Farm can be done for partial or full credit. Research may be done on any topic related to small scale agriculture, using organic methods. Examples: comparison of vegetable, field crop, or fruit tree varieties; comparison of soil amendments; comparison of pest control, tillage, composting and mulching methods. All of these kinds of research are important to balance the research which is currently being done or funded by chemically based industries.

Development Recommendations:

In addressing the need for this research further, there are improvements that could be made, to enable the Farm to better reach this goal. Most of these suggestions appear in other sections of this document; however, their importance in improving and expanding the Farm's research capabilities cannot be underestimated.

1. Develop a workable record keeping system.
2. Develop an information disseminating system.
3. Hire a Farm Manager.

Cooperation and communication with local groups with similar concerns is essential: Tilth, Local Farm Network, Farmer's Market Association...

There are several optional forms that the Farm's actions might take in order to further involve itself with the conducting of research:

1. Develop and implement long-term research with the greenhouses. Either a comparison between them or experimentation with each structure as a season-extender could easily be done.
2. Develop a networking system whereby farmers in this region could conduct experiments in ecological agriculture on their own land and the Organic Farm would serve as the networking center for information gathering and dissemination. Using this option we are able to take an active and supportive role in regional agricultural experimentation, while taking into account our structural and personnel limitations. A person's time would still be required under this suggestion. Workshops would be necessary for interested farmers on how to conduct research on their own farms.
3. Undertake and develop long-term experiments at the Farm on the above-mentioned topics. This would require greater commitment on the part of Academics regarding staffing at the Farm and a further institutionalization of the facility. It would also require commitment from students to follow through on long-range projects (at least two years). It might involve the implementation of a second year/advanced Farm program.

In any event, communication with the U.S. Agricultural Experimentation Station in Puyallup needs to be established. The station is a good source of information on traditional farming and chemical farming methods and experiments for comparison with the Farm's data.

Purpose III: OUTREACH

The Farm is used by students in the agricultural programs as a base for community outreach. Workshops and Leisure Education classes serve to enhance students' learning through teaching. Methods of gardening organically, learned at the Farm, are made available to area residents through these as well as through radio programs, tours, and booths at different fairs: Lakefair, Thurston County Fair. Students are available for public speaking and have, in the past, been asked to speak to the Olympia Women's Garden Club and Native American tribes on the peninsula, on different aspects of organic gardening. Students' projects have involved them with many community groups: Olympia Community Gardens Project, Olympia Food Co-op, Farmer's Market Association, Washington Small Farms Resource Network, Thurston County Agriculture Committee. A gardening project was started in winter of 1980/81 at Garfield Elementary School. This was initiated by students in the Farm program and has involved at least 40 young people from Garfield. This project has gained enormous support and has led to the formation of a group contract, for Fall 1981, in Environmental Education specializing in Agriculture. As with this example, students often continue their outreach projects via contracts or internships. It is felt that community outreach is a vitally important responsibility of students and faculty at the Farm. We may eventually be able to look at our research work as an outreach function.

Policy Recommendations:

1. Internships and community involvement should continue to be an integral part of the student's agricultural education.
2. Workshops should be organized around seasonal work at the Farm, and offered as a regular part of the Farm program. They should be offered to the public through Leisure Education as well.
Development Recommendations:

1. Continue and improve the outreach work which is occurring.
2. Need has been expressed for a conference involving colleges nationwide which have a similar farming program to Evergreen's. It would be held at Evergreen within the coming biennium. This would begin the networking and information-exchange process which is vital to the success of college programs like these, and to a growing movement toward the use of organic/ecological farming practices. Academic support for this idea is high. Holding such a conference would probably require funds to hire a person to organize and carry it off.

RECORD KEEPING:

Purposes: The keeping of good records is one of the most important activities at the Organic Farm. It has the following purposes:

1. Continuity and planning - The absence of complete records hampers the continuity of long-range projects at the Farm. Having records aids in assuring greater continuity of activities. The turnover of students and faculty make written records all the more essential. Proper rotation in the grain fields and vegetable beds also depends on adequate records of past plantings.
2. Communication - Records are the basis for communicating Farm projects to those working at the Farm and to visitors.
3. Education - Records can be a resource for teaching Farm visitors about Organic methods, raised-bed gardening, plant varieties, and other Farm activities.
4. Research - Research at the Farm must be carefully recorded, and the results made available to all interested persons. (For further discussion of research at the Farm please see p. 29.)

Past Record Keeping: In the past, records have been kept in several ways. One of the early Farm programs made an album of black and white photographs, which are now the only visual record of the Farm's appearance at that time. This album is presently stored in the Archives room in the Library on campus. Beginning in 1978, Farm notebooks have been kept by students in the Farm programs. Garden work and some other Farm projects and activities were recorded by the individuals doing the work. The notebooks contain information on vegetable varieties, planting, and growing. Since these notebooks have been thought by students to be voluntary, the completeness and quality of the information is variable. There is, however, much useful material in the notebooks, which are kept in the Solar Greenhouse. Maps of the raised-bed gardens, and of some other beds within the fenced-in area have been made since the raised beds were started. These maps have been kept at the Farm. This information is also included in the map section of this Biennial Plan.

Photographs and slides have been taken by students and caretakers over the past three years. Some of these were organized into a slide tape presentation in 1979 and 1980. These are kept with the slide librarian in the Library on campus. Additional written records of various Farm projects exist in the file cabinets in the Solar Greenhouse. Student research project reports are kept on file in the reference section of the Library on campus. Records of temperature, humidity and rainfall have been kept by Farm Caretakers and are kept at the Farm in the files in the Solar Greenhouse.

Problems: The main problems with record keeping at the Farm are:

1. Lack of clearly defined goals for the various records. This leads to difficulties in motivating people to keep records, and a lack of consistency in the records that are kept.
2. Lack of continuity. When students and faculty change, the kind, forms, and content of the records change. This should not occur.
3. No system of responsibility has been defined or established for assuring the keeping of records. With the "Why for" unclear, the "Who" becomes more obscured.
4. Loss of past records and difficulty in locating particular records. This is due to a lack of a well-defined record filing system, and a lack of control over the records at the Farm. No checkout system for the files exists.
5. Incomplete records. Varietal names are often missing, growth and harvest data left out. Dates and the name of the recorder are also often missing.
6. Cumbersome data sheet for records. The information required on cropsheets is nebulous and the purposes for the keeping of these records are no clearer. There are obviously different goals in relation to the different kinds of records and the different sections of the garden.
7. Information from the records that are kept is not in a useful form. The material recorded is rarely, if ever, used, because it is not summarized and made available.
Policy Recommendations: The purpose of each type of record must be clearly defined and articulated, and this should be consistent with Farm goals. Example: If vegetable varieties are planted in the garden for the purpose of comparing growth and yield, the need for keeping good records becomes clear. The person doing the comparison will be motivated and responsible for the records.

Maintenance Needs: Several types of records should be maintained on a regular basis:
A. Maps of each activity, showing planting, location, scale, orientation, and specific variety of plant.
B. Garden Notebooks should be continued, using a standard format. The entries should be completed through the harvest of each variety and type of plant. If a variety doesn’t reach harvest stage for any reason, the problem should be noted. Entries should be dated and signed.
C. Weather data: The caretakers have kept the records from the hydrothermographs (in the weather station area and both greenhouses) and the rainfall gauge. This should be continued and the records kept in the file cabinet in the Solar Greenhouse.
D. Photographs: Caretakers and some members of each academic program should be designated as official photographers. Both black and white prints and color slides should be taken of the Farm on a regular basis, and of any construction projects, activities, and events. These should be labeled, and kept where appropriate: Albums may be stored in the Archives of the Library and slides may be kept with the slide librarian in the Library.
E. Research reports and other information on student projects are to be duplicated, with copies kept at the Farm in the filing cabinet, and in the student papers file in the Library.

Development Recommendations:
1. Storage - To be useful, records need to be stored in a safe and accessible manner. The present file cabinet has some problems, in that it is too accessible, and important information has disappeared. The Farm coordinator, caretakers, or other responsible persons should keep the cabinet locked, with posted instructions for obtaining the key.
2. Use of the information - To be most useful, the results of Farm activities should be summarized and printed in the form of pamphlets, newsletters, or research reports. This would include information on the results of vegetable, orchard, or berry varieties, comparisons of planting methods, results of research plots and so forth.
3. Visual aids - Maps and posters should continue to be displayed on signboards at the Farm, both for educational purposes to the general public and to assist all Farm users in their awareness of all the things going on. Each vegetable bed or other project should have a number designation which correlates it to a large posted mylar map, upon which information regarding variety, when planted, etc., be written.
4. Define clearly the kinds of data we want kept and why.
5. Look at cropsheet for unwieldiness. Redesign it so that the goal in keeping the following particular information is included: Planting data—variety, location, method of planting, germination data, cultivation records, harvest and yield data, pest problems and treatment. Obviously, the purpose for different projects would dictate the data accumulated. Example: Orchard records would include budding, flowering and fruit-set dates, rather than planting and germination dates.
6. Responsibility - Define a system for who is to be responsible for record taking and organizing. With individuals involved in the work recording their work, and having a commitment to this, half the problem is solved. An additional solution is to assign the daily task of garden surveying to individuals/duos in the Farm program on a weekly rotating basis. This would help assure the keeping of records as well as train students in observation skills. This activity would be overseen by Farm Program Aide for now, and by an instructional aid, and Farm Manager in the future.
THE EVERGREEN STATE COLLEGE ORGANIC GARDENS

TESC's Organic Garden has been cultivated to varying degrees by academic programs in the past ten years. Presently, there are approximately three acres under various kinds of cultivation. There are: terraced beds, which are usually used for Market Garden sites, 300 square feet of fruit orchard, grain fields, an herb garden, intensively cultivated beds in the Main Garden, two greenhouses, and community gardens. (See maps Appendix)

MAIN GARDEN

Intensively cultivated beds are those that are double-dug and raised. They make up an area of approximately 120x100 ft. or 12,000 sq. ft. The beds, which are three feet wide with one foot paths between them, encircle the herb garden. (See map App.0)

The double-dug raised bed method of growing vegetables involves two biennial, deep digging of beds in order to loosen lower depths of the soil. It also involves the periodic use of compost and the annual use of soil amendments, such as lime and rock phosphate, as fertilizers. Mulch is used on the surface for protection as well as for the addition of organic matter that it brings to the soil.

The Main Garden is maintained by students in the agricultural program. For a maintenance, planning, planting, and harvest schedule please refer to the calendar, App. D. Information regarding the maintenance of paths may be found there as well.

The rotation of crops is essential. This is for pest control as well as nutritive reasons.

In the Pacific Northwest, because of the mild climate, crops may be reaped at least twice annually from intensively cultivated, well-cared for land, and gardening is a year-round activity. It is therefore essential that records be kept of what crops were planted where, when, and what preparation was made for them.

At the present time the Main Garden is large enough to be cared for by a Farm program at the current one-year enrollment size (25). In the future the Main Garden area may be used for additional purposes, such as long-range experimentation, etc. The addition of a second year study program at or in connection with the Farm would necessitate reconsiderations of the Main Garden's uses, layout, purposes, and adequacy as to size. There are a number of options regarding the future use of the area that is now the Main Garden. Some of these are:

DEVELOPMENT RECOMMENDATIONS:

1. Leave it as is, with improvements. Continue to use intensively-cultivated, double-dug, raised beds. This, if accompanied by good record keeping, would provide for better research in this kind of vegetable production, including a look at companion planting, and intensive planting in relation to pest control and yield.

2. Rotate beds with clover-covered paths, having beds where, in previous years, nitrogen-fixing cover crops have enriched the soil. Seed clover where beds have been. This means double-digging these "paths." This would show the fertilizing effects of having nitrogen-fixing cover crops in one path. It would also rotate the soils in the Main Garden more evenly.

3. Maintain current beds and cultivation methods in some areas of the garden, and plant some crops each year in traditional plowed rows. This might include the plowing under of some raised beds. The advantage to this would be that yield could be better planned for; specialty crops could be planted in this manner in order to generate revenue. Comparison of at least these two methods of cultivation could be done as research.

4. Use garden beds for additional comparison of intensive gardening methods. (i.e. Chinese raised beds.)

5. Have some beds in the garden designated for the teaching of basic gardening and others for longer range experimentation. This would require a bit more continuity of records and people than now exists at the Farm.

a. Research could then be effectively done in some beds with varietal testing, biological pest control methods, companion planting, and the use of different biological nutrient sources as to their effectiveness in meeting plant needs.

b. Hands-on-learning continues in the other beds.

6. Designate some areas of the Main Garden for experimentation that would involve the growing of non-edible agricultural items. For example, Jerusalem artichokes might be grown for experimentation as a possible source for the production of ethanol fuel.

1Jevons, John, How to Grow More Vegetables, 1979 ed.
2Colebrook, Binda, Winter Gardening in the Pacific Northwest
It appears that other avenues might be appropriate to look at, should any or all of the cases occur, where expansion of personnel and interested students at the Farm leads to the need for additional space and/or different use of existing space. Some options are: clear more land within the boundaries of the Farm, expand the Farm's boundaries, seek alternative sites for Farm activity expansion. For a discussion of this see section on Boundaries, p. 54.

THE HERB GARDEN

The herb garden is located at the center of the raised beds in the Main Garden at the Farm. It was first organized and planted in 1977 with permanence in mind. There have been a few changes in the site from year to year but generally the herbs grow in the same places annually. There are other herbs planted around the garden at the ends of beds and as companion plants.

The herbs should be weeded and thinned and reseeded if necessary every late winter or early spring. Starts from the herb garden shall be used in companion planting and/or potted for sale to the community. In the file cabinet in the Solar Greenhouse there are two extensive papers on herbs and their uses.

The herb garden is inhabited by an elf who is the Farm's calmest and wisest caretaker.

GREENHOUSES

Purpose:
The purpose of the greenhouses is to extend the growing season to the fall months and to enable early planting. In addition the plastic greenhouse is maintained for an inexpensive comparison to the active solar greenhouse.

Plastic Greenhouse:
Constructed in 1977, recovered with new plastic in 1979 and again in February, 1981, this structure has been an asset to the Farm. During the past year the greenhouse has been used to grow brassica, tomato, cucumber, and pepper starts for the garden and for sale. Starts were sold to the Olympia Food Co-op, on campus, to community gardeners, and community people. The growing beds produced tomatoes, peppers, cucumbers, eggplant, and other long season hot weather crops successfully.

The winter of 80/81 had the greenhouse without plastic or water in the aquaculture tank. No over-wintering crops were grown. At this point the replacement of the plastic and bed preparation are completed. During the reconstruction 4 mil. plastic was used; two vents were added and one replaced along the peak for better air circulation in the summer. The aquaculture tank functions mainly as heat storage for the plastic greenhouse. Presently one goldfish and one carp inhabit the remaining water in the tank. This number was reached after the winter 1980 population (11 carp and one goldfish) dwindled over the summer. The aquaculture tank was refurbished in the spring of 1981 (new plywood siding, foundation work, and a good scrub).

In July of 1980 a Hydrothermograph was installed to monitor temperature and humidity. The records provide valuable data for comparison with the solar greenhouse. The Hydrothermograph papers can be found in the filing cabinet in the solar greenhouse.

RECOMMENDATION FOR USE DEVELOPMENT:
Maintenance:
1. Maintain temperature, humidity, and yield data for comparison with garden and solar greenhouse.
2. Maintain records and care of aquaculture tank and feed fish.
3. Water and care for plants.
4. Open and close vents as needed to maintain appropriate temperature.
Development:
1. Place compost piles under benches in the fall for heat and for early planting and starts.
2. Research best plant use for the available spaces.
3. Winter Quarter 1983 the aquaculture tank will need to be reconstructed.
4. Heavier plastic (i.e. 8 mil.) shall be used in the future.
5. The plastic greenhouse was designed to be a temporary structure. The beams and poles which provide its structure are rotting (Spring 1981). The presence of this second greenhouse is vital to the Farm's operation. Options for its replacement do exist.
   A. Rebuild the plastic greenhouse. This would mean the cutting of new poles and the monetary commitment for new plastic to cover it approximately every three years. An advantage to this is that it would be the least expensive route to take.
   B. Build a polyethylene tube greenhouse to replace the existing structure. More research needs to be done as to cost and duration of such a structure and its suitability for the Organic Farm.
   C. Replicate existing solar greenhouse where plastic one has been in order to compare active and passive solar heating systems. It would cost considerably less than the first solar greenhouse, as it would not have the air heating system.
   D. This option relates to any of the above and that is the need to consider alternate sites for this greenhouse.

Active Solar Greenhouse:
The solar greenhouse, a student-designed and built project, was begun in 1978, and was completed in 1980.

How the Active Solar Greenhouse Works:
The duct work and blower system was designed and installed by Jerry Graser and Pat Cole in the Spring of 1980. The system is designed to utilize a differential thermostat that controls the air movement system. This system can be activated two ways. One is that when the temperature in the peak of the growing area reaches a predetermined setting, the large blower is activated and moves the warm air into the rock-heat storage bins. This heat is then slowly released into the growing area.

The other means of activation comes when the temperature at ground level falls below a predetermined level. This causes the small blower to come on and circulate warm air from the peak to the beds, bypassing the rock bins.

This winter has exhibited favorable results from the system. Plants are thriving in the warm air that the system circulates in the greenhouse. Four 4-foot fluorescent grow lights are intended to permit the early start of plants like tomatoes and peppers.

In July 1980 a Hydrothermograph was brought in to monitor temperature and humidity. (The three thermographs are on loan from Lab Stores.)
The bed space in the greenhouse has been used to grow hot weather crops and some unusual plants. In 1980 luffa, African gourds, and watermelon were grown. The tomatoes and peppers did well, as did nasturtiums and marigolds.
The back room of the greenhouse is finished and contains a sink, stove, refrigerator, cabinets, library, filing cabinet, desk, and a hot water heater. This area is used for preparing produce for market, preserving food, record keeping, and informal gatherings.

In the center of the structure is the drying room, where drying racks have been installed. A stove built by Benjamin Stone and donated by Fred Stone, provides the heat. The heat from the stove has proven important in supplementing the temperature of the growing space. The heat rises out the two window vents and activates the air movement systems, warming up the area. This drying room has been informally used as a sauna.

RECOMMENDATIONS:

Maintenance:
1. Maintain temperature, humidity, and yield data for comparison with the plastic greenhouse and garden.
2. Water and care for plants.
3. The front, side, and top vents should be examined for methods of safe opening and closing.

Development:
1. Thought and research should be given to the best use of the growing area.
2. Continue experimentation using the lights and other equipment in the structures.
3. The Farm Board needs to address policy regarding use of the drying room as a sauna.
GRAINFIELDS

The grainfields extend along the southern perimeter of the main garden area. The map, (App. T) indicates what the fields were planted to in the spring of 1980. The numbers were assigned to these fields arbitrarily to facilitate the following discussion and for ease of identification. For a detailed report on the planting and harvesting of these fields the reader should refer to the grain-field report prepared in the summer of 1980. (Student files in Library)

Helpful references to use:
The One Straw Revolution by Masanobu Fukuoka
Perma Culture Two by Bill Mollison
The Tilth Clover Project by Mark Music
The 1980 Grainfield Report by Mark Lacina and Jessie Peters

These should be referred to for information regarding grains and the Organic Farm grainfields.

SPRING 1980:
Field #1 was sown to rye in the north half and white Dutch clover in the south.
Field #2 was sown to rye in the east section, was mulched in the center and sown to triticale in the west.
Field #3 was sown to rye in the east and squash was planted in the west.
Field #4 was sown to wheat and various clovers in the east half and the west half was sown to barley.
Field #5 in the southeast corner was sown to soy beans, the southwest to oats, the northeast to sweet clover, and the northwest to rye.

WINTER 1981:
Field #1 went through a transformation: the northeast half was planted with fruit trees to start an orchard, the rest of the field was overgrown with annual weeds and grasses.
Field #2 was in a similar condition (weeds and grasses).
Field #3 was mulched with cardboard to keep the weeds from coming into the field.
Field #4 was heavily mulched with leaves.
Field #5 was mainly mulched lightly with straw.

SPRING 1981:
Field #1 was full of weeds and grasses, then it was rotovated three times at three-week intervals to kill the weeds.

Field #2 was dealt with in the same manner as Field #1.
Field #3 was weedy and cardboard; nothing was done to it at this time.
Field #4 was hand-weeded and then sown to clover, and then to buckwheat (as a nurse crop*).
Field #5 in the southeast was weeds and grasses, the southwest and northwest clear with some weeds; the northeast had a fairly good stand of clover.

SUMMER 1981:
Fields #1 and #2 should be sown to millet in June.
Fields #3 and #5 should be sown to oats, barley, or wheat.
Field #4 - the buckwheat and clover should be let to come up, then the buckwheat harvested when ready.

PROBLEMS:
1) Weeds - a field must be constantly occupied or weeds will take over.
2) Lack of continuity - There is generally not any one person present through the field preparation, plantings, harvesting, and cover cropping cycles.
3) Amount of labor - The number of people working each quarter/year at the Farm varies, so that labor cannot be counted on.

RECOMMENDATIONS:
1) Cover or green manure crops must be sown every fall for weed control and protection through the winter. If the weeds are abundant in the fall turn them under; then sow the cover crop.
2) Due to the uncertainty in the amount of labor available at the Farm, heavy mulching is an advisable method of controlling weeds, because: a. mulching is a labor intensive practice, but b. mulch materials cannot always be procured. An alternative to mulching is to establish a cover crop of clover.
3) Strive to establish clover in all the fields, one field at a time. Clover is a nitrogen-fixing legume that covers the ground and provides nitrogen for future crops. The seed should be covered with lime and inoculated. Clover should be sown in the fall. (White Dutch variety is recommended.) A light seeding of winter rye can be used as a nurse crop. After harvesting the rye use the straw as a light mulch in order to protect the seed from birds. Spring sowing should be made depending on the strength of the stand of clover.
4) The care of the grainfields project requires the work of four students and the periodic help of the entire program for each quarter of the year.

*"a nurse crop is one that is intended to be turned under, adding green manure fertilizer and organic matter to the soil in the form of live matter."
SPECIFIC RECOMMENDATIONS FOR THE FIELDS:

5) Fields #1 and #2 should be sown to White Dutch clover in fall 1981. Before sowing the clover, lime, phosphate and compost should be added to the fields. Then, the clover, with a light sowing of winter rye, should be evenly broadcast. This should be covered with the straw from the millet to act as a light seed-protecting mulch. This light mulching adds organic matter to the soil as it decomposes, though seed protection is its main function. If the millet fails to grow and keep back the weeds, the field should be tilled; then the aforementioned procedures executed.

In the spring of 1982 a spring variety of wheat or oats should be sown.

6) Fields #3 and #5 should be dealt with in the same way as Fields #1 and #2. The objective is to establish clover. Once clover is established, variations in grain varieties, sowing times, and cultural methods can be experimented with.

7) Field #4 is the current no-till project, clover and buckwheat having been sown in the spring of 1981. In mid to late July the buckwheat can be harvested. Millet will be planted two weeks prior to this time using the buckwheat straw as mulch. The millet may or may not be harvested due to the late planting. Its primary purpose is to occupy the field and control weeds. In the fall 1981, winter rye will be sown two weeks before cutting or harvesting the millet. Again use the millet straw as a light seed-protecting mulch. The clover’s root system should be developing all this time, enabling it to come on strong in the spring. At this time a spring grain variety should be sown.

8) Beyond this, all plans are mere speculation due to the experimental nature of no-till methods. All of the above recommendations are geared toward a no-till grain fields project for the Farm. This should be evaluated each year in winter, around early March. Planning for the coming season should be done accordingly.

ORCHARD

In February 1981 the Orchard was started with the planting of eleven trees for the following purpose:

Purpose: The purpose for establishing an orchard at the Organic Farm is to provide an area for experimentation and learning pertaining to tree crops and permaculture in agriculture. Permanent crops, such as fruit trees or berry bushes are an integral part of small scale agriculture; therefore an orchard broadens the scope of activity at the Farm in relation to this goal. In keeping with the overall goals of organic farming practices, no synthetic chemicals are to be used, either for insect or disease control, or fertilization.

History: Joel Walker, a student in the 1980 As You Sow Farm program, developed a plan for the establishment of an orchard at the Organic Farm. The plan was evaluated by some members of the ‘80-’81 Small Scale Agriculture program and by Sam Benowitz and Michael Dolan, orchardists in Morton, Washington. (See Walker plan and Benowitz evaluation in Library archives.) Many aspects of the plan still require further research.

While the above mentioned investigation will continue on an ongoing basis by this and future academic programs, it was felt that the establishment of a small part of the orchard should be begun. In February of 1981 the planting of eleven trees occurred. These trees were obtained from San Benowitz of Raintree Nursery in exchange for student labor at the nursery. The formula for earning trees is: one tree for every three hours of a student’s labor.

Preparation: The area between the trees was cleared and cultivated and planted with a cover crop of clover. An alternative for the future would be to use the area for vegetable beds. It is important at this time to establish weed control, as these young trees could be easily overrun with weeds which will out-compete them.

Pruning and Training: The trees were pruned at the time of planting to compensate for the reduced root system, due to their being moved from the nursery to our site. The trees have been started with the “central leader” method of shaping. In this method a single central leader is encouraged to grow upright. The branches are left around the tree in a wheel spoke arrangement. Branches with a crotch of less than 45 degrees are removed. It is important to observe the
new growth each year, as a healthy tree will put out about 12 inches of new
growth in this time.

Young Douglas Firs growing along the southeast fenceline were removed in
order to prevent root competition as well as to be able to subsequently
incorporate this site with the future orchard site to the east.

Varieties: The following trees were planted:

Dwarf Apples: Kane, Chehalis, Melrose, and Mutsu -- These are dwarf trees on
Malling 9 rootstock. They will reach a height of approximately 6-8 feet. A
trellis will be constructed behind them to support the branches, because they
will need support for the weight of their fruit upon reaching full maturity.

Semi-Dwarf Apples: Kane, Chehalis, Melrose, and Liberty -- These are the same
varieties (with the exception of Liberty) on Malling 36 rootstock. They will
attain a height of from 8-12 feet, and require no support.

The trees were chosen on these two rootstocks in order to observe the
growth and yield on the two different dwarfing rootstocks

Three apple trees that had been previously donated by Sam were transplanted
from the border of the main garden beds to the new orchard site. They are
labeled, and according to our best information, are also dwarf trees.

Plums: Matsuma, Shiro, and Greengage -- These were chosen over the more common
Italian prune, which we already know does well in this area, in order to ob-
serve how these more unusual varieties will grow. Shiro and Matsuma will
pollinate each other and Greengage is a self-pollinator. (See appendix, maps p.
for planting scheme.)

Kodota Fig: This tree was container-planted and placed near the house. It was
a gift from San Benowitz, and is an experiment to see how a containerized fig
placed near a “warm” structure will grow in this climate. It is self-fertile
and not usually hardy below 10 degrees Fahrenheit. Should the temperature drop,
the fig tree should be covered with tar paper, for insulation, and tied securely.

Planting Details -- The trees were planted in holes dug deeper and wider than
needed, to accommodate the roots. This was done to create loose soil conditions
below the trees for maximum root growth. Topsoil was mixed into the hole with
the subsoil. A tree was then planted to the same depth as it had when growing
at the nursery, with the graft union growing well above the soil line. It is
important not to bury the graft union in order not to have roots growing out
from the scion wood. Permanent metal tags were affixed for identification, and
metal cans were placed around the base of each tree to discourage rodents from
gnawing at the bark. No fertilizer material was incorporated into the planting
holes as it is not recommended for new plantings. Nitrogen, in particular, is
discouraged at this stage of growth, as it would encourage leaf formation at a
time when the trunk and branches should be making growth. Fruit trees require
a neutral pH of around 7. Lime and well-rotted compost was added as a top
dressing. A fence was constructed at the time of planting, as deer can be a
problem in this area with young fruit trees, and adequate protection in the form
of a fence is necessary.

Maintenance Recommendations:

1. Who is responsible for the undertaking of a permacultural project?
The Farm as an entity has taken on this project, one that requires continued
maintenance, physical labor, research, and record keeping. It is the faculty
person’s responsibility to see that students in the Farm program take the orchard
on as a project, for further research, care, records, and extension. This shall
be done under the supervision of caretakers and coordinator.

2. Continuity -- In the absence of permanent Farm-staff persons, it is difficult
to provide the continuity necessary for the establishment of a “permanent” crop.
Therefore, adequate and detailed record keeping, as well as instructions for
future care, should be provided by each group that cares for and experiments
with these trees for groups which follow. A separate notebook has been estab-
lished by the 1981 group to keep these records and plans pertaining to the
orchard work only. This notebook is kept in the file cabinet in the solar
greenhouse.

3. Area between trees should be maintained by cultivation and planting to
clover as a weed control.

Development Recommendations:

1. The option for using the areas between trees for vegetable beds exists.
Look at this in the future.

2. The Farm Manager, upon being hired, would be responsible for the ongoing
orchard project, as a responsibility designator.

3. Orchard Extension, Future Plans -- The site immediately to the east of the
present site has been designated for the expansion of the orchard in 1982.
This site was formerly in community garden plots. (Plots have been replaced --
In 1981, the area is being enclosed by a fence and the soil has been rotovated and planted to clover so that the area may receive the planting of more trees next winter/spring. The soil is sandy loam and will benefit by the addition of organic matter. We recommend the addition of compost when the clover crop is turned under. We further recommend the planting of a successive legume crop (vetch, for example, or another clover), with the final planting in clover before the trees go in. Intermittent crops should be turned under. The soil should also be limed. (See calendar for maintenance schedule.)

Blueberries: A discussion of the blueberry bushes is necessary at this time. At this writing there are 14 blueberry plants, donated by Eberhardt's Blueberry Farm. They have been transplanted from pots into a permanent area near the Organic Farm's Lewis Rd. entrance. Holes, 2 feet wide and 2 feet deep, were dug for each plant. Compost was added to the soil, and after planting, the blueberries were mulched with rotten sawdust. The plants are two years old. There will be no fruit crop this year; however, in two years, fruit can be expected, and within five to six years they will produce a full crop, providing they are properly maintained.

Mulch is beneficial for blueberries, because they do not root deeply, and are harmed by drought. Pruning should be done each spring. Blueberries need no lime and should be watered often.

Recommendations regarding record keeping in the orchard applies to the blueberry area as well.

STRUCTURES

The Farmhouse

The Farmhouse is presently being used by varying college programs, through prior arrangement with the Office of Facilities for reservation of space. The building permit for the Farmhouse was secured and the foundation construction begun in the spring of 1975; the house was opened February 14, 1980. Since its opening it has been used for many different purposes.

The space available for academic and public use in the Farmhouse is large. This means that the entire Farm facility can be put to better, more frequent, and diversified use. For this reason, it is necessary to list in descending order, who will receive priority in using the public area of the house:

1) Academic programs directly related to the Farm.
2) Unrelated academic programs.
3) On-campus activities (scheduled lectures, recreation, etc.)
4) Off-campus activities, community events.

All groups will be asked to take the responsibility of cleaning up the area that they used/occupied before leaving, so as not to burden the caretakers with the additional work.

The Farmhouse is heated by three woodstoves. (For more information see the 1979 Biennial Plan.)

The Greenhouses - (Refer to the section on greenhouses, pgs. 39-41.)

The Tool Sheds

The Farm has two tool sheds. The white garage on the north side of the parking lot was remodeled in 1980. It is now used as a classroom and workshop and storage area for tools and materials. The old sugar shack east of the parking lot was remodeled in the summer of 1980 for storage of garden implements.

The Barn

The red barn is now being used as a storage space for large materials. A lumber shed has been added to the west side of the barn.

The Chicken Coop

A chicken coop is located at the west end of the main garden.
The Outhouse

An outhouse was built as a projected need for the Harvest Fair of 1980. It is situated northeast of the terraced beds in the woods.

The Root Cellar

There is a root cellar east of the outhouse which is not presently used.

Glass Storage

Glass is being stored in the shed west of the outhouse.

RECOMMENDATIONS:

Development

1) The Farmhouse is bare of any hominess; it needs some improvements along those lines (more comfortable furnishings, posters, paintings...)
2) A shelter for wood used in the woodstoves is needed, soon, to keep the wood dry.
3) The root cellar, if it is going to be used, needs to be renovated.
4) The white garage needs to be renovated. In particular, heating and improvement of lighting are needed for the comfort of those using the workshop space.
5) An additional lumber shed needs to be constructed for large pieces of lumber.
6) In the future, additional structures may be needed at the Farm. Should such occasions arise, the decisions surrounding them will be dealt with by the Farm users and the Farm Board as to sites. The guidelines for land use on the Evergreen campus as outlined in the Evergreen Master Plan 1981 are to be followed. This also relates to the kinds of structures felt to be needed.

ACCESS TO THE FARM

PARKING:

We continue to urge Farm users and visitors to park on campus whenever possible, and use the footpath to get to the Farm. If there is an event at the Farm which requires motor transportation of a large number of people to the Farm, arrangements have been made either with shuttle service or designating one side of Lewis Rd. for overflow parking. Additional space is available at the slurry plant. The parking lot at the Farm only holds about a dozen vehicles. We do not recommend enlarging it all, as we would like to discourage parking at the Farm.

There are, however, instances where parking and vehicular access to the Farm is necessary. For example: in the loading and unloading of large items and materials, for handicapped access, and for night classes and workshops at the Farm, particularly during winter quarter. All of these situations need to be looked at as to the Farm's providing adequately for these needs.

PATHS:

The Farm may be reached from campus by walking the footpath from the southwestern corner of Parking Lot B. This path exists in the woods after about one-half mile, and cuts diagonally toward the Main Garden. It is being relocated (Summer '81) with the construction of a fence around the future orchard site, so that it will run along the eastern perimeter of the orchard fence, hugging the woods more. The path to the Farm from campus is not easily used by some people. They can be driven to the Lewis Rd. entrance to the Farm. There is no shuttle service at this time; however, escort service is available both to and from the Farm (i.e. at night) by calling Security at 866-6140. Ask them directly or ask for E.S.C.O.R.T.

A path also exists from the Main Garden to the Westfield Community Garden site on Lewis Rd.

Paths exist within the Main Garden, and are periodically turned and seeded to clover. They generally are the width of a lawn mower and run between the beds.

WOODLANDS:

The forested land within the present boundaries of the Organic Farm will be referred to here as the Farm woodlands. These woodlands have been logged and burned several times since the turn of the century. They are now characterized by Red Alder, Cedar, and Swordfern on the wet sites, and Douglas Fir and Salal on the dryer sites.

This is a new area for the Farm to formally consider, and there are a number of possible ways in which it can be dealt with. These eight acres of woodland could conceivably be put to a variety of uses simultaneously.

The aspects to consider are presented here, and are intended to serve as a starting point for the planning of the best use of the land.

A form of non-management recognition of the Farm woodlands could occur. This means that the woodlands, as they exist, would not be altered. It would not cost anything to maintain, and it would provide an area for forest ecology study on the Organic Farm.
Presently the focus of crop raising at the Farm is on vegetable, grain, and permaculture crops. Ecological Forestry or Woodlot management practices could become a very practical part of the Farm program, or part of one of the other environmental studies programs. This would enlarge the scope of the Farm and augment its self-reliant capabilities. Because the forests have been logged and cleared in the past, this would not be a difficult physical undertaking.

Students would have the opportunity to learn and apply environmentally sound forestry practices. Research could be done on developing these methods which could be applied to other forests in western Washington. This would include soil preservation practices, timber harvesting, selective cutting, thinning and other sound silvicultural practices.

The forest ecosystem would be impacted such that changes in ground cover and animal habitat would occur. The costs would include equipment purchases, upkeep of this equipment, and academic commitment to this field. The wood gained would be used for building projects, and fuel for the woodstoves at the Farm. Restrictions prohibit the generating of profit from the sales of state owned timber.

The Farm woodlands could also be used for recreational purposes. An area could be developed as a group meeting and picnic area, with benches, a cleared circle, etc. Existing overgrown skid roads could be turned into trails, providing an area for nature walks and other educational uses of the forest. Costs would need to be looked at for the development of a group area, trails and the maintenance of these areas. A commitment, by areas represented on the Farm Board, would be needed for the undertaking of these projects.

In addition to this, an arboretum could be developed. Native and non-native flora could be grown, observed and compared. The area involved need not be large, an acre or so. This would be a fine thing to offer to the Olympia community for its aesthetic value and for recreational purposes. Identification, observation and cultivation of these trees may be a good area for academic expansion in relation to the Farm. Costs would be minimized by using donated plants and labor.

Policy Recommendation:

Before any action is taken on these options, a policy on woodlot management needs to be written and adopted by the Farm Board. This policy must follow guidelines for land use as outlined in the Evergreen Master Plan, and advice must be sought from the Environmental Advisory Council (EAC, Richard Schwartz, convenor).

Development Recommendations:

1. Consider the following areas for woodlot management first:
   a. The Doug fir stand to the south of the Main Garden—these trees are quite tall and currently shade a good portion of the garden for five months out of the year.
   b. The alder grove north of the community gardens—a cutting back of this area to the Farm's fence border would provide additional recreational space.

2. Begin limited ecological woodlot management practices throughout the remaining eight acres. Fenceposts, poles and firewood are in demand at the Farm. This would allow for the removal of what can be removed in perpetuity.

3. 1981-82 Farm program, Applied Environmental Studies or other such programs should look for possible sites suitable for nature trails, arboretum, or outdoor meeting place.

Proposals for such must include an environmental impact statement, be brought before the EAC for advice, and be given to the Farm Board for a final decision.

We strongly recommend the use of ecological forestry and the development of the above-mentioned recreational/educational areas for the Farm's woodlands.
The Organic Farm is located near the intersection of Lewis and Simmons Roads. Its present site is 13 acres, following the fenceline border of the farmstead which occupied this site before Evergreen was even a twinkle in the legislature's eye. Five acres are cleared, and the remaining eight are predominantly conifer forest.

Policy Recommendation:
1. It is recommended that the current 13 acres be designated as the operating boundaries for the Organic Farm. This would place it as a "management unit," the Farm Board being the mechanism and body by which the land is managed.
2. It is recommended that areas be designated for possible expansion of the Farm as a management unit, should further growth be necessary.
3. Should it be determined that the Farm needs more cleared land, the following criteria for deciding upon land should be used: adequate exposure to sunlight, soil suitability to agriculture, existing cover of the land (vegetation type and size), uniqueness of the habitat, and proximity to the present Farm.

Development Recommendations:
Taking these considerations into mind, the following is an option for expansion within the present 13 acres:
1. South and East of existing gardens: these sites are included in the Farm's present boundaries. The vegetation consists of 40-50 year old conifers, with some alder and maple in the overstory, and salal and swordfern in the understory. Most of the area was thinned in the early '70's to obtain lumber for the Farmhouse. The remaining trees are fairly tall and create a shade problem for the garden. The advantage in expanding in this way is that it would eliminate the shade problem for the garden and supply the Farm with much good lumber and firewood. The major drawback would be the need to cut so many trees in order to gain any usable growing space. Also, the soils are quite clayey and have some drainage problems.
2. Expand north of the community garden sites, to the fenceline: the vegetation is mostly alder. With a northern expansion, each foot gained is in sunny usable garden space.

Should further expansion be desired or necessary, a variety of options exists. The same criteria as above are used for the following optional sites.
1. Expansion to the north of the present Farm site -- this moves us outside of the 13 acres. The reasons for choosing this area are that shade problems would be minimized, soils are suitable, and there is easy access to existing utilities (water). There is currently a relatively young stand of alder trees in this area. This growth could occur in stages, as needed...
   - Expand to include area in dense alder grove,
   - Include above area, plus the cleared land occupied by the slurry plant,
   - Include just the cleared land around the slurry plant,
   - Include all land north of present boundaries, up to and including the slurry plant.
2. Kifer Farmstead - This approximately three-acre site is about one-fourth mile west of the Organic Farm on Simmons Road. When the college acquired land for the campus it included the property belonging to Mr. Ben Kifer. Mr. Kifer has been living on the property since 1936, and over the years has constructed a house, garage and barn. He has also been farming the cleared land and using the forest as his fuelwood source. When his land was purchased by the college, he was granted lifetime occupancy. Upon his death, the college will assume responsibility for the upkeep of his farmstead. Including Mr. Kifer's farmstead as part of the Organic Farm seems to be a natural move. The expense would be minimal, as all utilities are already there, the land cleared and cultivated, the buildings in good condition, and the area fenced. An important consideration is the need it would present for additional caretakers to maintain the property and provide security.

The following options relate to suggestions for land use on campus that would not necessarily fall under Farm Board jurisdiction:
1. Land west of Lewis Rd. This forested site lies directly across Lewis Rd. from the Farm. The land nearest the Farm is covered with a stand of 40-50 year old Douglass firs. The rest of the site is a mixed conifer/hardwood forest. The soil on the southern portion of the site is a sandy loam with good drainage and agricultural potential. To obtain any increase in cropland, a section of the forest would have to be cleared and a waterline constructed. This would require some cost, but could
be accomplished as part of a program in forestry management.

The land would best be used as an experimental area for ecological woodlot management. Centering this type of program at the Farm would diversify opportunities for both practical and academic studies.

2. Other land on campus. There are a few areas on campus that might prove suitable for agricultural activities, and are already cleared. Examples of these include: the field behind the seminar building, the land behind the Library, Driftwood Meadow, the recently cleared land behind the fire station, the small meadow across Driftwood Rd. from Driftwood Daycare Center, the field on the southwest corner of Kaiser Rd. and Evergreen Parkway, and areas close to current dorms and proposed dorm sites.

The inclusion of such sites would require some expense for transportation of materials, and would need some irrigation or watering system.

The advantage of using other lands on campus is that sizable growing space for research, i.e. with grains, could be obtained without having to clear any forest land. Addition of other lands would also facilitate appropriate programming (i.e. Elementary Environmental Education being focused on at sites proximate to Driftwood Daycare Center).

3. Other lands off campus. This possibility hasn't been fully explored. The basic idea would be to utilize land owned by a private person for the purpose of experimentation. There have been offers from local farmers. To date the only project of this kind that has begun involves the use of land adjacent to Garfield School, on Olympia's westside, for a project involving several grades of young people from that school.

A drawback to this option is the decreased accessibility for faculty and students. Advantages would include the opportunity for larger scale experimentation and the continuity such a place would provide for research.

The Organic Farm as COMMUNITY OUTREACH CENTER

In this section we address a number of activities that the Farm is involved in as they relate to the larger community. This interaction of the Farm with the Olympia community and the farming and gardening communities is vital. Both recreational and educational purposes are served.

Community Gardens:

Community garden space is available each year in early March. People interested must sign up in advance, so that the area may be divided into plots and assigned equitably. People retaining their plots from year to year are given that priority. The same land use guidelines apply to community garden plots as to the rest of the Farm (for example: use of only organic/non-synthetic fertilizers, agreements to keep pests and weeds controlled organically).

Community gardeners are charged $5.00 per year for students and elders (those over 62), and $10.00 per year for all others, from March through November, and must sign a contract. If a gardener wants to winter-garden, special arrangements can be made. The fees cover the use of tools, hoses, and other necessary equipment. Money is also used for the purchase of bulk materials for fertilizing. Manure and other compost materials are usually free for the fetching, and money is used for the purpose of running a truck, making this possible. This program has been self-supporting for the past two years.

Community gardeners are required to use compost or other organic fertilizers, so as not to deplete soil nutrients. Composting information is disseminated in early spring, via workshops and/or literature, to assist gardeners who are unfamiliar with this.

Plots must be ready for planting by early April or contract will be void and the plot reassigned (weather permitting). Gardeners must clear and clean their plots by early November, and make overwintering provisions, by either cover-cropping or heavy mulching.

Two sites are currently being used as community garden sites: one in the northwest corner of the Farm, on Lewis Rd. by the Farm's driveway--the other on the corner of Lewis and Simmons Rds. (see map, App.S). This second site, the west field, was opened for community gardens this past spring, in order to compensate for the loss of plots by the orchard preparation work, and to meet the increased demand. Approximately ten additional plots have been gained. Demand for Community garden plots has been steadily increasing, and other sites are being explored.
by which to introduce the Organic Farm to those unfamiliar with it.

Day-long conference/workshops have been co-sponsored by the Farm. Topics were Direct Marketing and Integrated Pest Management.

Development Recommendations:
The following are suggested special topics for workshops, to be organized by the Farm. These should not preclude basic gardening workshops and workshops geared toward particular audience needs. Co-sponsorship should be sought from other S&A groups as well as outside groups (Tilth, Farmers Market Association, Local Farm Network...).

- Integrated Pest Management
- Blacksmithing and other rural trades
- Food and Urban Vulnerability
- Regional Self-Reliance
- Direct Marketing
- Permacultures
- No-Till Farming
- Non-Western Farming Techniques
- Biodynamic Gardening
- Herb Growing, for Culinary and Medicinal Purposes
- Nutrition
- Children and Gardening/Elementary Environmental Education
- Pesticides and You
- Agriculture as an Environmental Study
- Edible Weeds
- Women and Agriculture
- How to do Research on Your Own Farm/Garden
These should be advertised to the general public.

Additional Outreach Work
Research done at the Farm functions as outreach, when results are made public. See section on Research, p. 31 for a discussion of this and other academically-related outreach.

A radio program on agricultural issues, legislative and other, has been started at station KAOS. This was undertaken by students in the Farm program and should continue as such.

Development Options:
1. Expand north of the present community garden site to the Farm's border fence.
2. Locate community garden site closer to the core of the campus. This would benefit people in the Evergreen community, particularly those that reside on campus. One possibility would be to use sites proximate to current dorms and modular housing. Another would be to include community garden sites when planning for the construction of more dormitories.

Leisure Education Courses at the Organic Farm:
Leisure Education classes, offered to the general public and the Evergreen community, were started in summer 1980. These classes have been offered each quarter since that time. They have dealt with organic gardening methods, organic farming practices, and basic auto mechanics. Classes are well enrolled. They are one of the sources of revenue for the Organic Farm. In the past these classes have been organized by faculty at the Farm and taught by a combination of faculty, students and knowledgeable outsiders as guest lecturers. It is hoped that these kinds of offerings can be continued and expanded to include other topics as the demand increases.

Policy Recommendation
The responsibility for coordinating Leisure Education classes shall be the responsibility of the Farm coordinator.

Events and Conferences
Events and conferences are important for several reasons. They are important as revenue-generating sources (please see discussion on funding sources, p. ), but more important for the educational services they provide, and the networking of people and ideas, pertinent to agriculture, which is facilitated.

The Farm sponsors, and, with other campus groups, co-sponsors events on campus, providing for all the same purposes as above mentioned. Examples for 1980-81 are speaker Peter Caddy, film events, lectures, and a panel discussion on regional self-reliance. Much of this activity occurred during Earth Week '81.

A Harvest Fair, held at the end of orientation week in September 1980, attracted over 800 people, for a vegetable contest, feasting and other "country fair" type activities, including fine entertainment. This event should become an annual one, as it is looked forward to by all. It is a joyous celebration.
The Farm is listed each year in the Thurston County Farm map, published by the Thurston County Agricultural Committee. This encourages many visitors, especially in the summer time. Tours of the Farm are gladly given. Tours may also be obtained for school groups, etc., by appointment. They are also given in connection with campus-wide events, such as Super Saturday and the Annual Health Fair.

News of the Farm has touched people in this region through journalistic exposure: an article in Tilth Magazine (Spring 1981) and in the Daily Olympian from time to time.

In relation to this we recommend that a column be explored for publication in the C.P.J., the Daily Olympian, or perhaps an agricultural journal like The Capitol Press.

The Farm owns a copy of the slide show Food First, which can be used as an outreach tool. It is kept with the slide librarian in the Library on campus. Other films owned by the Washington State Film Library have been used as outreach tools too.

Recommendations regarding Recreational Use of the Farm:

1. Sites for picnic and play use should be looked into and made a reality.
2. A recommendation made in the section on woodlands, for the development of an Arboretum, is appropriate to mention here again.
3. Feasibility of making areas of the Farm accessible to handicapped persons for recreation and/or gardening use should be researched and made a reality.
4. One of the limiting factors in regard to large events at the Farm, is the amount of clear space and parking (see p. 50). The question is therefore raised as to whether we would like to change this situation or not.

**REVENUE GENERATING FOR THE S&A BUDGET**

This refers only to the S&A portion of Farm support.

**Purpose:** The portion of the Farm that is operated for recreational purposes is supported by S&A fees and coordinated by the Farm coordinator. It is considered a service to the student body, and falls under that category of groups in the budgeting process.

Revenue is generated through a number of different activities throughout the year, so that the recreational programming at the Farm may be as self-supporting as possible. Particular programs are self-supporting; for example, the community gardens (see p. 57).

In 1981 the S&A fees for goods and services will be only 25% above the expected revenue to be generated. This means that we are moving closer to a self-supporting level. At present, no organized plan exists for the move in this direction; however, the hiring of a coordinator and the expansion of outreach activities (see p. 59) have pushed us in that direction quite well.

What follows is an explanation of and recommendations for Market gardening at the Organic Farm. A discussion of other programs which generate revenue for the Farm, like Leisure Education classes, etc., may be found on p. 59.

**Market Gardening:**

The purpose and educational focus of the market garden is for students to learn various practical skills in the growing and marketing of produce.

Before 1980 there has never been a separate market garden area or a large crop of a specific marketing item. The students of Small Scale Agriculture in the winter of 1980-81 planned a market garden separate from the main garden. The terraced beds and the beds south of the plastic greenhouse were planted specifically for market.

Sales at the Farm will not be competitive with the prices of local growers. (See sales policy, App.C).

Marketable vegetables are those that are in excess of the needs of the Farm workers (program students/gardeners) and those that have been designated for marketing from the start. Past markets have been the campus, the Olympia Food Co-op, the Farmers Market, and local restaurants. Brassica, tomato and herb starts, peas, beans and carrots have been profitable in the past.

Vegetables in excess of the needs of the workers and the market are available for donation to charitable organizations in the Olympia community.
Presently revenue generated by the Farm is deposited to a College Bookstore account with the Cashier (1st floor of the Library) where 10 percent of the total is deducted for the college's tax purposes and 90 percent is deposited into the Students and Activities (S&A) Farm budget. This applies to produce sales only.

RECOMMENDATIONS:

Development

1) Those who are involved in marketing produce should be aware of vegetable marketing standards (prices, quantity, quality, appearance, lot sizes, etc.).
2) Create an on-campus market for produce. This may be done by using a roving vegetable cart, and selling in the Dorm courtyard, at the Mods, and at ASH. Appropriate times would need to be decided upon.
3) Research needs to be done on the TESC sales policy restrictions as they relate to the Farm sales of produce: why does 10 percent go to the Bookstore?
4) Since there are fewer restrictions on produce sold as prepared food in conjunction with an event, it would be a useful perspective to have some of the market garden vegetables as potential entertainment items rather than as produce for market.
5) Consider a permanent site at the Farm for a market garden.

Events as Revenue Generators:

Food as entertainment item--The Farm has raised funds quite successfully by participating in on-campus events with booths for the sale of prepared foods. These have varied from salads to cider to eggrolls.

Development Recommendations re: Revenue Generating in general:

1. Make Harvest Fair an annual, expected and drooled-for event. It has been a major fund-raising event due to its success.
2. Many ideas for the development of outreach programming have been suggested. The co-sponsorship of singular events on campus is a good starting place: speakers, films, etc. Try doing two per quarter, well advertised, and see what the response is like.
3. Continue and improve the revenue-generating projects and programming that currently exist. This would be best for the next biennium, and not scatter energies too much.

APPENDIX A

POLICY RE: LIVESTOCK

1. -- Proposals regarding temporary projects involving livestock must be made before The Farm Board. The initial proposal must include a letter of intent and information regarding type of animal, number, where they will be kept, how cared for, by whom, and length of project. Twenty-four hour contact telephone numbers for applicants are essential. (What if your chicken died in the middle of the night?)

2. -- Upon an affirmative decision by The Farm Board, contracts will be drawn up delineating responsibilities and signed by those immediately concerned (usually caretakers, coordinator and person wishing to import animals).

3. -- Though not directly related to livestock, this is the appropriate place to mention the policy regarding dogs. NO DOGS allowed at The Farm. Though the traditional farm is pictured with its loyal pooch, The Organic Farm is a research center. It is used by a large number of people from a wide variety of groups, and dogs are not appropriate in this setting.
APPENDIX B

FARM TOOLS AND EQUIPMENT

All tools and equipment in use at The Evergreen State College Organic Farm are owned and registered in the state of Washington. The tools, which are kept in stock in the toolshed, are to be used primarily by caretakers and academic programs to maintain and upgrade the college's Organic Farm and Garden. It is understood that the tools and equipment will be made available to the people involved in the community garden*, but with priority of use being given to farm-related programs. None of the tools are to be loaned at any time.

Replacing tools that have been lost or damaged has now become quite expensive. In order to keep better track of the equipment, caretakers will take inventory of the tools at the Farm at the end of every quarter. This facilitates the quick replacement of lost items.

All tools should be cleaned, dried, and returned to their proper place in the tool shed immediately following their use.

*See page  for more about community gardens.

APPENDIX C

POLICY ON SALE OF PRODUCE FROM THE ORGANIC FARM

The sale of produce from the Organic Farm will be authorized as long as the sales activity is a result of and is incidental to the academic program. Sales that do occur will be in accordance with the general policies of the Organic Farm and the educational objectives of The Evergreen State College. An effort will be made to balance the sales of produce to private parties with donations or sales at cost to public, non-profit organizations.

Sales will be handled under the aegis of the college bookstore with all funds being deposited at the cashier's office in a Bookstore account. Adequate fiscal records will be kept by both the coordinator of the Organic Farm and by the Bookstore.

Sales of produce from the Organic Farm should not compete with local farmers. The business manager of The Evergreen State College will be kept informed and consulted about any sales activity of the Organic Farm. This policy was approved by the Deans and by Ken Winkley, the Business Manager of The Evergreen State College, August, 1979.
APPENDIX D

CALENDAR FOR FARM AND GARDEN

JANUARY
1. Order seeds for spring.
2. Make detailed map of garden rotations and where specific plants will go, always referring to past maps and general plan and notebook for seed varieties.
3. Plant early peas.
5. Continue winter repairs.

FEBRUARY
1. Plant fruit and nut trees.
2. Plant early potatoes, onions, peas, and fava beans.
3. Make connections with co-op to sell vegetables.
4. Turn cover crop when ground begins to dry.
5. Plant flats of brassica in greenhouses to sell and plant.
6. Pruning.
7. Make trellis for blackberries and raspberries.
8. Coordinate community garden meeting.
9. Begin preparations for campus spring fair (Earth Week).

MARCH
1. The major part of the garden soil will be ready to work and plant to all spring vegetables and greens.
2. Begin selling starts on campus.
3. Have workshops on composting and pruning.
4. Plant field crops (sunflower, oats, barley, peanuts, potatoes).
5. Continue successive planting in flats of brassicas.
6. Transplant herbs into pots to sell.
7. Make new budget proposal.
8. Continue successive planting of vegetables and flowers.
9. Add compost and water with herbal tea water to plants started in March.
10. Sell produce on campus.
11. Transplant herbs to pot to sell.
12. Mow and seed paths if needed.

MAY
1. Continue successive planting.
2. Prepare ideas for Lakefair Parade.
3. Start records of harvest.
4. What about May Day at the Farm?

JUNE
1. Prepare for county fair exhibit.
2. Lakefair Parade.
3. Continue successive planting.
4. Begin planning and planting of fall crops and winter brassicas.
5. Sell at Farmers Market.

JULY
1. County Fair.
2. Continue successive planting and transplanting.
3. As crops are harvested prepare beds (compost-mulch) for next crop or cover.
4. Continue to sell at Farmers Market.
5. Begin seed collection (vetch, clover, vegetables).
6. Begin drying and canning food for winter.
AUGUST
1. Begin preparations for Harvest Fair (to be held the week before school begins Fall Quarter) at the Organic Farm.
2. Continue transplanting brassicas and successive planting.
3. Continue collecting seed (vetch, clover, vegetables).
4. Harvest Grain.
5. Continue drying, canning and pickling food for winter (beans, squash, herbs...)
6. Harvest garlic (if not already done).
7. Prepare cold frames.
8. Write article for orientation issue of the Cooper Point Journal.
9. Workshop on fall and winter gardening.
10. Order winter rye and other cover crops.
12. Prepare winter storage areas for harvest.

SEPTEMBER
1. Begin planting garlic.
2. Begin cover crop planting (rye, clover, vetch, fava beans).
3. Continue harvest (corn, cabbage, broccoli, beans, apples, carrots, beets, turnips, etc.).
4. Plant fall crops of lettuce, spinach, radish, etc.
5. Collect seeds (peas and lettuce, both self-pollinating).
6. Continue transplanting.
7. Recheck with community gardeners to see who will have a winter garden.
8. Plant herbs for winter use in greenhouses (parsley, basil, wintergreen).
9. Rhubarb roots and comfrey can be divided and planted.
10. Make sure storage areas are complete.
11. Transplant herbs into pot to keep in the greenhouse.
12. Begin collecting fallen leaves from campus for mulch.

OCTOBER
1. Continue harvest and putting food away for winter.
2. Continue to collect seeds.
3. Plant garlic September 15 - October 15.
4. Plant in places where cold frames are to be used—onions, spinach, etc.
5. Plant potatoes for winter keepers.
7. Continue successive planting.
8. Trade seeds with Abundant Life Seed.
9. Gather bean and bean poles and store in the barn.

NOVEMBER
1. Tree and shrub pruning can be done during dormant period.
2. Onions can be sown and will germinate in early spring.
3. Collect string and store.
4. Community garden cleared and turned and planted to winter cover crop.

DECEMBER
1. Plan workshops.
2. Do complete tool repair and clean up and order new tools.
3. Begin planning spring garden.
4. Enjoy the winter and all the good stored food.
APPENDIX E

DAILY—WEEKLY—BI-WEEKLY—MONTHLY

1. Garden Survey in relation to record keeping will be done daily.
2. Caretakers should record temperature and humidity inside both greenhouses and outside (daily).
3. Caretakers should check tools (inventory).
4. Pick up food wastes from dorms, Mods, ASH, Saga and the co-op (weekly).
   This also includes making the compost the same day to avoid having the scraps attract insects and breed diseases.
5. Watering in the greenhouses in the summer and outside when needed.
6. Composting is the gardener's way of helping plants grow. It is very important to add compost at planting and midway in the plant's life cycle.
   So along with making compost weekly, adding compost should happen along with mulch.
7. Coordinator should keep records of Farm expenditures.
8. Keep a journal of plant growth and farm activities.
9. When planting designate which rows or areas or individual plants are to be saved for seed.
10. Review budget monthly (Coordinator).
11. Post current internships on bulletin board along with other local farm happenings (everyone, particularly Faculty).
12. Talk to visitors.
13. Coordinate work on farm and garden (daily).
15. Check paths for mowing and reseeding when needed.
16. Check the bees (weekly).
17. Continue community outreach (everyone, particularly Coordinator).

APPENDIX F

CROP SHEET

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<tr>
<th>CROP</th>
<th>Variety</th>
<th>Planting Date</th>
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<table>
<thead>
<tr>
<th>Location</th>
<th>Cultural methods (tillage, soil treatment, fertilizer, mulch, raised bed, seed treatment, seed or transplants, staked, etc...)</th>
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<tr>
<th>Spacing: at planting</th>
<th>after thinning</th>
<th>Thinning date</th>
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<th>Companion plants</th>
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<table>
<thead>
<tr>
<th>Disease, Insect and Animal Control</th>
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<td>Date</td>
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<tr>
<th>Watering Schedule (dates and extent of soil wetting)</th>
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<tr>
<th>Harvest Record (ave. length, avg. diameter, flavor, appearance, number harvested and date). If plants don't reach harvest: reason.</th>
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APPENDIX G

VEGETABLE VARIETIES GROWN AT THE T.E.S.C. ORGANIC FARM - 1980

BEANS, POLE
Cranberry Horticultural: Seeds from Abundant Life
  Good production, large beans
Louisiana Purple Pot: A.L.
  Good production, tasty, tender beans
Royalty Purple Pod: A.L.
  Good production, planted late, not vigorous growth, but good yield.

BEANS, LIMA
Watcom: A.L. Planted late (June 24). Didn't ripen.
  Planted in greenhouse; flowered, but didn't produce.

BEANS, BUSH, SNAP
Blue Lake: Western Farmers. Eaten by deer. Produced well, good quality,
  Late fall crop was ruined by mold.
Tender Crop: Planted at Harmony farm. Excellent results.
Tendergreen: A.L. Planted May 18, well drained soil; good yield.
  Late planting, good yield, but molded in fall.
Pencil Pod Wax: A.L. Very prolific, did well with corn. Needed support.
  Mold late in season.

BEANS, NAVY
Lucas: A.L. Poor germination, didn't produce well.

BEANS, PINTO
From A.L. Low yield, ruined by mold before the beans ripened.

BEANS, FA VA
Windsor, vegetable fava: A.L. Excellent yield. Overhead watering knocked
  plants over. Early spring plantings produced well.
Field fava, seeds from Woody Deryckx. Good yield. Should be planted in
  late fall, winter-hardy, and blossom early in May.

BEANS, SOY
  Maple Presto: ENTSOY. Matured, poor production.
Maple Arrow: ENTSOY. Good growth, but never reached full maturity.

BEETS
Detroit Dark Red: A.L. Produced well.
Lutz Green Leaf: A.L. Produced well, good greens, large roots.
Early Wonder: A.L. Produced well.

BROCCOLI
Italian Sprouting: planted April 3, excellent yield.
Early Purple Sprouting: A.L. Spring planting, didn't yield until the
  following March. Should be planted in fall for spring production.
  Early fall planting: prolific, small, tasty heads, winter-hardy.

BRUSSELS SPROUTS
Catskill: A.L. Didn't yield very well; froze in winter.
Danish: A.L. Transplanted well, slower to produce (?)

CABBAGE
Chieftain Savoy: A.L. Good yield.
Golden Acre: Good yield.
Mammoth Red Rock. Late maturing, re-grew small heads after main head harvested.
New Jersey Wakefield. Early season, good yield.

CABBAGE, CHINESE: all from Abundant Life
Bok Choy. Heavy attack by root fly maggot and slugs. Yielded well in
  early spring and fall - cold weather.
Japanese White Celery. Similar to above.
Pak Choy. Similar to above.
Bok Toy: Similar to above.

CARROTS -- early plantings avoided root fly damage
Danvers 126: A.L. Interplanted with lettuce, grew OK but were small.
Amsterdam forcing: A.L. Small yield, rust fly maggot problems.

CAULIFLOWER
Early Snowball: A.L. Did well, small to medium heads. Late season
discoloration of heads.
St. Valentines: A.L. Grew well, hardy crop yielded nice heads.

CHARD
Rhubarb Red: A.L. Grew very well, good quality producer.
Lucullus: A.L. Grew well, fine producer.

CORN - Salad
Variety unknown from A.L. grew well throughout the year.
CORN
Black Aztec: A.L.  Flint corn did well interplanted with bush beans.
Golden Jubilee: W.F.  Treated with captan.  Grew well, some seed eaten by
birds, matured late in season.
Morning Sun: W.F.  Treated with captan.  Grew well, some seed eaten by
birds, matured late in season.

CUCUMBERS
Early Russian: A.L.  Medium producer, nice long fruit.
Lemon: A.L.  Did well, tasty fruit.
Early Ochiai: A.L.  Grew fairly well but had poor germination rate.
Puget Pickler: A.L.  Late planting, produced small fruit.

EGGPLANT
Japanese Early Purple: A.L.  Flea beetle and virus damage (grown in green-
house) produced small fruit.

ENDIVE
Excellent growth, yielded late into fall, winter-killed.

KALE
Ornamental: A.L.  Grew very well and produced beautiful head.
Siberian: A.L.  Grew all summer and winter, produced prolifically.
Tall Green Curled Scotch: A.L.  Grew very well, produced prolifically.

KOHLRABI
Early Purple Vienna: A.L.  Produced well.
Early White Vienna: A.L.  Produced well into winter.

LETTUCE:
April plantings did best; all varieties did well.
Butter Crunch: A.L.  Overwintered well.
Oak Leaf: A.L.
Black Seeded Simpson: A.L.
Great Lakes Premier: A.L.
Iceberg: A.L.  Didn't germinate
Romaine:  Did great.
Salad Trim Red:  Not good appearance for marketing.  Overwintered well.
Winter Marvel:  Fall planting.  Overwintered well.

MUSTARD:
(See Chinese Cabbage)

MELONS
Early Hanover muskmelon: A.L.  Grown in plastic greenhouse, some yield,
killed by mildew in the fall.
Northern Sweet Waternelon: A.L.  Grown in greenhouse, one small fruit.

OKRA
Green Long Pod: Burpee.  Poor germination, didn't yield (grown in greenhouse).

ONIONS
Green Bunching, from seed.  Planted April 4, grew well.
Walla Walla Sweet, sets: Western Farmers.  Fair (interplanted in shade).
Yellow Globe.  Planted late, didn't mature.

GARLIC
Elephant Garlic.  Planted fall '79.  Grew well, didn't remove flower heads,
which caused small garlics.
White Garlic.  Grown at the Organic Farm several years, source and variety
not known.  Excellent yield.
Red-tinted Garlic.  Same as above.

LEEPS
Carentain: A.L.  Planted in February in trenches, did well.

PARSLEY
French type.  Grew well all summer, fall and winter, into spring.
Mossy curled.  Grew well.

PARNSIPS
Didn't germinate.

SALSIFY
Grew well, but dug up by mistake before harvesting in early spring.

PEAS
Alaska Early: A.L., Saved seed from previous years.  Planted in early
March, grew very well, good yield.
Sugar Snap: Grew well, very tall, good yield.
Oregon Sugar Pod: Didn't do very well: late variety, virus resistant.
Dwarf Grey Sugar: Fairly good yield, wasn't very tasty.
Lincoln: Shell pea, did quite well.
Laxton progres: Planted late, virus resistant, didn't grow well.
Chinese Snow Peas: Early planting, did very well.

PEPPERS:
Produced in greenhouse, not outside.  All from A.L.
Cayenne: Aphid problems, poor germination, good production eventually.
Red Marconi: A.L.  Produced fairly well.
King: Did well.
Cal Wonder: Did quite well.
Sweet Bull Nose: Grew and produced quite well.
POTATOES: attacked by flea beetles; early plantings outgrew them, late had more damage.
Norland, Early Red: Western Farmers certified. Did fairly well.
Pontiac, Late Red: " " " " " " " " " " 
Netted Gem, Late White: " " " " " " " " " " 
White Rose, Early White: " " " " " " " " " "

PUMPKINS
Streaker, Naked seeded: Nichols. Very poor germination, poor yield.
Small Sugar: A.L. Excellent production.

RADISHES
Daien: A.L. Good growth but mostly attacked by root maggots.
Cherry Bell: A.L. Best crop from early planting.

RUTABAGAS
Laurentian: A.L. Good producer, late season growth.

SPINACH
Bloomsdale Longstanding: A.L. Good crop, plant early to prevent bolting.
Savoy: A.L. Grew well but not maintained.
Winter Bloomsdale: A.L. Grew well, winter variety.
Thick Leaf: A.L. Fine winter variety.

SQUASH - summer
Scallop: Nichols
Scallopini: Nichols. Both varieties grew and produced well
Yellow Crook Neck
Yellow Straight Neck: A.L. Neither grew very well and suffered from mold damage.
Zucchini, Dark Green: A.L. Poor germination but produced fair.

SQUASH - winter
Butternut Waltham: A.L.
Sweet Meat
Spaghetti

ACORN: all of above from A.L.

SOY BEANS - see beans

SWISS CHARD - see chard

TOMATOES - all early plantings suffered from flea beetle damage.
Italian Plum: A.L. Fairly late producer, tough, resistant fruit, heavy yields and slow to mature.
Nova: A.L. Plum type, early producer, medium yield and fruit susceptible to rot.
Red Cherry: A.L. Outdoor crop, only fair production, better growth in greenhouse.
Ponderosa: A.L. Medium size, good producer, late maturity.
Williamette: A.L. Medium size and production.
Sweet 1000: A.L. Very good producers, huge plants.

Unknowns and volunteers grew the best and produced the most.

TURNIPS
Purple Top White Globe: A.L. Early crop, did quite well.
Shogoin: A.L. Planted late, did poorly.
Subject: Fiscal and administrative responsibility for The Evergreen State College's Organic Farm and Garden.

Purpose of this agreement: Prior to the time of this writing, the farm had been bounced between programs 040, 060, and 160 several times. It was hoped that this agreement would serve as a means for maintaining an attitude of joint ownership, of mutual respect and of shared responsibility between academic programs, plant operations, and student activities.

Whereas both the instructional program (060) and the Services and Activities Fee Review Board (S & A Board) have supported the operation of the Organic Farm and Garden in part since 1972, and whereas the S & A Board allocated funds for construction of a new farmhouse during the winter quarter of 1975, and whereas plant operations has supported the utility operation of the farm fiscally since 1972, the following agreement is made relative to fiscal and administrative responsibility for the Organic Farm and Garden:

1. Because of its value as an instructional resource and field laboratory, the institution, primarily through programs 040 and 060, will support its operational costs as well as share in the responsibility for establishing use policy and guidelines for caretakers and others.

2. Because of its value as a leisure pastime in addition to its instructional and field laboratory value, the S & A Board will hear requests for funds to support the purchase of agricultural equipment and supplies, and to share in the responsibility for establishing use policy and guidelines for caretakers.

3. Sharing in this regard means no decisions which would affect any of the parties involved would be made without mutual consultation.

Date: June 25, 1975

Academic Budget Desk Dean

Plant Operations Representative

Services and Activities Review Board

Executive Secretary

Student Activities Representative

bhn

3/25/75
Herb Garden 1977

S
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Herb Garden 1978

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N
**Winter Rye**

- **Crops Planted**:
  - White Dutch Clover
  - Wheat
  - Triticale
  - Rye
  - Squash

- **Fields**:
  - **No-Till using wheat and various clover**
  - **Sweet Clover**
  - Barley
  - Soybeans
  - Oats
  - Rye

**Scale**: 1" = 20' (approx.)

- Crops named indicate spring 1980 plantings.
- Numbers indicate separate fields, for identification.

**Notes**:
- Plants need to feed and flower in heavy metal areas.
- ROB's Block southwest of the site is used for experimental garden plots.
- These plots are used for growing and evaluating new species.
- Solar greenhouse is not to scale.

**Location**:
- T.E.S.C. Main Garden

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**Diagram**:
- Game Road
- Lewis Road
- Trigon Road
- The Gardens
- Westfield Site
- T.E.S.C. Site

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**Legend**:
- (T)
During the winter quarter, As You Sow covered the following main topics:
1. Soil science; 2. Organic horticulture and garden planning; 3. Seminars and speakers on social, political, economic and cultural aspects of agriculture; 4. Preparation of research proposals by the students; 5. Workshops on agricultural skills. In addition, students gained skills by writing reports and journals, giving class presentations, leading seminars and participating in group decision-making and task forces. Two faculty members were assigned full-time to the program: Fred Stone (Agricultural Ecology) and Steve Herman (Wildlife Conservation, Research).

Soil science consisted of weekly lectures and occasional field experiments. The text was Brady, Nyle C., The Nature and Properties of Soils (8th ed.), supplemented by outside readings. Topics included physical and chemical properties of soils; soil organisms and organic matter; soil water, air and temperature; pH and liming. Additional topics will be covered during spring quarter. Students completed a major experiment in compost making. Working in small groups, they located local sources of compost material, planned a pile to include a proper nutrient balance, constructed the pile and recorded its temperature and appearance, and wrote a report on the results. A take-home exam required the students to explain fully the physical, chemical and biological changes which occur during organic matter decomposition, and to discuss the effects of organic matter on soil.

Organic horticulture was done through individual and group activities: each student did a research report on a garden vegetable, which included: varieties adapted to Western Washington, climate, soil and nutrient requirements, pests, diseases and controls, yield, nutritional value and sources. Reports were given orally to the class, and one page summaries were written for compilation into a vegetable handbook. Students also worked in groups to plan sections of the Organic Garden, order seeds and begin soil preparation and planting.

Weekly seminars covered socio-economic aspects of agricultural change, using readings from Rodefeld, R.D. et. al., Change in Rural America: causes, consequences and alternatives. The readings were alternated with the following books:

Aldo Leopold, Sand County Almanac; Robert Frost, Selected Poems; Lappe and Collins, Food First; Fukuoka, One Straw Revolution; and Pearl Buck, The Good Earth.

Students were required to write a journal entry on each seminar reading, and to lead one seminar. The seminar leader was expected to do additional research on the seminar topic and to prepare a written and oral presentation about it.

A number of speakers gave the class additional insight into agricultural problems occurring locally and in third world countries. Speakers included:
- Dan MacDonald, Washington Department of Agriculture, Small Farm Program: Problems of Washington farmers.
- Fred Stone: Utopia and the American dream, and Agricultural systems of Southeast Asia; problems and solutions.
- Steve Herman: Applied aspects of pest management, and Peasant agriculture and agri-business in Guatemala.
- Randy Son, Washington Small Farm Network: Recent trends in support of small scale agriculture.
- Munk Bergen: Present trends in professional pest management in Washington state.
- Clare Dykeman, Washington State Office of Environmental Education: Planning an educational farm for alternative agriculture.
- Woody Deryckx: Cropping systems and soil management in England, the Netherlands, Germany and Switzerland.

Students put a large amount of effort into developing research topics and writing their research proposals. This quarter, the emphasis was on library research, formulating a research question, and research design. The research will be carried out in the next two quarters.

Workshops included:
- Composting: Fred Stone, Pat Messner, and other students.
- Group decision making: Eric Einspruch and Tony Jucevic
- Tool care: Kurt Danison
- Goat raising: Burt Rydell of Amber Acres Goat Dairy
Spring quarter, As You Sow focused on plant physiology and land use planning for small scale farms, as well as continuing the winter quarter activities, namely: student research projects, seminars and readings on social aspects of agricultural change, and applied agricultural skills. Students kept regular journals documenting their progress, gave class presentations on a library research topic, led a seminar and participated in group planning sessions. Faculty members included Fred Stone (Agricultural Ecology), full time, and Richard Cellarius (Plant Science), quarter time. Richard taught the Plant Physiology portion of the program.

Plant physiology included two lectures (11 hours each) per week and an afternoon session which included some laboratory work, student reports and additional lectures. The text was Galston, Davies, and Satter, The Life of the Green Plant, 3rd ed. Topics were cellular metabolism, plant nutrition, nutrient cycles, water relations, plant growth and development, and the effects of light on plant function. Labs were carried out on plant structure and adaptation, mineral nutrition, and photosynthesis (the Hill reaction), the latter being done by only part of the class. Dr. Lynn Miller demonstrated microbiological methods and made cultures of micro-organisms found in compost piles, followed by a discussion of the microbiology of decomposition. Each student did weekly library readings on current literature relating to plant science and kept journal notes on them. Once during the quarter, each student presented a report to the class on a topic covered in their readings. Students also wrote journal entries answering a weekly question sheet, and completed two exams during the quarter.

For the land use planning exercise, students working in groups of four to six selected a local farm and found out what they would need to know about its soils, land use and economic situation in order to decide whether or not it would be feasible to purchase it. Students surveyed the soil, talked with the farm owner, and visited the local assessor, auditor, planning, public works, and real estate offices to determine land use regulations, taxes, property encumbrances, and the land value and markets for various types of produce. Each group wrote a report on their selected farm and presented a report on it to the class.
Socio-economic aspects of agricultural change were covered through readings, seminars, speakers and field trips. Books read and seminared on were: Berry, The Unsettling of America; Anderson, Plants, Man and Life; Steinbeck, Grapes of Wrath; Logan, The Land Remembers, King, Farmers of Forty Centuries; Todd (ed), The Book of the New Alchemists; Nair, Blossoms in the Dust; and Berry, Farming, A Handbook.

Speakers were:
Russell Fox, Evergreen faculty: Land use regulations effecting agriculture.
William Brown, Evergreen faculty: Agricultural options in the U.S.
Fred Stone: Problems of development programs in Southeast Asia.
Becky Leibman, Director, Olympia Farmers Market Ass'n: Farmers markets.
K.V. Ladd, Evergreen faculty: Chemicals and agriculture.

A two day field trip to Seattle acquainted students with problems of small farmers of King County. Visits and speakers included: Marilyn Chase, Bulk Commodity Exchange; Keith Aartz, King County Agricultural Department, The Farmland Preservation Act; Louise Dicks, Pike Place Market, farm coordinator; Roger Wexler, Community Produce, buyer; Steve Craighton, King County Extension: programs for small farmers; Sharon Hart, Interim: community gardens in the International District. The theme of the field trip was innovative developments in King County aimed at preserving farmland and the livelihood of the farmers.

Applied aspects of agriculture were learned through work at the Organic Garden, visits to local farmers and workshops. A major effort went into the planting of the Organic Garden. A related workshop was given by some of the students on planting and transplanting techniques. Additional garden work included growing and selling starts. Students also prepared and marketed produce on campus, at the Olympia Food Co-op and at the Olympia Farmers Market. The grain fields were hand-spaded and planted to small grains and legumes. Special attention was paid to soil care, with compost made and applied regularly. Kurt Pohl talked to the class about hog and cattle raising methods at his farm. Jasper Martin, who runs an organic vegetable farm south of Olympia, discussed his methods of vegetable growing and dust mulching to reduce water loss. Vegetable farmers near Woodinville demonstrated their methods and their marketing strategies during the field trip there.

Melanie Bennett and Norbert Lazar gave a workshop on home brewing of beer.

Work continued on the research projects which were planned winter quarter, with the emphasis this quarter being on field work and collection of data.

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AS YOU SOW: A STUDY OF THE SMALL FARM

Program Description
Summer, 1980

Summer quarter of As You Sow was a continuation of the previous two quarters. Activities included: pest management; seminars, speakers and field trips focusing on social, economic and political aspects of small-scale agriculture; applied organic agriculture; and writing workshops. Students continued to work on their research projects and wrote a final report on their findings. The students also completed an economic plan for a local farm, kept a regular journal, presented written and oral reports to the class and participated in group projects and decision making. Faculty member Richard Cellarius (quarter time) taught six writing workshops and critiqued the research reports. Fred Stone (program coordinator) taught pest management and coordinated the rest of the program activities.

Pest management included one lecture (1-3/4 hours) and an afternoon practicum each week. Texts were: Metcalf and Luckmann, Introduction to Insect Pest Management; Niehaus and Ripper, A Field Guide to Pacific States Wildflowers; and Borror and White, A Field Guide to the Insects. Lecture topics included: pest management concepts; ecological aspects; economic considerations; plant resistance; parasitoids; predators; diseases; insecticides; semiochemicals; sampling pest populations; modeling and computers; and tree fruit pest management. Several speakers and field trips acquainted the students with current developments in pest management. Speakers were:

Dr. John Perkins, T.E.S.C. Dean: Changing pest control strategies.
John Peard, T.E.S.C. pesticide residue testing lab: The impact of pesticides on the environment, and methods for testing for residues.
Dr. Art Antonelli, extension entomologist, Western Washington Research and Extension Center at Puyallup: Current research on controlling insect pests without pesticides.
Dr. Ralph Byther, Plant pathologist, Puyallup: Vegetable and fruit diseases and their control.
Dr. Jay Bruner, Fruit Tree Research Center, Wenatchee: Use of computer models to determine optimal time for pest control.
Gary Moulton, Western Washington Fruit Tree Research Station, Mt. Vernon: Selection of disease resistant fruit trees for Western Washington.
The class went on a week-long field trip, and learned pest management methods directly from organic growers, including:

Wilma Ramirez, Blueberries, Puyallup: vegetable crops, herbs, raspberries.
Jeff Lauderbach, John Brownfield, Paul Lanphere: apples and pears.

Students spent the afternoon practicum sessions learning to identify garden weeds and insects. Each student also prepared a report on a local pest, using library resources and information from extension and local farmers. The reports were presented orally to the class, accompanied by a summary sheet. A question sheet was given out each week on the reading material, and students wrote the answers to one topic area in their journal every week in lieu of exams.

Seminars: Seminars were held bi-weekly through the summer, alternating with field trips. Books were: Van den Bosch, The Pesticide Conspiracy; Nichols, The Milagro Beanfield War; Mooney, Seeds of the Earth; and Berry, Farming, A Hand Book. The class also had a debate on "pure" organic agriculture versus integrated pest management. The theme of the seminars, social, economic and political aspects of small scale agriculture, was extended through speakers and field trips.

Speakers were:
- Lloyd Flem, President, Washington State Farmers Market Association: Selecting enterprises and marketing considerations for small farmers.
- Dan McDonald, Washington State Department of Agriculture: Current trends in alternative agriculture and corporate agriculture.
- Fred Stone: The un-economics of small farms.

Field trips, on which we studied economic problems of local farmers at first hand included:
- Jim Ward's farm, Montesano: vegetables and beef cattle.
- Sam Benowitz, Montesano: fruit tree nursery.
- Blue Heron Farm, Rochester: vegetables.
- Carolyn Commeau and Dylan Gillis, Olympia: vegetables without irrigation.
- Becky and Woody Deryckx, Concrete: mixed farming.
- Candlelight Coyote, Mt. Vernon: vegetables and herbs.

Students also did an economic analysis of a local farm in which they determined the expenses involved in buying and operating the farm. The students worked in groups to plan the future operation of the farm, the enterprises which best suited the land and markets, and the means of financing their investments. The reports were given orally to the class with a written summary.

Work in the Organic Garden continued through the summer, with emphasis on soil building, weeding, watering, harvesting and successional plantings. The results of intensive composting and soil building over the past year were evident in the quality and quantity of produce from the garden. Several students carried out additional projects at the Organic Farm in lieu of the economic study. Projects included: teaching community workshops in organic gardening, constructing and staffing a booth at the Thurston County Fair (which won the outstanding exhibit award), construction of a lumber shed, rebuilding a tool shed and remodeling the existing tool shed, and marketing produce at stores and the farmers market.

Workshops also contributed to applied farming knowledge:
- Richard Cellarius, T.E.S.C. faculty: Winemaking.
- Sam Benowitz and Michael Dolan: Starting fruit and nut trees and grafting.
- Amy Kersten: Canning.
- Fred Stone, Billy Omey and Bob Dickenson: Identification and uses of garden herbs.
- Andy Schwarz: Use of small tractors in cultivating vegetable crops.
- Forrest Roth-Shomer: Seed production.
- Cara Stiles: No-till grain and legume growing.
During fall quarter, Small Scale Agriculture dealt with the following main topics: 1. Soil science; 2. Seminars and speakers on social, political, economic and cultural aspects of agricultural change; 3. Preparation of research proposals, journal writing and class presentations by students; 4. Applied organic horticulture and agricultural skills. Students also participated in program planning and group decision-making, in planning and growing an organic garden, and in assisting with community outreach projects. Fred Stone (Agricultural Ecology) taught the program full-time, and Russ Fox (Community Planning) assisted students with their research proposals.

Soil science consisted of two lectures and a practicum each week, emphasizing ecological approaches and organic methods of soil management. Texts were: Cox and Atkins, Agricultural Ecology; Hainsworth, Agriculture, The Only Right Approach; Stella, The Geography of Soils; Mollison, Permaculture Two. Students were encouraged to do additional outside reading. Topics included: the development of agriculture and domestication; soil physical and chemical properties; soil formation; soil organisms and organic matter; nutrient cycles; soil water; effects of cultivation on soil erosion; irrigation; maintenance of soil ecosystem; practical organic farming and no-till methods. The practicum sessions included design of a composting experiment, field testing of soil, identification of soil organisms and determination of organic matter content of soil. Students were required to write answers to weekly question sheets and to summarize their knowledge in a final paper.

Seminar books were: Berry, Farming, A Handbook; Merrill, Radical Agriculture; Carter and Dale, Topsoil and Civilization; Leopold, Sand County Almanac; King, Farmers of Forty Centuries; Buck, The Good Earth; White, Medieval Technology and Social Change; and Kukuoka, One Straw Revolution. In addition to completing the readings, each student wrote a journal entry of each book, and led a seminar. The seminar themes of agricultural change and the impact of agriculture on soil was extended by speakers, including: Fred Stone, Agricultural Systems of Southeast Asia; Giovanni Shore, Agricultural Problems among Mexican Indians; Eric Einspruch, The USDA Report and Meeting on Organic Agriculture; Norma Epstein.

Students developed a research topic and prepared a research proposal concerning alternative agriculture. Students also kept regular journals containing entries on program activities, natural history and their learning progress. They were also encouraged to give a class presentation relating to some aspect of the program.

Applied organic horticulture and agricultural skills were learned by hands-on experience at the Organic Farm, workshops and field trips. Fall farm work involved harvesting and storing garden produce, preparing the garden for winter, making cold frames and hot beds for winter gardening, compost making and mulching, and construction of a lumber shed roof. Books used on organic horticulture were: Colebrook, Winter Gardening in the Maritime Northwest; Rodale, The Basic Book of Organic Gardening; Seymour, The Self Sufficient Gardener.

Workshops were held on: Tool Care by Kurt Danison; Orchard Planting and Pruning by Sam Benowitz; Nut Tree Culture by Michael Dolan; No-till Grain Raising and Double Digging Raised Beds by Mark Lacina; Winter Gardening and Edible Wild Plants by Fred Stone; Identification and Uses of Cultivated Herbs by Nancy Jean Roberts, Ronald Desrosiers and Fred Stone; Goat Raising by Gregg Wichelns, Biodynamic Methods by Janet Obodov and Ethanol Production by David Cox.

Visits to local farms gave the students practical knowledge about the problems and methods of small-scale farming. Farms visited included: Blue Heron Farm, Phil Isom, Oakville: Commercial organic market gardening; Giovine-Kerr farm, Rochester: Hay and horses; Little Egypt Greenhouse, Shelton, Eli Herron: solar and hot water-heated greenhouse; commercial organic greenhouse; Amber Acres Goat Farm, Rochester, Burt Rydell: Dairy goats; Scatter Creek Nursery: Organic greenhouse; Raintree Nursery, Horton, Sam Benowitz, Michael Dolan: Fruit and nut trees; Llama Farm, Gayer Dominick, Olympia.

Students also assisted in hosting an all-day workshop on Pest Management, held at Evergreen with speakers from the Cooperative Extension Service and the Tilth Organization.
SMALL SCALE AGRICULTURE: A STUDY OF THE SMALL FARM

Program Description

Winter Quarter, 80/81

During winter quarter, the Small Scale Agriculture program continued with the main themes begun in the fall. The main components of the program were:

1. Agricultural climatology and designing farming systems;
2. Land Use Planning: the biennial plan for the Organic Farm;
3. Seminars and speakers on alternative agriculture;
4. Continuing with research projects and journal writing;
5. Applied organic horticulture, farm work, workshops and field trips.

Students also had the option of taking modules for partial credit: Making a Living from a Small Farm by Lloyd Flem and Biodynamic Agriculture by Janet Obodov. Fred Stone, Agricultural Ecologist, was the only full-time faculty member.

Texts used in agriculture climatology were Cox, Agricultural Ecology; Stella, The Geography of Soils and Mollison, Permaculture Two. Topics covered during the quarter were: global patterns of climate, vegetation and soils; world agricultural systems; soil classification according to the latest approximation; bioclimatology; modifying climate with plants; plant breeding; adaptations of plants to the environment; and environmental design of farming systems.

Students wrote answers to weekly question sheets on the lecture topics, and completed a final paper on a design for an environmentally sound agricultural system for the college's Organic Farm.

Land use planning was done as an extension of the lecture portion of the program. Carolyn Dobbs gave a workshop on the planning process, and the class worked on the biennial plan for the Organic Farm. Land use based on soil classification was also emphasized on field trips, using the Thurston County Soil Survey. Group process was an important part of the biennial plan, with students preparing and presenting portions of the plan for group response. A major part of the plan was completed, with only the final editing still to be finished.

Seminar readings were: Anderson, Plants, Man and Life; Lappe and Collins, Food First; Merrill, Radical Agriculture; Berry, The Unsettling of America; Kramer, Three Farms; Gandhi, Autobiography. In addition to participation in seminar discussions, each student wrote a journal entry on the reading and led a seminar during the quarter. Seminars emphasized the economic and political aspects of agricultural change, and approaches to alternative agricultural systems. Speakers elaborated on these themes, and gave insights on existing alternative agriculture organizations in the Olympia area. Speakers included: Rabina Bergren and Sharon Newell, The Local Farm Network and The Olympia Food Co-op; Mike Maki and Debby Bradford, The Tilth Organization; Lloyd Flem, The Washington Direct Marketing Association; Sharon Hart, Agriculture in Yemen. The class also viewed films on agricultural land preservation (The Only Essential Industry) and the Pike Place Farmers Market (The Last Farmer in the Market).

The land use and seminar themes were further explored during a two-day trip to Seattle and King County. The trip included: visits to: truck farmers Tim Winship, Fred Zante and Juan De Los Angelos; The Ste. Michel Winery; The Bulk Commodities Exchange; The Pike Place Market Association; The King County Agriculture Department; King County Cooperative Extension; The International District Community Gardens; The Tilth Urban Agriculture Demonstration Site and the Puget Consumers Co-op. At each stop, representatives of the organization talked to the class about the problems facing agriculture in King County, and the efforts being made to support small scale farming.

The major farm work completed by the class winter quarter was the planning and planting of an orchard and renovation of the plastic greenhouse. Planting was also begun in the solar greenhouse, and seeds were ordered for spring planting. Students exchanged work at Raintree Nursery, Morton, for orchard trees. Students continued to learn organic horticultural methods from direct experience at the Farm, and through workshops and field trips. Texts used were: Colebrook, Winter Gardening in the Maritime Northwest; Rodale, The Basic Book of Organic Gardening and Seymour, The Self Sufficient Gardener.

Workshops were conducted on: Planting Fruit Trees by Gregg Wichelns; Planting Blueberries by Kathy Scandibar; Horse Selection by Ivy Otto; Dyeing and Spinning Natural Fibers by Liz Frey and Felicia Danon. The class went on field trips to several local farms, in order to gain a direct understanding of farming methods and the problems involved in agriculture. Farm trips were: Draft horses and mules, Yelm; The Evergreen Dairy, Murray Weiks, Little Rock, a large commercial dairy; and The Eberhardt Blueberry Farm, Olympia, The Dempseys, commercial berry farming.
Students had an opportunity to participate in several other events relating to small scale agriculture: An Alternative Agriculture Career Workshop; the annual meeting of The Washington Direct Marketing Association at the Organic Farm; meetings of The Tilth Organization. Several students also assisted in teaching Leisure Education courses on Organic Gardening and Organic Farming at the Organic Farm.