

Sowing Seeds for the Future

Practicum in Sustainable Agriculture at UBC Farm



October, 2009

“Sowing Seeds for the Future” Overview

What is it?

A season-long practicum in Sustainable Agriculture.

Who is involved?

Participants can come from all backgrounds and are expected to be passionate about pursuing a career in sustainable agriculture.

Our **Field Mentor** will guide students through hands-on experience on our working farm.

Our **Education Mentor** will coordinate complementary educational activities, lectures and farm visits.

UBC Farm Staff will work alongside the students and the Field Mentor, keeping all activities within the context of a working farm setting.

Our producer-led **Steering Committee** will provide oversight for the program’s operation.

The **UBC Farm**, through the Faculty of Land and Food Systems, will host the practicum.

Where is it?

Most instruction will take place at the UBC Farm, the last working farm within the city of Vancouver. Visits to local farms will be included as part of the practicum.

Why are we doing this?

BC needs new farmers. Current population trends suggest that many of these new farmers will have to come from urban backgrounds. We feel that a knowledge-intensive, small-scale, diversified farming model using direct marketing provides a viable and rewarding way for new farmers to establish themselves.

What’s New for 2010?

Following two full seasons, the Sowing Seeds practicum is making several changes to its structure to reflect feedback from our 2008 and 2009 apprentices, our UBC Farm Staff, and our Steering Committee. The information contained in this overview reflects the current direction of the project (November 2009) and further details, including the course outline, will be posted later this year. Program details are subject to change. In the meantime, we are welcoming applications to the 2010 practicum.

For 2010 we have identified the following:

- The practicum will emphasize applied agro-ecological theory through practical and instructional field activities. Lectures, farm visits and educational activities will complement these core practical activities.
- Sowing Seeds 2010 is directed towards beginning agriculturalists, however, students will benefit most who have some prior theoretical knowledge of agricultural principles.
- Practicum hours have been adjusted both to increase program quality and accessibility to students.
- We aim to increase the participation of undergraduate students in relevant disciplines (e.g. Applied Biology, Applied Science, Botany etc.), while still welcoming applications from the general public.

When will this happen?

In 2010 the Sowing Seeds practicum will run for 8 months, from March 13–November 6. Hours vary throughout the growing season:

- In March and April, the practicum will run one day per week (Saturdays 9-5).
- From May to August, the practicum hours increase to 21 scheduled hours per week (Wed 9-12, Thurs 9-12, Fri 9-5¹, Sat 8-5).
- From September to November, scheduled hours will be on Saturdays (8-5) with 7 flexible hours on either Thursdays (9-5) or Fridays (9-5).

Students should anticipate spending, on average, an additional 4 extra hours per week completing readings, class projects and tending to their personal garden plots (“Discretionary hours”).

Sowing Seeds General Information

1. The UBC Farm and Centre for Sustainable Food Systems

The Centre for Sustainable Food Systems (CSFS) is an interdisciplinary learning, research, and community service program of UBC’s Faculty of Land and Food Systems. The Centre is the primary steward of the UBC Farm, a 24 ha site located on the south end of UBC’s Vancouver campus.

2. Sowing Seeds

Sowing Seeds is a practicum course for experiential learning in sustainable agriculture. While the UBC Farm has provided practical and theoretical education to thousands of students and volunteers since 2000, Sowing Seeds began in 2008 and is the first formal program we have offered that extends for a complete growing

¹ Harvest Fridays may go over time and students are expected to stay till tasks are complete.

season. The program is partially modeled upon UC Santa Cruz's Apprenticeship in Ecological Horticulture, as well as the Linnaea Farm Ecological Gardening Programme.

Our eight-month practicum offers instruction and daily work experience in sustainable farming. In a hands-on learning approach, participants work alongside staff in the greenhouse, gardens, fields, and orchard, and are exposed to the different aspects of sustainable production on both the garden scale and a tractor-cultivated field scale. Students attend complementary lectures, demonstrations, and farm visits, and participate in a variety of practical and reflective educational activities. Direct marketing activities are also a key part of the experience.

Sowing Seeds is designed as an entry point for aspiring growers, educators, and agricultural professionals. Students interested in starting their own operations are strongly encouraged to pursue further training with a mentor after completing the Sowing Seeds program. Through the program, students will be introduced and connected to a network of established organic producers in BC. UBC Farm staff will assist students interested in post-practicum work on established farms.

A certificate of completion will be issued to students who complete the program requirements. Please note, **this is a non-credit practicum** and therefore participants are unfortunately not eligible for student loans. However, UBC students who participate in the program have many opportunities to apply their on-farm experience towards directed studies credits. Supervising faculty members will work in cooperation with farm staff to ensure that students' on-farm efforts are appropriately recognized when considering directed studies credit. Please note that in 2010 we are offering a **fee discount for UBC students who register, and successfully earn credits, for a directed studies** based on their Sowing Seeds Practicum (see section 7 for details).

3. Facilities

The program takes place at the UBC Farm, at the southern end of the University of British Columbia's Vancouver campus. The Farm is located on the traditional territory of the Musqueam people. Surrounded by coastal hemlock forest, the UBC Farm stewards a 24-ha landscape, forming a rich mosaic of cultivated field areas, hedgerows, orchards, indoor and outdoor classrooms and maturing successional forest stands. The diversity of the landscape provides valuable habitat for a range of birds, mammals, amphibians, and reptiles not found elsewhere in the city.

The gently sloping southern aspect of the site and moderate maritime climate allow for cultivation of a wide variety of crops year-round. The soils are well-drained and sandy, and are therefore workable most of the year.

Up to 250 different varieties of annual and perennial crops are cultivated at the farm in a given year. Vegetables, fruits, berries, herbs, edible and cut flowers, transplants, eggs, and honey are all produced. Annual crops and grazing livestock are managed in

a multi-year crop rotation. All practices voluntarily adhere to COABC standards for organic production. Certification of the UBC Farm is in progress.

The site is managed as an integrated, working farm system. Produce sales are the largest single source of income from the farm used to support staff wages and the academic programs on site. Food grown on-site is provided to the UBC community through weekly farmer's markets, a Community Supported Agriculture (CSA) box program, and direct sales to restaurants and campus food services. This self-sufficient operating style puts the learning experience in a context that is similar to conditions an aspiring grower may experience in the private sector. At the same time, the community and educational context of the UBC Farm offers a unique and culturally rich learning environment.

The farm has kitchen, office, workshop, storage, processing areas and limited classroom space on-site. Two glass greenhouses and two poly houses provide facilities for plant propagation. Free range chicken flocks and honeybees are the only livestock on site at the moment, but there is a strong interest in diversifying the animal component of the farm. An on-site compost facility turns organic waste from campus into a valuable soil amendment. The farm is home to a heritage apple orchard, numerous teaching gardens and research plots, a cob tool shed and a basic complement of powered field equipment and hand tools.

4. Topics

The intention of the practicum is to provide students with the basic practical skills and concepts necessary for the sound management of sustainable small-scale farms. The daily and seasonal activities of farming – planning, production, crop care, harvest and marketing – form the basis of this learning. A strong group learning environment will be fostered, and the theoretical framework for the practical field skills will be explored through discussions, applied exercises, lectures, farm walks, readings, and record-keeping. Topics to be covered throughout the practicum generally fall into these categories:

- **Sustainable Farming Practices**
 - Soil management – Soil texture and structure, field tillage and cultivation, fertility management, preparation and use of compost, soil testing and interpretation.
 - Seeds - Propagating crops from seed, seed selection and sourcing, potting mixes, seedling care, seed saving.
 - Transplanting and direct seeding – Seedbed preparation, mulching options, timing and germination.
 - Irrigation - Principles and practices, use of low-flow and conventional irrigation systems.
 - Selecting and using cover crops – Benefits and uses, over-winter cover.
 - Promoting biodiversity – Establishing and maintaining hedgerows, set-asides, on-farm habitat features.
 - Managing arthropod and vertebrate pests - Identification and monitoring, prevention, encouragement of beneficial organisms, responses.

- Managing plant pathogens – Signs and symptoms, prevention, responses.
- Managing weeds – Timing, cultivation, mulches, rotation, implements.
- Harvesting – Timing, techniques.
- Animal integration – Benefits and drawbacks, poultry care.
- Agroecology in a changing climate.
- **Direct Marketing and Farm Business Management**
 - Post-harvest processing, on farm food safety.
 - Direct marketing – Farmer’s markets, CSA box programs, direct sales agreements with restaurants and institutions, general marketing strategies.
 - Business management – Record keeping, calculating contribution margins for specific crops.
 - Health and Safety on Small Farms - Risks and hazards, responsibilities of employers and employees.
 - Organic Certification and regulation.
 - Land Tenure – Models of ownership, leasing arrangements, co-operatives, the Agricultural Land Reserve.
 - Resources – Introduction to existing organizations and networks.

A full course outline will be available on the UBC Farm website prior to the application deadline (December 1, 2009).

5. Instructional Techniques

Sowing Seeds 2010 will emphasize applied agro-ecological theory through field activities. Most of the learning in the practicum happens through doing, and the Field Mentor, Field Production Coordinator and field staff will work alongside students. This hands-on mentorship forms the core of the learning experience, and students will be guided through technique demonstrations and practice. The Education Mentor will link the field activities to structured learning objectives through the season. The following table outlines the complementary instruction methods used in the practicum:

<p style="text-align: center;">Field Work and Practical Instruction</p> <ul style="list-style-type: none"> • ~70% of total time 	<p>Working in the field alongside experienced staff on a diverse range of field tasks forms the core learning experience of the practicum. Any new task will be preceded by practical instruction and will be practiced under mentorship. Field work will reflect the farm's seasonal priorities and involves strenuous physical labour in all weather conditions.</p>
<p style="text-align: center;">Lectures and Educational Activities</p> <ul style="list-style-type: none"> • ~30% of total time 	<p>The Education Mentor, farm staff, and visiting experts will provide theoretical instruction through complementary: discussions, farm walks, lectures, readings, record keeping and applied exercises.</p>
<p style="text-align: center;">Farm Visits</p> <ul style="list-style-type: none"> • 2-4 visits per year 	<p>Visits to established local farms will provide a perspective on how innovative systems are developed by producers to secure a viable niche.</p>

Examples of daily practicum activities include: bed preparation, transplanting, weeding, thinning, composting, harvesting, and produce preparation, storage, and marketing. Rotational positions of responsibility, such as greenhouse management, egg collection, seed sowing, blog posting, harvesting, irrigation, cooking, cleaning and selling at market, will be scheduled in advance.

Please note that **field work involves strenuous physical work and takes place rain or shine**. Students are encouraged to apply for the program only if they are comfortable with the physical requirements of farm work. We structure the program to ensure that all students experience a variety of tasks, however applicants are asked to note that involvement in this scale of production also involves sustained periods of repetitive tasks, such as weeding and mulching.

5.1.1. Personal Garden Plots

Students will have the opportunity to practice new skills in their own personal UBC Farm garden plots. Plots have been a favourite amongst our 2008 and 2009 students. The opportunity to care for plants for the full growing season, to learn from each others' growing styles, to practice techniques and to experiment has increased students' confidence in their own skills. Regular plots sessions are included in the schedule, during which time the Mentors will be available to provide feedback and guidance. Additional time tending to personal plots is accounted for in the "Discretionary hours" (average 4 hours/week) and should be taken into consideration by prospective students. The scheduled weekly practicum hours (e.g. 21 hours/week mid season) do not include these "Discretionary hours." Typically, the establishment of plots in the early season requires the highest number of "Discretionary hours."

5.1.2. Practicum Instructors and Staff

Students learn and work with a diverse team. Some of the people involved in the practicum include:

Field Mentor: The students' primary field contact. The Field Mentor delivers many of the practical instruction sessions, and also works alongside students during field activities.

Education Mentor: Ensures that the behind-the-scenes coordination (e.g. communications, guest lectures, farm visits, scheduling etc.) runs smoothly. The Education Mentor is also responsible for the complementary educational activities.

Field Production Coordinator: Manages the production-oriented field operations at the UBC Farm, and also provides field instruction.

Farm Team: Working in the teaching and research field operations and on a number of community projects, the "farm team" is primarily composed of UBC students with past experience working at the UBC Farm. The Farm Team also work alongside the practicum students, providing peer instruction and mentorship (and maintaining a vibrant, energetic atmosphere in the field!).

Steering Committee: The Steering Committee is composed of 6 established organic producers from around the province. They provide leadership and advisory support to help shape the larger vision and objectives of the practicum. Steering Committee members also provide vital connections to the organic sector, and opportunities for further on-farm work.

Program Coordinator: Responsible for overall coordination of the Centre for Sustainable Food Systems, providing management for a full range of academic and community initiatives.

UBC Faculty: Faculty members share their expertise on a range of topics through guest workshops and lectures.

6. Weekly Schedule and Course Dates

	SPRING	SUMMER	FALL
Months	March, April (First day: Sat March 13)	May, June, July, Aug	Sept, Oct, Nov (Last day: Sat Nov 6)
Schedule	Sat (9-5)	Wed (9-12) Thurs (9-12) Fri (9-5) ² Sat (8-5)	Sat (8-5) Either Thurs (9-5) Or Fri (9-5)
Scheduled hours/wk	~7 hours/wk	~21 hours/wk	~15 hours/wk
Discretionary hours/wk	Average 4 hours/wk	Average 4 hours/wk	Average 4 hours/wk

In total this part-time practicum will deliver ~600 hours of instructed learning, and will require ~140 “Discretionary hours.” Discretionary hours average 4 hours per week, with some weeks requiring less or more depending on the seasonal demands in personal plots.

Students are expected to participate fully in the program by being available for all scheduled hours. **Participation in 90% of practicum hours is a requirement for completion of the program.** In the case of unavoidable, non-recurring absences, hours may be made up outside of regularly scheduled shifts.

Students will have a 1 week vacation (21 practicum hours) mid-program, and potentially a 1 week vacation in early May following UBC’s exam period. Some days will be given off in lieu of statutory holidays. The first statutory holiday falls over Easter (Saturday April 3).

The part-time structure of the program in is intended to offer flexibility for those wishing to continue part-time work or school commitments through the duration of the practicum. The current lack of on-site housing at the UBC Farm is a significant consideration in the decision to keep the practicum at part-time only.

Please note: In addition to balancing practicum hours with employment and/or school obligations, it is essential that participants leave themselves adequate time for course reflection, personal affairs, rest and recreation. This is an intensive program, and we recommend that students **budget for a minimum of one day off per week.** The quality of your experience will be significantly impacted by how much energy you are able to bring to the practicum.

² Harvest Fridays may go over time and students are expected to stay till tasks are complete.

7. Fees and Payment for 2010

The fee for the 8 month (35-week) 2010 program is **\$3,000 CDN**. In 2010 Sowing Seeds will be in its 3rd year, and we are proud of the significant growth and program development that has occurred since its launch in 2008. At the same time, we acknowledge that practicum improvement is an ongoing process, and participants will be asked to provide constructive feedback.

Upon acceptance to the Sowing Seeds Practicum, a **non-refundable registration deposit of \$300** is required to hold your place. The remaining fees (\$2700) are due the first day of class (Saturday March 13, 2010). Withdrawal from the program prior to the end date is permissible with written notice to the UBC Farm. Pro-rated refunds of the \$2700 will be offered until Saturday April 10, 2010. No refunds will be available for withdrawal after April 10, 2010.

UBC students: In 2010 we are offering a **fee discount** for students who register, and successfully earn credits, for a directed studies based on their Sowing Seeds Practicum. In recognition that directed studies students will have to pay twice (to UBC for the directed studies credits, and to UBC Farm for the Sowing Seeds Practicum), we will refund \$400 to students once Directed Studies credits have been earned (Practicum fee: \$2600 vs \$3000).

Please note that in 2010 the Sowing Seeds program will no longer be subsidized by external grants, and so all program costs must be covered by course fees and proceeds from farm-gate sales. The \$3,000 course fee represents approximately 40% of the per-participant cost of running the program. Our goal is to make the course as affordable and accessible as possible, while continuing to cover our operating costs.

7.1.1. A Note on Marketing

UBC Farm produce is marketed through three main channels: at our seasonal Saturday farmers' markets, through our Community Supported Agriculture (CSA)³ box program, and through direct sales to campus food providers and local restaurants. Care, harvest, and storage of field crops requires intensive labour on the part of all the students, especially in the second half of the practicum. Throughout the season, practicum students are responsible for harvesting, packing, weighing, setting up the marketing area, pre-packing orders, and selling the produce. All students are expected to participate in marketing endeavours.

In the first two years of the program (2008-2009) produce sales covered roughly 25% of our program operating costs with tuition contributing another 25% of the total. In 2010 Sowing Seeds will be running without subsidy. Students' participation in production and marketing contributes significantly to covering course costs (approximately 60%) and so is therefore considered essential.

³ Through our CSA program, local residents pay the farm a set price in the spring and then receive a weekly share of produce harvested by staff, students, and volunteers.

8. Community Spaces

A shared kitchen facility is available at the farm. Students have the option to use this area for food preparation and are welcome to share meals with farm staff and volunteers. Participation in group meals is optional. As the kitchen and shared indoor spaces are in continual use by a wide variety of academic and community users, students are asked to respect the booking system and must take part in keeping shared spaces clean and maintained. The weekly Friday lunch, where we share food and time together on busy harvest Fridays, is a favourite amongst staff, students and volunteers alike. We do our best to accommodate dietary needs, but we cannot guarantee that every meal will be suitable for those with dietary restrictions.

The farm hosts a number of volunteer, staff, and public social events and dinners through the course of the year, many of which our students are welcome to attend. We do ask that all students and volunteers respect the farm's closing times, and respect the privacy of the farm's live-in caretakers.

As the farm is a public facility and a part of the University of British Columbia campus, courtesy towards the visiting public, customers, and academic users is essential. All participants in the practicum become representatives of the UBC farm, and it is of considerable strategic importance for the farm's long-term future to maintain a public-friendly, professional image.

9. Visiting the UBC Farm

Visiting the UBC Farm is not a mandatory pre-requisite for applying to the Sowing Seeds Practicum, however it is strongly encouraged. We believe this gives applicants a better understanding of the hands-on, rigorous nature of the program along with a better sense of the UBC Farm community. In addition it provides us with the opportunity to match names with faces. Potential applicants are invited to join during a volunteer session and get their hands dirty! In addition, the UBC Farm is hosting a **Sowing Seeds drop-in Open House on Saturday October 31, from 2-5 pm**. Potential applicants are encouraged to come out, meet UBC Farm staff and join a farm tour with our current 2009 students. There will be plenty of opportunities to ask questions and no RSVP is required.

10. Criteria for Selection

The goal of our practicum is to prepare future sustainable farmers, scientists, teachers, and community leaders to take the next step in an agricultural career. Therefore, in our selection process we strive to choose the individuals who seem most prepared to maximize their learning and to then use it for their work and studies.

In choosing individuals who will work together for 8 months, we are in effect creating a community. Out of the pool of applicants, we attempt to achieve a balance of interests, geographical and cultural origins, ages, and gender. Consequently, there is no one "preferred" type of applicant. We carefully consider each application in relationship to the entire pool of applicants. Our students come from diverse

backgrounds, yet they have in common a strong interest in sustainable farming and gardening, as well as personal motivation and enthusiasm.

That said, the selection committee looks highly upon applicants who demonstrate thoughtful consideration of what this program offers and the degree to which it fits their long-term learning/professional objectives. As previously stated – in 2010 we are looking for increased participation from Undergraduate students in related disciplines, however we continue to welcome applications from the general public.

Further, the committee is looking for applicants who have carefully considered how the Sowing Seeds Practicum will fit logistically with their other life commitments.

Again, we recommend that students **budget for a minimum of one day off per week.**

Applicants must be at least 20 years old.

Again, we encourage potential applicants to attend the Sowing Seeds Open House (Saturday October 31, 2-5pm), and/or to volunteer alongside our UBC Farm team.

Finally, because we are a small program still in development **we currently cannot accept international applicants.** In the future we hope to become more accessible to an international audience.

11. How to Apply

Applications for the 2010 season are now available on our website. Applications are accepted until December 1, 2009. Applicants will receive a response in late December 2009. We look forward to hearing from you!

The Sowing Seeds project was implemented from 2008-2009 as an activity of the Organic Sector Development Program component of the Agri-Food Futures Fund, funding for which is provided through the Canada-British Columbia Framework Agreement on Agricultural Risk Management.