

Humboldt State University Community Garden Management Plan



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The following document contains a management plan outlining the organizational structure of Humboldt State University's community garden development. The intention of this plan of management is to:

- Declare a concrete vision and related objectives for the community garden.
- Describe management structure, including partnerships with external organizations.
- Delegate responsibility and accountability for management of the garden.
- State how the garden will function for users and volunteers.
- Outline a plan of action contingent on potential problems the garden might encounter including
(but not limited to) vandalism, pests, illegal use, etc.
- Delineate guidelines that include language ensuring:
 - The garden remains safe for users, volunteers and other affected institutions.
 - Aesthetic appeal with adherence to CSU and university policy.
 - The garden is productive and healthy.
 - Proper management of resources.
 - The garden remains an inviting community space, available for use by all students, staff, and faculty.
- Define policies, rules, and regulations related to gardening.

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1. Vision

1.1 Brief history of the community garden effort

HSU's most recent community garden movement began in the Spring of 2011 as a ballot item for the Associated Students annual election. A majority of students responded positively to this ballot item: a question of whether they valued a community garden on campus. In response to this positive feedback, the 2011-2012 Associated Students council created a sub-committee that would assess on- and off-campus community garden alternatives and draft a proposal that would eventually be presented to the University Executive Committee. In the Spring of 2012, the Executive Committee approved the project for further deliberation, and shortly thereafter the Board of Finance granted a one-time amount of \$11,539.87 for the implementation of a garden somewhere on campus. Additionally, the Campus Center for Appropriate Technology (CCAT) created two employee positions which would coordinate the implementation of a community garden and, once implemented, oversee operation and maintenance of the garden. At the end of the Spring 2012 semester, a final location was given for the garden: a 35'x35' section of grassy space west of the Jensen House near CCAT.

1.2 Purpose of our community garden

The purpose of the HSU Community Garden is to provide space for students to learn about and practice growing food and other plants organically. This garden will facilitate healthy living by promoting organic practices and encouraging students to eat fresh, local produce. In addition, the space will provide a place where people can gather and share in the common experience of growing their own food. The garden will serve as one avenue to practice collaboration and learn to care for the commons. The garden also provides a number of benefits:

Promotes recreation and healthy living:

The physical and mental health benefits of gardening are well known, and there is a long history of gardens being used therapeutically. In addition to the therapeutic side effects of gardening, gardeners will also reap the health benefits of the organic food they produce for themselves.

Increases accessible recreation:

Outdoor activities and gardening practices have traditionally been geared towards those without physical limitations. With this garden, we look to challenge these traditional views by creating an accessible space that allows for the participation of all body types and backgrounds. This will be a gem of the campus, as there are few locations accessible to people in wheelchairs and other alternatively-abled people to recreate in a similar outdoor activity.

Increases sense of community and student retention:

All community gardens have one thing in common: *community*. CCAT has long been an entity that promotes the importance of strong communities. A community garden that aims to attract diverse people can provide an opportunity for community development and increase campus cohesiveness. According to the HSU Student Engagement and Leadership Support homepage, "research in higher education indicates that the more students are engaged in their university learning community through class participation, student leadership positions, or engagement in university activities, the more successful the students are likely to be." The community garden will provide a unique type of space for students to establish a sense of direct involvement on campus and will lead to students being more invested in Humboldt State University.

From its inception, this garden's central intention has been to promote inclusion of underrepresented groups and strengthen the campus community by creating cross-cultural and cross-disciplinary connections through an activity that is fundamental to all our existence: production of food. In this way, the community garden will provide a way for students to collaborate and learn to functionally operate within the community space.

Acts as a catalyst for activism:

Food is a commonality among us all and can be the necessary element that drives activism and community involvement for people who might otherwise not be encouraged to do so. At HSU, this is incredibly important. While an active campus community, campus movements seem to lack the vigor and participation that historically made HSU such a successful, activism-oriented community.

Facilitates deep connection to the land:

Growing one's own food provides a fundamental connection to the land, which would otherwise not be present. Being connected to and reliant on the land promotes stewardship of that space; it encourages people to care for the land which provides them with sustenance.

Promotes the conservation of resources:

HSU strives in many ways to facilitate living lightly on the land, and CCAT has been an integral part of this from its inception. Producing local, organic food decreases fossil fuel use by demonstrating an alternative to the normal production chain of industrially-produced food. Organic gardens also preserve green space and biodiversity.

Diversity of aesthetics:

The approved area for the garden is located westward of the Jensen House. With hard work and student involvement, this space will become not only functional---but beautiful. The community garden space will be a departure of the usual lawn and trees landscaping which is typical of campus. With a little love and intention, what has been nothing more than a lawn, now has the potential to become an inviting, creative space.

Provides financial benefits:

While not a primary goal of the garden, student, faculty and staff will benefit economically from the self-production of food. This will help relieve the impacts of stretched budgets because of increasing educational costs.

Creates future prospects:

The community garden, located next to the Jensen House has been framed as a pilot project throughout the negotiation. By determining student interest and involvement, it has the potential to demonstrate the need for an expansion of garden opportunities elsewhere on campus.

2. Management of site

2.1 Managing waste on-site - organic and non-organic waste

Dumping of any organic and non-organic waste will be prohibited. There will be no trash or recycling receptacles on site. Users must carry out any trash they bring in.

A sealed bin will be located on site for temporary containment of garden-related waste such as weeds, trimmings, fallen fruit, and other organic waste from gardening activities. Users will be expected to utilize these bins when caring for the garden. Subsequently, garden waste contained in these temporary receptacles will be managed by the hired CCAT Organic Gardeners or any designees from affiliated organizations. Waste will be hauled off a minimum of three times a week to the existing composting system at CCAT, or utilized by WRRAP in

their composting activities, so as to prevent vermin or overflow issues.

2.2 Garden practices

According to the International Federation of Organic Agriculture Movements, organic agriculture “is a production system that sustains the health of soils, ecosystems and people. It relies on ecological processes, biodiversity and cycles adapted to local conditions, rather than the use of inputs with adverse effects. Organic agriculture combines tradition, innovation and science to benefit the shared environment and promote fair relationships and a good quality of life for all involved.” The term “organic” is now closely associated with a certification process by the government. This being said, the Campus Community Garden will operate according to organic practices, but will not be subject to the certification process.

In addition, CCAT Organic Gardeners, or any designees from affiliated organizations are available for guidance and will host workshops regularly. As part of the vision and guiding principles of CCAT, strict adherence to organic practices has been followed when gardening. These practices will be mandated for the community garden as well. While specific methods will be left to users, all synthetic pesticides, herbicides, fertilizers and genetically modified organisms will be banned from use. Building healthy soil to reduce pest and diseases will be accomplished by utilizing compost. Other organic practices such as crop rotation, companion planting, mulching, and Integrated Pest Management (via strategic plant varieties) will be promoted. These techniques, along with others, will be suggested to the gardeners. Many organic practices will be taught during gardener orientation, as well as other workshops. CCAT Organic Gardeners and CCAT Organic Gardener or affiliated designee will be sources for the community gardeners to seek advice with organic garden care.

2.3 Water management

It is not currently appropriate to utilize a rainwater catchment at this site. For the cost of materials, as well as space constraints, rain catchment will not be the most effective means of watering the site. Instead, the existing water lines will have an adaptor installed to allow for hose connection. Participants will be educated about water conservation and runoff. This will ensure that they do not overuse the irrigation system and will minimize pollution in association with runoff. In addition, all gardeners will be oriented with straw swaddles (sponge-like straw bundles used to soak up pollution), so that if they notice contaminated water runoff, they can prevent the spread of pollution. These will be available year-round at CCAT with emphasis on monitoring during the first flush.

The location of the garden suggests that runoff from the hill will be significant. However, contamination from runoff will not pose a problem. As mentioned above, synthetic fertilizers, herbicides, and pesticides will be banned, so there will be no non-organic pollution threats to the stormwater collection system in the downhill parking lot. Additionally, all of the gardening will take place within raised beds; any potential overland flow will flow around the beds and not over them. Consequently, any organic fertilizers, soil, and amendments will be contained within the raised beds and will not be washed out due to surface runoff.

2.4 Use of sustainable materials on site

Paths will be maintained with either mulch or gravel. Retaining walls, particularly in association with the accessibility platform, will be constructed with earthbags and cement plaster. This is determined to be the safest, most cost-effective and sustainable method to construct a platform in adherence to the Americans with Disabilities Act (ADA) regulations. Materials used for maintaining the community garden should be local sustainably sourced materials.

2.5 Garden tools and storage

Garden tools will be stored in a two-foot by two-foot storage shed located within the footprint of the

garden. This space provides a close, out-of-sight, low impact, locked, safe space for communal tools. Initially, tools will be donated or bought with the AS budget. Over time these tools will need to be serviced and replaced. Much of the upkeep can be done with the facilities at CCAT. It will be the responsibility of the hired Organic Gardeners to maintain the tools, possibly with the help of CCAT Maintenance staff.

2.6 Site safety

Clear safety guidelines will be expressed to the community gardeners before they are allocated a plot. This will be part of the gardener orientation process, supplemented with the Orientation Packet. In it, the importance of utilizing safety gear such as goggles, gloves, closed-toed shoes, and protective clothing is stressed. Gloves and goggles will always be available in the tool storage area. (In addition to the orientation process, gardeners will sign a release of liability when they do the paperwork for being allocated a gardening plot.) Also, gardeners will clearly understand the method of documenting accidents and potential hazards---as it is outlined in the Orientation Packet. The accident protocol delineates steps to take in case of emergency, as well as non-emergency situations. This protocol addresses the steps to take, by both the injured and any witnesses. Refer to Appendix 8.3 for the Orientation Packet.

Potential hazards noticed by gardeners, depending on the severity, will first be brought to the attention of the hired CCAT Organic Gardener or affiliated designee or any of the CCAT Co-Directors. In addition, there will be a space on the community garden 'Notice Board' for hazards to look out for. Part of the routine of working in the garden will be to check this part of the Notice Board. For instance, a tool may need repair.

2.7 Allocation of plots

Interested parties and individuals can apply for a plot via CCAT's website. There will be an online application before the start of the semester that will remain open until all the plots are full. Participants are required to confirm with CCAT via email whether or not they will be continuing to use their plot in the following semester. If participants do not follow up about their plot, their plot will be forfeit and the online application will be opened again. Priority for plot allocation will be given to individuals living on campus, followed by groups of students, and then to other on-campus organizations. If a group is applying, only a single representative may apply. This is to ensure students may not cheat the system by individually applying for plots to be used as a group. The individual representing the group will be the single point of contact for CCAT and will be the person responsible for managing the plot. To ensure individuals have priority plot allocations will be as follows: Plots 1-6 will be designated for individuals, while plots 7-10 will be designated for groups, plot 11 will be a communal bed, and plots 12 and 13 will be reserved as ADA access beds. See Figure 1 below for more details. It will be the responsibility of the Organic Gardeners, and any designees from affiliated positions to assess the applicants to determine the best fit for the limited garden space and provide a mechanism for inclusion. Incorporation of applicants who do not initially receive a plot will be accomplished with a waiting list system. People on this list will be offered the space of any participant who must forfeit their plot during the semester. In addition, some roles outlined in section 3.1 create space for people who do not have an exclusive plot to take part in the community garden.

For someone to voluntarily forfeit their plot, they must submit the terms of forfeiture to either of Organic Gardeners or members of affiliated organizations in writing. This includes the reason for forfeiture, (including simply "personal reasons") which will allow space for suggested garden improvements, date of last use, the final state of the plot (i.e. what is planted and where). This will be followed up with verbal confirmation between forfeiture and either Organic Gardeners or members of affiliated organizations.

In case of neglected plots, determined by plant overgrowth, unsightliness, rotten produce, or other

signs of neglect, determined by the Organic Gardeners and members of affiliated organizations, the gardener will be given a one-week warning notice via email and phone. If no work has been done to fix the neglected state of the plot, and no arrangements have been made to do so after one week, another email and a phone call will be made to issue a forfeiture notice. If after a second week, no steps have been taken to improve the plot, the plot will be considered abandoned and allocated to an approved applicant from the waiting list. Expectations will be clearly expressed before someone takes on the responsibility of a garden plot. These expectations include safety, plot maintenance, and community space maintenance.

Participants in need of assistance in crop planning and planting they may be referred to section 8.3 and 8.4 (Part of the Orientation Packet) of this document.

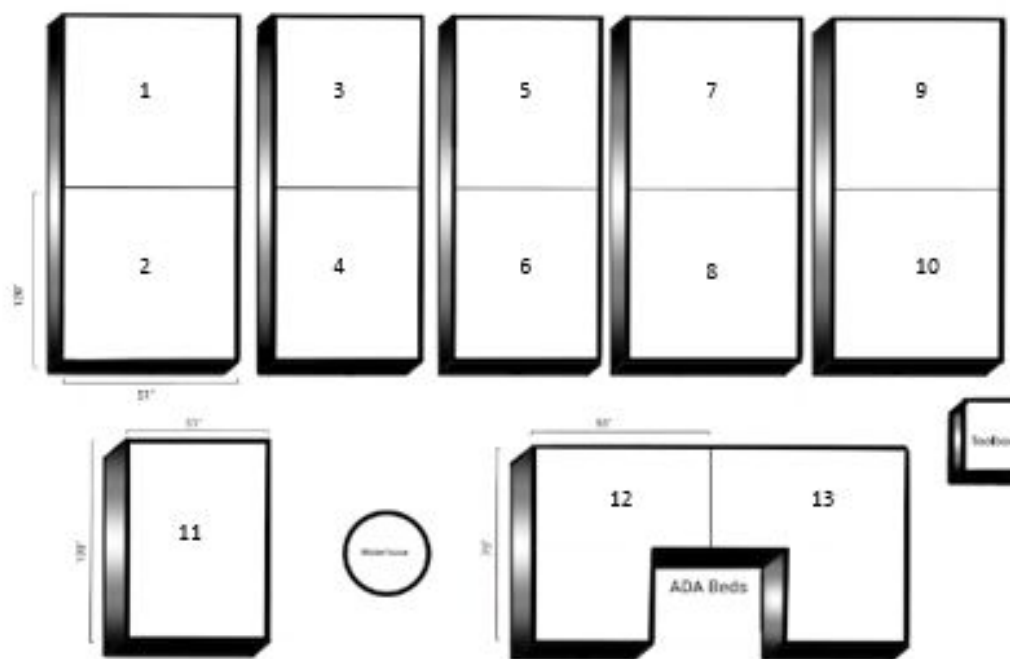


Figure 1. Plot allocation map. There are 11 plots with the same size, separated from each other by perpendicular pieces of wood, and 2 ADA beds

2.8 Management of shared areas

The Community Garden will be maintained with weekly workdays, of which plot-holders will be required to participate in at least one per month. Several days a week, CCAT Organic Gardeners and/or designees from affiliated organizations will be available for work days. This person will direct the plans for site upkeep and oversee safety. In addition, applicants on the waiting list will be invited to collaborate with existing plot-holders.

Special considerations may be made for participants who have scheduling conflicts with the workdays.

2.9 Addressing unwelcome situations

With a community garden comes the risk of undesirable situations. The three main circumstances and

proposed solutions anticipated:

Attraction of vandals:

If there is evidence of vandals or overnighters, the UPD and CCAT advisor will be notified. If vandals continue, heightened surveillance will be used to identify the perpetrator.

Vermin:

All participants will be made aware of their personal responsibility of maintaining their beds. Included in the level of expected maintenance is harvesting ripe fruits and vegetables, which would otherwise lure unwanted vermin. Waste may also attract vermin and will be required to be disposed of offsite. All issues will be dealt with on an as-needed basis. In general, the high traffic of use in the garden, as well as the presence of a fence, will deter visitation by undesirable animals. Should a vermin problem arise, Risk Management will be notified.

Illegal Dumping:

Proper signage will be in place which will inform people of what can be brought to the garden and when. Also, there will be a procedure for properly donating to the community garden posted on the Notice Board. Examples of proper donations include garden tools, fruit veggie and flower seeds and starts, and soil amendments. If there is an issue with people illegally dumping, the CCAT Organic Gardener or affiliated designee will deal with removing the unwanted materials and this will be paid for with the community garden section of the CCAT special projects budget. If it becomes a regular issue, temporary signs will be placed in the ground around the perimeter of the site, as well as specifically in the place where dumping becomes an issue.

3. Management structure

3.1 Roles in the community garden

CCAT Organic Gardeners, or any designees from affiliated organizations will take care of the community garden in turns until further notice. Beyond the implementation of the community garden, ~~this~~ these coordinator(s) will be responsible for ensuring the smooth function of the garden. The coordinator(s) will also be responsible for requesting the assistance of other CCAT employees where applicable. These tasks include, but are not limited to:

Coordinating workshops:

Throughout the semester, a number of workshops may be held. CCAT's Organic Gardeners (two each semester) and CCAT's Events and Outreach coordinator ~~to~~ will organize and conduct these workshops. Examples of workshops include organized planting days, propagation, tree/ bush planting, etc.

Monitoring plots:

Plots must be monitored frequently to determine if plot-holders are using their plots and if any action needs to be taken to address abandoned plots. The CCAT Organic Gardeners or any designees from affiliated organizations are responsible for monitoring site safety, gardener conduct, and site repair.

Review and assignment of plot applications:

The CCAT Organic Gardeners or any designees from affiliated organizations will be responsible for reviewing plot applications and following up with any necessary questions if applications are unclear. They will also be responsible for allocating individual garden spaces based upon demand for plots. Plots have been physically demarcated by perpendicular pieces of wood attached to each garden bed.

Orientation:

Once plots are assigned, the CCAT Organic Gardeners or any designees from affiliated organizations must provide a brief orientation to all garden plot-holders. The CCAT Organic Gardeners or any designees from affiliated organizations must show the participants their plots, obtain a signature of HSU's release of liability, explain the standing rules, present the Orientation Packet, give a detailed introductory tour of all parts of the site, and answer any questions that the gardeners may have.

Maintaining contact with gardeners:

E-mailing will be the primary form of correspondence between the CCAT Organic Gardeners or any designees from affiliated organizations and plot-holders. CCAT Organic Gardeners or any designees from affiliated organizations should always be aware of upcoming events and any changes to the standing rules, as well as providing feedback to questions. Updates and announcements must also be posted on the garden's entryway sign. Contact information for garden coordinators must be posted at the garden's entryway, and updated as needed.

Advertising:

CCAT Organic Gardeners or any designees from affiliated organizations will not be directly responsible for advertising but may choose to designate advertising responsibilities to the CCAT Events and Outreach Coordinators. In addition, the CCAT Organic Gardeners or any designees from affiliated organizations will arrange for outreach at the Arcata Farmers Market. This will raise awareness and support for the campus garden effort.

Maintenance of online resources:

CCAT Organic Gardeners and any designees from affiliated organizations must manage the community garden google "Team" drive and communicate with CCAT's Office Coordinator to ensure the community garden page on the CCAT website is up to date.

Coordination of workdays:

Some work days may coincide with CCAT's regular Friday volunteer work sessions. CCAT Organic Gardeners and any designees from affiliated organizations must work with CCAT employees to organize these workdays. On all workdays, CCAT Organic Gardeners and any designees from affiliated organizations must be present or assign a qualified CCAT employee to oversee the work and deal with potential problems.

Approval of events:

Occasionally events may be held in the garden (yoga classes, outdoor film screenings, lectures, etc.). CCAT Organic Gardeners and any designees from affiliated organizations must approve all proposed events and secure event approval through Associated Students (AS). In addition, a fundraising and outreach event will be held for the garden. It is the responsibility of the CCAT Organic Gardeners and any designees from affiliated organizations to ensure the event takes place and receives proper campus approvals.

Communication with CCAT:

CCAT Organic Gardeners and any designees from affiliated organizations must check in regularly with the CCAT co-directors and bring any problems to their attention. They must also attend regular CCAT meetings and physical site branch meetings, as well as maintain communication with Associated Student's liaison to CCAT.

Fundraising:

As needs arise, CCAT Organic Gardeners and any designees from affiliated organizations must work with, or recruit the CCAT Co-directors to help apply for any additional funding or applicable grants.

General operational function:

A section of the garden not reserved for designated plots will be maintained by volunteers, community gardeners, and CCAT employees. CCAT Organic Gardeners and any designees from affiliated organizations must ensure proper maintenance of this section. Additionally, CCAT Organic Gardeners and any designees from affiliated organizations must work with volunteers and CCAT employees to maintain garden walkways and signage. Tool condition will be monitored, repaired, and replaced by the Maintenance Staff.

Compost removal:

CCAT Organic Gardeners and any designees from affiliated organizations should be responsible for the removal of compost from the on-site bin as frequently as necessary to prevent vermin or overflow issues.

Evaluation:

CCAT Organic Gardeners and any designees from affiliated organizations must evaluate garden effectiveness over time and make both recommendations and changes to address any functional issues that may arise. They must also update any documentation as these changes come about, including the memorandum of understanding, management plan, plot application forms, decision-making process, and the official standing rules document. Evaluations will occur at least once per academic year. Participants will be encouraged to document their experiences, and the amount of produce grown.

3.2 Code of conduct/gardeners agreement

See Appendix
8.1

**3.3
Communication**

Communication is vital to all activities. To maintain understanding in the community garden, two main avenues of communication must be addressed:

Internal:

Gardeners will communicate with coordinators and other gardeners primarily through email. On occasion, phone and postal mail may be utilized.

External:

CCAT Organic Gardeners and any designees from affiliated organizations will act as the liaison between the garden and CCAT Co-Directors, Administrators, and the general public. The Coordinator will be responsible for updating the Co-Directors frequently and ensuring all events are publicized including deadlines for plot application. The form of communication will be dictated by the content and recipient.

4. Funding

A one-time grant of \$11,539.87 has been approved by Associated Students from unallocated funds for initial start-up costs. After this sum, the garden will primarily be maintained with funding allocated from Associated Students via CCAT. This cost will be a minority of the CCAT budget for the grounds maintenance and take the form of tool repair/replacement, soil, and other supplies as needed. In the event that more cost-intensive repairs must be made, a secondary request of unallocated funds will be submitted to Associated Students. In addition, the Advancement Foundation has stated that parents would most likely be in favor of a campus garden and donate money towards it.

4.1 Applying for grants

When necessary, grants will be applied for by the CCAT Organic Gardeners and any designees from

affiliated organizations, and anyone else who is willing to do so. All Associated Students and campus grant protocols will be followed.

4.2 Fundraising activities

A benefit event will be hosted to raise awareness and funds for the garden once per semester. This will be organized by the CCAT Organic Gardeners and any designees from affiliated organizations and CCAT. In addition, the CCAT Organic Gardeners and any designees from affiliated organizations will arrange for tabling at the Arcata Farmers Market.

5. Training

5.1 Recruiting and induction of new gardeners

Available garden plots will be advertised every semester through a variety of outlets. These include the CCAT website, physical fliers, University Notices, and social media. Upon plot allocation, new and returning gardeners will attend group orientation. Each time a new semester starts, all gardeners will go through the orientation process. Even if they're ongoing gardeners, this will ensure an understanding of best practices and will allow for new information to be clearly disseminated. During orientation, gardeners will be given informative materials and will be shown around the site. Information will include compost process and organic gardening methods. In addition, gardeners will sign a release of liability.

5.2 Ongoing training workshop

Occasional workshops will be held, as deemed necessary by the community gardeners.

6. Partnership Engagement

6.1 CCAT

In this pilot stage of the community garden, CCAT will act as the parent organization. The CCAT Co-directors will be responsible for the hiring of the Organic Gardeners, the CCAT employees will facilitate workdays, and managing the CCAT website that will host the application process. In addition, the community garden will allow space for the Green Building and Organic Gardening class to apply their education. The existence of the garden will continue to build a base of volunteers and encourage people to get involved with CCAT.

6.2 Associated (AS)

AS will be the primary source of funding and will represent the official endorsement of the community garden on behalf of the students.

7. Important Contacts

7.1 Campus Center for Appropriate Technology

Website: <http://www.ccathsu.com/>

Contact: Current Co-directors
Email: ccathsu@gmail.com
Phone Number: 707-826-3551

7.2 Associated Students

Website: <https://associatedstudents.humboldt.edu/>
Contact: Executive Director -- Jessica Lund
Email: jmg12@humboldt.edu
Phone Number: 707-826-5410

7.3 Office of Sustainability

Website: <https://facilitymgmt.humboldt.edu/sustainability/>
Contact: Sustainability Director - Tall Chief 'TC' Comet
Email: tcc4@humboldt.edu
Phone Number: 707-826-5920

7.4 Facilities Management

Website: <http://facilitymgmt.humboldt.edu/>
Contact: Jeanne Rynne
Email: Jeanne.Rynne@humboldt.edu
Phone Number: 707-826-3646

7.5 Risk Management / Environmental Health and Safety

Website: <https://risksafety.humboldt.edu/>
Contact: Kim Comet
Email: Kim.Comet@humboldt.edu
Phone Number: 707-826-3305

8. Appendices

8.1 General Rules Document:

General Rules and Guidelines for the HSU Community Garden

1. Individual garden plots are for growing annual fruit, vegetables, and flowers for gardener use and not commercial sales. If you have excess produce, please share!
2. If there are more applicants than allocated plots, the designation will be done via a random lottery with priority given to on-campus students and those who are willing to work within a small group, followed by on-campus organizations.
3. All plots must be maintained organically. Use of pesticides, herbicides, and genetically modified organisms are strictly prohibited. While this garden is not USDA Certified Organic, we do refer to their standards as guidelines. Please check out the USDA website to reference acceptable amendments and methods as well as CCAT, the Community Garden Orientation Packet, or other resources for organic means of dealing with problems.
4. Community garden hours of operation are sunrise to sunset.
5. Participants must:
 - a. Maintain safety as first priority.
 - b. Attend a Community Gardener Orientation session at the start of every semester
 - c. Accept responsibility for cultivating, weeding, and water their assigned plot
 - d. Completely plant and harvest their plot as the season/weather allows.
 - e. Remove/trim all disease and pest infested plants
 - f. Notify CCAT Organic Gardeners and any designees from affiliated organizations if you must abandon your plot for any reason. Plot- holders who do not take care of their plot will be given a one warning, then a week's notice to clean it up or it will be reassigned.
 - g. Care for the commons.
 - h. Always conserve water
 - i. Participate in at least one weekly workday per month.
6. Restrictions:
 - a. No pets, even on leashes
 - b. No motorized equipment
 - c. No disrespectful behavior such as smoking, alcohol consumption, etc.
 - d. Do not harvest that which is not yours without explicit permission
7. Participants are responsible for their guest's actions
8. Properly use, clean, and return equipment and tools to storage facilities and report anything that is needed to the CCAT Organic Gardeners or affiliated designees
9. Remove garbage and recyclable from the site each day as there is no receptacle
10. Enjoy the community and the food!

Outlawed Plants

The following plants will NOT be planted by participants (Note: this list is not exhaustive and subject to change). The community garden is primarily for growing annual plants that provide fruits, vegetables, and/or flowers. Anything that is typically grown that takes more than 1 year to mature and produce something, should be decided on a review basis. This will align the plants grown with the allocation term and will also allow long-term planning for particular plots that may be determined to be suitable for fruit trees, etc. Please talk with a CCAT Organic Gardener or affiliated designee or CCAT Co-Director if you have any questions about the plants listed below.

- Genetically Modified Organisms
- Any plant that can be used whole or in part to produce a substance that is defined as an illegal drug by the Federal Drug Administration
- Himalayan Blackberries
- Canna Lily
- White and Black Nightshade

- Jerusalem Artichokes
- Any type of Morning glory (weed, domestic, flower)
- Mint
- Bamboo
- Asparagus
- Trees or any perennial that grows over 6 feet tall and/or is hardwood
- Any invasive plants that spread aggressively from the site of planting, which takes over or overwhelms any nearby plants.

My signature acknowledges that I have read the HSU Community Garden Rules and Regulations and agree to abide by them. I understand that my failure to comply may result in termination and reassignment of garden plots.

Signature:

Date:

FOR OFFICIAL USE ONLY:

DATE RECEIVED:

PROCESSED BY:

PLOT NUMBER ASSIGNED:

8.2 Garden Application

HSU Community Garden Plot Application(s)

Participant Name	Phone Number	Email	Expected Graduation Date	Student/Staff/Faculty

Group, Club or Organization Name

Have you had a plot at the HSU Community Garden previously? YES NO

If yes, which semesters? _____

Are you living on campus? YES NO

Will you be able to maintain your plot over summer? YES NO

Are you willing to share a plot? YES NO

Are you willing to volunteer to maintain communal space if you do not receive a plot? YES NO

Do you have any suggestions for workshops you would like to attend?

8.3 Companion planting list

Vegetables							
Common name	Scientific name	Helps	Helped by	Attracts	Repels/Distracts	Avoid	Comments
<u>Alliums</u>	<i>Allium</i>	fruit trees, <u>nightshades</u> (tomatoes, capsicum peppers, potatoes), brassicas (cabbage, broccoli, kohlrabi, etc.) carrots	carrots		slugs, aphids, <u>carrot fly</u> , cabbage worms ^[1]	beans, peas, parsley	Alliums include onions, garlic, leeks, shallots, chives, and others.
<u>Asparagus</u>	<i>Asparagus officinalis</i>	Tomatoes ^[2]	Aster Family flowers, Dill, Coriander, Tomatoes, Parsley, Basil, Comfrey, Marigolds, Nasturtiums	coupled with Basil seems to encourage ladybugs		Onion, Garlic, Potatoes, Gladiolas	
<u>Brassicas</u>	<i>Brassica</i>	potatoes, cereals (e.g. corn, wheat)	geraniums, dill, alliums (onions, shallots, garlic, etc.), rosemary, nasturtium, borage		wireworms	mustards, nightshades (tomatoes, peppers, etc.)	Brassicas are a family of plants which include broccoli, Brussels sprouts, cabbage, cauliflower, Chinese cabbage, kohlrabi, radish, and turnip.
<u>Beans</u>	<i>Phaseolus</i>	Beets, <u>Brassicas</u> , carrots, celery, chard, corn (see <u>Three Sisters</u>), cucumber, eggplant, lettuce, peas, potatoes, radish, rosemary, spinach, summer savory, dill, radish, strawberries, and mint.	Eggplant, Summer savoury		California beetles	Tomatoes, chili peppers, alliums (onions, garlic, etc.)	Hosts nitrogen-fixing bacteria, a good fertiliser for <i>some</i> plants, too much for others
<u>Beets</u>	<i>Beta Vulgaris</i>	bush beans, lettuce, kohlrabi, onions and brassicas	Catnip, Garlic, Mint			Runner or pole beans ^[2]	Good for adding minerals to the soil through composting leaves which have up to 25% magnesium. Runner or pole beans and beets stunt each other's growth.
<u>Broccoli</u>	<i>Brassica oleracea</i>		geraniums, dill, alliums, rosemary, nasturtium, borage			mustards, Tomatoes, peppers	Rosemary repels cabbage fly, geraniums trap cabbage worms, same general companion profile as all brassica (cabbage, kohlrabi, Brussels sprouts, cauliflower, etc.)
<u>Cabbage</u>	<i>Brassica oleracea</i>		geraniums, dill, alliums, rosemary			mustards, Tomatoes, peppers, strawberries, and pole/runner beans	Rosemary repels cabbage flies, geraniums trap cabbage worms, same general companion profile as all brassica (cabbage, kohlrabi, Brussels sprouts, cauliflower, etc.)

<u>Carrots</u>	<i><u>Daucus carota</u></i>	Tomatoes, Alliums (onions, chives, etc.), lettuce	alliums (leeks, shallots, etc.), rosemary, wormwood, sage, beans, <u>flax</u>	<u>assassin bug</u> , <u>lacewing</u> , parasitic wasp, yellow jacket and other predatory wasps		Dill, parsnip, radish	Tomatoes grow better with carrots, but may stunt the carrots' growth. Beans (which are bad for tomatoes) provide the nitrogen carrots need more than some other vegetables. Aromatic companion plants repel <u>carrot fly</u> . Sage, rosemary, and radishes are recommended by <i>some</i> as companion plants, but listed by others as incompatible. Alliums inter-planted with carrots confuse onion and carrot flies. For the beneficial insect-attracting properties of carrots to work, they need to be allowed to flower; Otherwise, use the wild carrot, Queen Anne's Lace, for the same effect. Flax produces an oil that may protect root vegetables like carrots from some pests.
<u>Celery</u>	<i><u>Apium graveolens</u></i>		Cosmos, Daisies, Snapdragons			corn, Aster flowers	Aster flowers, can transmit the aster yellows disease
<u>Corn / Maize</u>	<i><u>Zea mays</u></i>	beans	Sunflowers, legumes (beans, peas, soybeans etc.), peanuts, cucurbits (squash, cucumbers, melons, etc.), amaranth, white geranium, lamb's quarters, morning glory, parsley, and potato ^[2]			Tomato, Celery	Provides beans with a trellis, is protected from predators and dryness by <u>cucurbits</u> , in the <u>three sisters</u> technique
<u>Cucumber</u>	<i><u>Cucumis Sativus</u></i>		Nasturtiums, radishes, marigolds, sunflowers, peas, beets, carrots, and Dill	Beneficial for ground beetles		Tomato, Sage	
Common name	Scientific name	Helps	Helped by	Attracts	Repels/Distracts	Avoid	Comments
<u>Eggplant or Aubergine</u>	<i><u>Solanum melongena</u></i>	Beans, Peppers	Marigolds, <u>tarragon</u> , mints				Marigolds will deter nematodes.
<u>Leek</u>	<i><u>Allium ampeloprasum v. porrum</u></i>	Celery, apple trees	carrots		cabbage worms, aphids, <u>carrot fly</u> , others	Legumes (beans, peas, etc.), Swiss chard	Same companion traits as all alliums (onions, garlic, shallots, chives, etc.)
<u>Lettuce</u>	<i><u>Lactuca sativa</u></i>		Radish, Kohlrabi, beans, carrots			celery, cabbage, cress, parsley	Mints (including hyssop, sage, and various "balms") repel slugs, a bane of lettuce and cabbages
<u>Mustard</u>	Brassicaceae, <i><u>Sinapis alba</u></i>	Cabbage, cauliflower, radish, Brussels sprouts, turnips			various pests		Same general companion profile as all brassica (cabbage, kohlrabi, Brussels sprouts, cauliflower, etc.)
<u>Nightshades</u>	<u>Solanaceae</u>		carrots, alliums,			beans, black	Nightshade plants include

Common name	Scientific name	Helps	Helped by	Attracts	Repels/Distracts	Avoid	Comments
			mints (basil, oregano, etc.)			walnuts, corn, fennel, dill, brassica (broccoli, cabbage, cauliflower, etc.)	tomatoes, tobacco, chili peppers (including bell peppers), potatoes, eggplant, and others
<u>Onion</u>	<i>Allium cepa</i>	Tomatoes, brassicas (broccoli, cabbage, etc.)	Carrots		aphids, <u>carrot fly</u> , other pests	Beans, lentils, peas, parsley	Same companion traits as all other alliums (chives, garlic, shallots, leeks, etc.)
<u>Peppers</u>	Solanaceae, <i>Capsicum</i>	marjoram	tomatoes, geraniums, petunias	Tomato Hornworm		beans, kale (cabbage, Brussels sprouts, etc.)	Pepper plants like high humidity, which can be helped along by planting with some kind of dense-leaf or ground-cover companion, like marjoram and basil; they also need direct sunlight, but their fruit can be harmed by it...pepper plants grown together, or with tomatoes, can shelter the fruit from sunlight, and raises the humidity level.
<u>Potato</u>	<i>Solanum tuberosum</i>		Horseradish			Atriplex, carrot, cucumber, onion, raspberries, squash, sunflower, tomato	Horseradish increases the disease resistance of potatoes
<u>Parsnip</u>	<i>Pastinaca Sativa</i>	fruit trees		a variety of predatory insects			The flowers of the parsnip plant left to seed will attract a variety of predatory insects to the garden, they are particularly helpful when left under fruit trees, the predators attacking codling moth and light brown apple moth. The root also contains Myristicin, which is toxic to fruit flies, house flies, red spider mite, pea aphids, a simple blender made extraction of three blended parsnips roots to one litre of water through a food processor (not one for preparing food) and left overnight, strained and use within a few days.
<u>Pumpkin and other Squash</u>	<i>Cucurbita spp</i>	corn, beans	Buckwheat, catnip, tansy, radishes	Spiders, Ground Beetles			Radishes can be used as a <u>trap crop</u> against flea beetles, Cucurbita can be used in the <u>three sisters</u> technique
<u>Radish</u>	<i>Raphanus sativus</i>	<u>squash, eggplant, cucumber,</u> ^[2] <u>lettuce</u>			<u>flea beetles, cucumber beetles</u>		Radishes can be used as a <u>trap crop</u> against flea beetles
<u>Spinach</u>	<i>Spinacia oleracea</i>		Peas, Beans				The peas and beans provide natural shade for the spinach
<u>Tomatoes</u>	<i>Solanum lycopersicum</i>	roses, peppers, asparagus	basil, ^[1] oregano, parsley, carrots, marigold, Alliums,	Tomato Hornworm	asparagus beetle	Black walnut, corn, fennel, peas, dill,	Black walnuts inhibit tomato growth, in fact they are negative <u>allelopathic</u> to all

			celery, Geraniums, Petunias, Nasturtium, Borage, any type of onion or chives			potatoes, beetroot, brassicas (kohlrabi, cabbage, etc.), rosemary	<p>other <u>nightshade</u> plants (chili pepper, potato, tobacco, petunia) as well, because it produces a chemical called <u>juglone</u>. Dill attracts tomato hornworm.</p> <p>Growing tomatoes with Basil does not appear to enhance tomato flavour but studies have shown that growing them around 10 inches apart can increase the yield of tomatoes by about 20%.^[2]</p>
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Herbs							
Common name	Scientific name	Helps	Helped by	Attracts	Repels / Distracts	Avoid	Comments
<u>Basil</u>	<i>Ocimum basilicum</i>	tomato, ^[2] peppers, oregano, asparagus, petunias	chamomile, anise	butterflies	asparagus beetle, mosquitoes, <u>thrips</u> and flies	common rue	is said to make tomatoes taste better, chamomile and anise are supposed to increase the essential oils in many herbs like basil
<u>Borage</u>	<i>Borago officinalis</i>	Almost everything, especially strawberry, cucurbits (cucumber, gourds), tomatoes and cabbage		Predatory insects, honey bees	many pests		Predict a square metre for its adult size. Borage is the magic bullet of companion plants ^[citation needed]
<u>Caraway</u>	<i>Carum carvi</i>	Strawberries		Parasitic wasps, parasitic flies			
<u>Chamomile</u>	<i>Matricaria recutita</i>	Basil, Wheat, Onion, Cabbage, Cucumber		<u>Hoverflies</u> , wasps			Growing near herbs will increase their oil production.
<u>Chervil</u>	<i>Anthriscus cerefolium</i>	Radish, lettuce, broccoli			aphids	radish	loves shade, fortunately it grows well with shade-tolerant food plants; will make radishes grown near it taste spicier
<u>Cilantro / Coriander</u>	<i>Coriandrum sativum</i>	spinach	beans, peas	tachinid fly	aphids, spider mites, whiteflies and potato beetle	dill	Will cross-pollinate easily with dill and ruin both plants.
<u>Chives</u>	<i>Allium schoenoprasum</i>	Apples, carrots, tomatoes, brassica (broccoli, cabbage, etc.), mustard, etc.), many others	carrots		cabbage worms, <u>carrot fly</u> , aphids	beans, peas	Same companion traits as all alliums (onions, garlic, shallots, leeks, etc.)said to prevent apple scab after 3 years

Common name	Scientific name	Helps	Helped by	Attracts	Repels / Distracts	Avoid	Comments
							planting at base of apple trees
<u>Dill</u>	<i>Anethum graveolens</i>	Cabbages, Corn, Lettuce, Onions, Cucumbers		Tiger Swallowtail butterflies/caterpillars, Hoverflies, Wasps, Tomato Hornworm, honey bees, Ichneumonid Wasps	Aphids, spider mites, squash bugs, cabbage looper	carrots, tomatoes, cilantro	One of the few plants said to grow with fennel. Will cross-pollinate easily with cilantro and ruin both.
<u>Fennel</u>	<i>Foeniculum vulgare</i>	Dill	Dill	ladybugs, <u>syrrhid fly</u> , <u>tachinid fly</u>	aphids	Almost everything	Fennel is <u>allelopathic</u> to most garden plants, inhibiting growth, causing to bolt, or actually killing many plants
<u>Garlic</u>	<i>Allium sativum</i>	Apple trees, Pear trees, Roses, Cucumbers, Lettuce, Celery			Aphids, cabbage looper, ants, rabbits, cabbage maggot	Beans, cabbages, peas	Deters rabbits, same companion traits as all alliums (onions, chives, shallots, leeks, etc.)
<u>Hyssop</u>	<i>Hyssopus officinalis</i>	Cabbage, grapes		honey bees, butterflies	Cabbage moth larvae, <u>Cabbage Butterflies</u>		Stimulates growth of grapes.
<u>Lavender</u>	<i>Lavandula Angustifolia</i> <i>Lavandula Dentata</i> <i>Lavandula Stoechas</i>	Chamomile, Lettuce, Brassicas, Onions, Tomatoes, Oregano, Thyme, Marjoram, Sage, Rosemary, Basil, Lemon Balm, Squashes					
<u>Lovage</u>	<i>Levisticum officinale</i>	Almost all plants	beans	Ichneumonid Wasps, ground beetles (good)		rhubarb	Is thought to improve the health of almost all plants, like borage and geraniums, is considered a "magic bullet" of companion planting
<u>Oregano</u>	<i>Origanum vulgare</i>	Tomatoes, peppers, many other plants	basil		aphids		provides ground cover and much-needed humidity for pepper plants if allowed to spread among them
<u>Parsley</u>	<i>Petroselinum crispum</i>	Asparagus, corn/maize, tomatoes		Swallowtail Butterflies, wasps, flies		Alliums, lettuce	Sacrificially attracts insects that predate upon tomatoes
Common name	Scientific name	Helps	Helped by	Attracts	Repels / Distracts	Avoid	Comments
<u>Peppermint</u>	<i>Mentha piperita</i>	Brassica (cabbage, kohlrabi, broccoli,			cabbage fly, ants, cabbage looper		Repels cabbage flies, has same general

		and the other kales)					companion properties as other mints
Rosemary	<i>Rosmarinus officinalis</i>	<u>sage</u> , cabbage, beans, carrots, thyme				bean beetle	Deters cabbage flies, repels many bean parasites
Sage	<i>Salvia officinalis</i>	<u>rosemary</u> , cabbage, beans, carrots		honey bees, <u>cabbage butterfly</u>		cabbage flies, <u>carrot fly</u> , black flea beetle, cabbage looper, cabbage maggot	Deters cabbage flies, repels many bean parasites
Southernwood	<i>Artemisia abrotanum</i>	Fruit trees					Controls cabbage moths and malaria mosquitoes.
Spearmint	<i>Mentha spicata</i>					ants, aphids	Controls ants and aphids, has same general companion properties as other mints.
Summer Savoury	<i>Satureja hortensis</i>	Green beans, onions,					also delays germination of certain foul herbs
Stinging nettle	<i>Urtica dioica</i>	Chamomile, mint, broccoli, cannabis sativa, tomatoes, valerian, angelica archangelica, marjoram, sage & peppermint				aphids	
Tansy	<i>Tanacetum vulgare</i>	beans, cucurbits (cucumbers, squash, etc.), corn, roses		honey bees		flying insects (Ichneumonid Wasps), Japanese beetles, striped cucumber beetles, squash bugs and ants	Is reputed to generally repel insects (except for nectar-eating types). This herb should not be consumed, as it is quite toxic.
Tarragon	<i>Artemisia dracunculus</i>	Everything, but especially eggplant					Its scent is disliked by most pests, and this plant is also thought to have Nurse Plant properties, enhancing the growth and flavor of crops grown with it.
Thyme		Cabbage and broccoli					Deters whitefly

Flowers

Flowers							
Common Name	Latin Name	Helps	Helped by	Attracts	Repels / Distracts	Avoid	Comments
Geraniums	<i>Pelargonium</i> spp.	Roses, corn, peppers, grapes			leafhoppers, Japanese beetles	Tomatoes, Tobacco, Eggplants and	A <u>trap crop</u> , attracting pests away from <u>roses</u> and grape vines, distracts beet leafhoppers, carrier of the curly top virus, keep away from

						other nightshades	<u>Solanaceous</u> plants like eggplant, and tobacco
<u>Lupin</u>	<i>Lupinus</i>	Cucurbits, brassica, lettuce, rosemary, dill, strawberry	summer savory	Honey Bees		tomatoes and other solanaceae	This wildflower is a legume, hosting bacteria that fixes nitrogen in the soil, fertilizing it for neighboring plants
<u>Marigold</u>	<u>Asteraceae</u> <u>Calendula</u> <u>Tagetes</u>	most plants, especially tomatoes and peppers, cucurbits (cucumbers, gourds, squash), brassicas (broccoli, kale, cabbage)		snails	nematodes, <u>beet</u> <u>leafhoppers</u> , other pests		Marigolds are a wonder-drug of the companion plant world, invoking the saying "plant them everywhere in your garden". French marigolds produce a pesticidal chemical from their roots, so strong it lasts years after they are gone. Mexican marigolds do the same, but are so strong they will inhibit the growth of some more tender herbs. Certain Varieties of marigolds (<u>Tagetes</u>) can help manage eelworms (<u>Root-knot nematode</u>) when planted the year before [1]. Tagetes has also been found effective against perennial weeds such as Ranunculus ficaria (Celandine), Aegopodium podagraria (Ground elder), Glechoma hederacea (Ground ivy), Agropyron repens (Couch grass), Convolvulus arvensis (Field bindweed), Equisetum arvense (Field/Common Horsetail) and other 'starchy' weeds. ^[citation needed]
<u>Petunia</u>	<i>Petunia x hybrida</i>	cucurbits (squash, pumpkins, cucumbers), asparagus			leafhoppers, Japanese beetles, aphids, asparagus beetle		Is a trap crop almost identical to geraniums in function
<u>Nasturtium</u>	<u>Tropaeolum majus</u>	Many plants, especially cucurbits (melons, cucumbers, gourds), beans, tomatoes, apple trees, brassicas (broccoli, cabbage, etc.), radish ^[citation needed]		predatory insects	aphids, cabbage looper, squash bug, white fly, cucumber beetles	radish ^[citation needed] , cauliflower	Both work as trap crops for aphids, is among the best at attracting predatory insects ^[citation needed]
<u>Sunflower</u>	<i>Helianthus annuus</i>	corn, tomatoes			aphids		Was grown as a companion for corn(maize) before modern Europeans arrived in the Americas, supposedly increases their production, ants herd aphids on sunflowers, keeping them off neighboring plants
<u>Tansy</u>	<i>Tanacetum vulgare</i>	cucurbits (cucumbers, squash, etc.), raspberries and relatives, roses, corn			sugar ants, Japanese beetles, cucumber beetles, squash bugs, <u>mice</u>		Toxic to many animals, don't plant it where livestock browse
<u>Yarrow</u>	<i>Achillea millefolium</i>	many plants		predatory wasps, ladybugs, hoverflies, <u>damsel bugs</u>			May increase the essential oil production of some herbs. Also improves soil quality, use the leaves to enrich compost, or as mulch.
<u>Zinnia</u>	<i>Zinnia</i>	beans, tomatoes, peppers			whiteflies		Attracts hummingbirds that eat whiteflies, attracts pollinators

Other

Other Common Name	Latin Name	Helps	Helped by	Attracts	Repels / Distracts	Avoid	Comments
<u>Alfalfa</u>	<i>Medicago sativa</i>	Cotton		assassin bug, big-eyed bug, <u>Ladybug</u> , parasitic wasps	<u>Lygus bugs</u>		Used by farmers to reduce cotton pests, a good crop to improve soil; fixes nitrogen like beans do. Also breaks up hardpan and other tough soil.

(Credit: Wikipedia)

8.4 Orientation Packet

To growth, health, and collaboration!

Spring 2013

Hosted by: The Campus Center for Appropriate Technology

Welcome to the HSU Community Garden!

Thank you for being part of the Campus Community Garden effort. With hard work, love, and patience, this garden and your experience will be rewarding.

This packet of information is intended for anyone getting involved in the community garden. Pages two and three cover basic information pertaining to garden management.

Pages four, five, six and seven cover basic organic gardening techniques. The topics covered are not exhaustive, and are not thorough—instead they are a brief introduction to the concepts. More information can be found on the web, the CCAT Library, and asking experienced peers. This garden is a place of collaboration, let's share skills and ideas!

Throughout the semester, gardening workshops will be held through CCAT. If you have requests for topics, please let the CCAT Organic Gardener or affiliated designee know. Stay up to date by checking your email and the Notice Board at the garden often.

Goals of the Community Garden

The purpose of the HSU Community Garden is to provide space for students to learn about and practice growing food and other plants organically. This garden will facilitate healthy living by promoting organic practices and encouraging students to eat fresh, local produce. In addition, the space will provide a place where people can gather and share in the common experience of growing their own food. The garden will serve as one avenue to practice collaboration and learn to care for the commons.

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Safety Protocol

Safety is of utmost priority in relation to the Community Garden. We emphasize taking every necessary precaution to ensure the safety of yourself and others. This said, we suggest all gardeners wear protective clothing and closed toed shoes. In addition, gardeners should always utilize the provided safety goggles and protective gloves provided. There are two varieties of incidents that you may have to typically deal with in the garden: emergencies and non-emergencies.

Notice: as a witness or victim to an accident, whether it is an emergency or non-emergency, you will have to fill out a portion of the Accident Report form presented by UPD. In case of this unlikely event, please stay with anyone injured and provide necessary information to the best of your ability.

Emergency Protocol

In case of emergency (life threatening or needing immediate medical attention), call 911 and UPD at 707-826-5555. If you do not have access to a phone, there is an Assistance Tower in the parking lot next to the Children's Center, and next to the Schatz Energy Research Center. Please locate this and orient yourself with how to operate it prior to any situation. In addition, there is a phone at CCAT, both upstairs in the dining room and downstairs in the office.

Non-Emergency Protocol

There is a wealth of different situations you may need to deal with that are not apparent emergencies. In any questionable situation, always call the UPD at 707-826-5555. In case of minor injuries which obviously do not require professional medical attention, a First Aid Kit will be available in the tool storage area. One of the CCAT Co-Directors or the CCAT Organic Gardeners or affiliated designees should be notified in any non-life-threatening situation so there can be documentation and reparation of all dangers associated with the garden.

Potential Hazards Protocol

There are many situations you may have to deal with as a gardener which could present potential hazards. Please use your conservative discretion; if you notice anything that could harm anyone or anything in the garden, notify the appropriate person. Some people to notify are the CCAT Organic Gardeners or affiliated designees, the CCAT Co-Directors, or the CCAT Advisor. In the unlikely event that you are unable to contact one of the people listed above, please refer to others on the contact list. In addition, potential hazards should be listed on the Notice Board so that all gardeners and visitors are informed and can take the necessary precautions. As a gardener, part of your routine should include checking this board at the start of all of your work sessions. Some situations to notice:

Chemical fertilizers, pesticides, herbicides, or fungicides should not be on site for any reason. If you see them, please notify one of the people on the contact list. In case they somehow appear and manage to endanger someone (i.e. get in the eyes), please assist them in locating fresh water to rinse with and then call the UPD.

-If you see broken glass, please put on gloves, then carefully pick up all visible pieces and then turn the soil so shards are not on the surface. Also, notify one of the CCAT Organic Gardeners or affiliated designees or CCAT Co-Directors.

-In the event that a tool appears to be damaged in a way to render it inoperable, or unsafe, please follow the procedure of the "Lockout/ Tagout" system. This entails locating and filling out one of the red tags available in the tool storage area, and then attaching it to the tool in question. Lastly, place it in the location clearly marked "Tool Quarantine." There will be a clipboard located in this same area outlining this process.

-This garden aims to be as accessible as possible despite the limitations of the space. The gate and upper-terrace adhere to the Americans with Disabilities Act, and it is important that they remain this way. Normal wear and tear is expected, but these features must be steadfastly maintained. This being said, if there is any damage that seems to compromise the mission of accessibility, please notify the CCAT Organic Gardeners or affiliated designees. Examples of this kind of damage include broken boards, wash out, difficult entry ways and any other apparent structural change.

-If there is ever any water leaking, or if it appears that a waterline has broken, please call Facilities Management (number available on the contact list) as well as the UPD.

Garden Courtesies

Individual garden plots are for growing annual fruit, vegetables, and flowers for gardener use and not commercial sales. If you have excess produce, please share!

If there are more applicants than allocated plots, the designation will be done via a random lottery with priority given to on-campus students and those who are willing to work within a small group, followed by on campus organizations. Priority is given to individuals by having a majority of plots designated for individual use.

All plots must be maintained organically. Use of pesticides, herbicides, and genetically modified organisms are strictly prohibited. Please check with CCAT, local gardeners and farmers, or the web for organic means of dealing with problems.

Community Garden hours of operation are sunrise to sunset.

Participants must:

Maintain safety as first priority.

Attend a Community Gardener Orientation session at the start of every semester.

Accept responsibility for cultivating, weeding, and watering their assigned plot.

Completely plant and harvest their plot as the season/ weather allows.

Remove/trim all disease and pest infested plants.

Notify CCAT Organic Gardener or affiliated designee if you must abandon your plot for any reason. Plot-holders who do not take care of their plot will be given a warning, then a week's notice to clean it up or it will be reassigned.

Care for the commons. Conserve water always!

Attend the monthly meeting

Participate in at least one workday per month. Workdays will be weekly, the day posted in advance on the notice board. Special arrangements may be made for those with scheduling conflicts.

Remove all garbage and recyclables, as there is no receptacle.

Restrictions:

No pets, even on leashes. No motorized equipment.

No disrespectful behavior such as smoking, alcohol consumption, etc.

Do not harvest that which is not yours, unless given explicit permission.

Prohibited Plant List

The following plants will NOT be planted by participants (note: this list is not exhaustive, and subject to change). If you have any questions about why these plants are not allowed on the site, please ask a CCAT Organic Gardener or affiliated designee.

Genetically Modified Organisms

Any plant that can be used whole or in part to produce a substance that is defined as an illegal drug by the Federal Drug Administration

Himalayan Blackberries

Canna Lily

White and Black Nightshade

Jerusalem Artichokes

Any type of Morning Glory (weed, domestic, flower)

Mint

Bamboo

Asparagus

Trees or any perennial that grows over 6 feet tall or is hardwood

Any invasive plants that spread aggressively from the original site of planting, which takes over or overwhelms any nearby plants.

Introduction to Organic Gardening

According to the International Federation of Organic Agriculture Movements, organic agriculture "Is a production system that sustains the health of soils, ecosystems and people. It relies on ecological processes, biodiversity and cycles adapted to local conditions, rather than the use of inputs with adverse effects. Organic agriculture combines tradition, innovation and science to benefit the shared environment and promote fair relationships and a good quality of life for all involved."

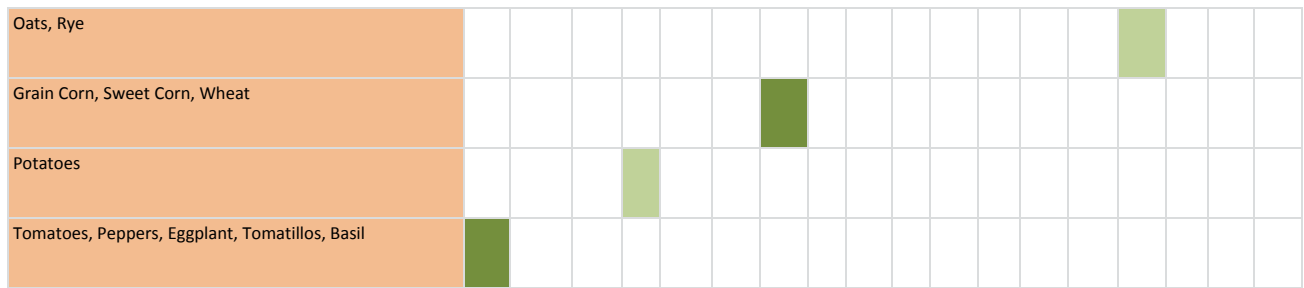
The term organic is now closely associated with a certification process by the government. This being said, the Campus Community Garden will operate according to organic practices, but will not be subjected to the certification process.

The following sections are brief introductions to organic techniques. For more information, visit Appropedia.org, the CCAT Library, or take the Organic Gardening class.

In addition, the CCAT staff (specifically the Community Gardeners and Organic Gardeners) are available for guidance and will host workshops regularly.

Local Planting Guide

	February		March		April		May		June		July		August		September		October	
	Early	Late	Early	Late	Early	Late	Early	Late	Early	Late	Early	Late	Early	Late	Early	Late	Early	Late
Carrots, Parsley, Parsnips																		
Lettuce, Spinach, Cilantro, Dill																		
Summer Squash, Zucchini, Cucumbers																		
Broccoli, Cabbage, Cauli, Kale, Beets																		
Bok Choy, Chinese Cabbage																		
Radishes, Asian Greens, Arugula																		
Pumpkins, Winter Squash																		
Peas																		
Dry Beans																		
Snap Beans																		
Winter Cover Crops																		
Onions																		
Garlic																		
Leeks, Green Onions																		



Biodynamic Planting

According to the Biodynamic Gardening and Farming Association, biodynamic gardening is a spiritual-ethical-ecological approach to agriculture, food production and nutrition.

Biodynamic farmers strive to create a diversified, balanced farm ecosystem that generates

health and fertility as much as possible from within the farm itself. Biodynamic practitioners also recognize and strive to work in cooperation with the subtle influences of the wider cosmos on soil, plant and animal health.

Methods unique to the biodynamic approach include its treatment of animals, crops, and soil as a single ecosystem, its use of traditional and development of new local breeds and varieties, and its use of an astronomical sowing and planting calendar.

What's Up with "No GMOs?"

GMO stands for genetically modified organism. They are crops that have genes from another species, sometimes from another kingdom, spliced into their genome.

Benefits of GMOs are increased yield, reduced pesticide use, reduced fertilizer use, and increased nutritional value in the food.

Unfortunately, this is a relatively new technology and little is known about the long term effects of GMOs.

Interestingly, there is major opposition from GMO-producing companies to researching the effects. First of all, the access to the proprietary GM crops for study is often denied to independent researchers. Secondly, when the access is not denied, there is a contract that compels the researcher to submit their results to the company prior to submission to any journal for publication. In almost every case, the company does not allow publication if the results indicate any adverse effect of the product.

While there is not robust information in primary scientific literature condemning GMOs, to be conservative and in line with organic practices, we will not grow these kinds of plants. With a little research on basic genetics and what GMOs are, there are obvious concerns that arise. You are encouraged to learn more about this controversy.

Why no Pesticides, Herbicides, Fungicides, or Fertilizers?

These synthetic chemicals are not appropriate for an organic garden because of the adverse effects they have on the rest of the ecosystem.

If applied to your garden, these chemicals will leech into the groundwater. Pesticides and herbicides, such as Round-up, made by Monsanto, are known to kill amphibians and fish due to their toxicity.

Some pesticides which are certified as "organic" also have these harmful effects. To remain conservative with our actions, we will utilize alternative means of plant management.

Some of the practices include: homemade pest deterrents, row cover, mulching, composting, and companion planting. The most important defense of plants is accomplished by the plant itself. The healthier the plant, the better it will be at self-defense. Furthermore, chemical fertilizers can be expensive, and their chemical makeup can reduce the quality of soil and cause the buildup of chemicals/salinization.

Please note that organic amendments may be applied. There is a list available on Appropedia.org. In general, they include anything that occurs without human synthesis. Some examples are: seaweed, crushed oyster shells, and guano.

Integrated Pest Management (IPM)

Integrated pest management uses mechanical, biological, and chemical control measures. Mechanical or "physical" control measures include: hand removal of insects, soil steaming, traps, scarecrows, and barriers such as row cover. Biological controls are measures which mainly include using other organisms to eat the pests/diseases. When applicable, native species should be encouraged. Chemical controls (organic substances/mixtures poisonous or repelling to pests/ diseases) are considered a last resort in IPM but sometimes they are needed. These chemical controls can be homemade and are non-toxic to the environment and to humans. See the list of recipes for pest deterrents, located at CCAT.

The Magic of Mulch

Mulching is the act of applying a layer of material, on the ground surface, around growing plants. It prevents the growth of weeds and the loss of moisture.

Average thickness is 3-6 inches of mulch. It encourages the activity of earthworms and keeps the soil from becoming hard.

Compost

Compost is organic matter that has been decomposed and recycled as a fertilizer and soil amendment. Composting methods and philosophies vary, and will not be addressed here. You are encouraged to learn more about the process and components of compost either on the web, from the CCAT Organic Gardeners, or from WRRAP.

For the purpose of this community garden, we will focus on the compost lifecycle over the long term as it breaks down and forms humus and nutrients. The application of a mulch layer should only happen when the seedlings have grown well above the soil or if the plants are planted. Sowing or planting in a mulch layer is ineffective. Do not apply the mulch layer near frost sensitive plants until after last frost.

Two benefits are created by amending beds with compost in this way. First, we will contribute our plant waste to a larger composting facility operated by WRRAP. Second, we will utilize mature compost to provide nutrients to the soil.

Compost improves soil structure, improves aeration, increases water-retention, minimizes erosion problems, and makes the soil easier to work. If used as mulch, it can slow the growth of competitive weeds between rows and soil, it will not be able to radiate heat at cold nights, so the danger of frost damage is greater.

Some kinds of mulch include wood chips, newspaper, cardboard, compost, and straw around plants. Similar to how a sponge holds water, organic matter helps to retain nutrient ions in the soil that the plants need to grow. When you remove green waste from your plot, please place it in one of the sealed bins. This will be emptied regularly, and eventually used to provide nutrients back into your plot!

Interplanting

Interplanting is a technique to maximize the output of an area. This is of particular interest in this space, given the limited area allocated to each gardener. The guiding principle is to intentionally plant species close together, without compromising the health of either plant.

Some things to consider in order to make wise pairings:

How fast do the plants grow? Try planting a fast-growing crop between a slower-growing one.

Do the plants need similar water, sun and soil requirements?

Do the plants have shallow or deep root structures? Minimize competition by pairing a shallow with a deep-rooted plant.

Do the plants belong to the same family? If so, they may be targeted by the same pests.

Also, try planting annual flowers in your bed. They will attract beneficial pollinators. Some examples are marigolds and nasturtium. Also, some plants may be pest deterrents.

Companion Planting

Very simply, some plants can benefit other plants when planted closely. On the other hand, plants can also be harmful when planted near other plants. This basic concept is important to consider when designing your plot. Plants are considered companions if they help other plants with the uptake of nutrients, deterrence of pests, or attraction of pollinators. For instance, nasturtium is a great companion plant for cabbage. Caterpillars which feed on cabbage will preferentially lay their eggs on the nasturtium instead,.

Please refer to the many resources available at CCAT and on the web for examples of companion and antagonistic plants. Nasturtium is a great companion plant. It attracts pollinators, deters pests, has edible leaves, and beautiful flowers!

Crop Rotation

Crop rotation is a vital concept in farming. For the purposes of this community garden, it is less applicable. Nonetheless, it is an important concept with which to be familiar. Similar species should not be planted in one area consecutively. If plants of the same variety or family are planted in one area continuously, pests and pathogens can accumulate. Alternating shallow rooted plants with deep rooted plants will benefit the soil structure.

If plots are planting with similar plants consecutively, the soil is disproportionately depleted of nutrients. By rotating varieties, nutrients can be added back to the soil without the use of harmful and expensive fertilizers. Crop rotation is particularly important when growing grains. It is necessary to replenish nitrogen by planting a legume. Crop rotation is often done on a 1/3 or 1/4 schedule.

Cover Cropping

Cover crops are useful in managing soil fertility, weeds, and erosion. In times when a bed in the community garden is to be left unattended, you are encouraged to plant a cover crop. Some species often used as a cover crop create associations with bacteria in the soil and consequently provide nitrogen. This is a common characteristic of legumes. A great variety to plant locally is fava bean.

Some plants such as rye, red clover, and mustard produce a biochemical which degrades to a mildly toxic chemical that inhibits pathogens and weed seed germination. In times when a garden is not being utilized at maximum capacity, this property is useful to minimize the presence of unwanted seeds which would otherwise accumulate in the soil, posing a future threat.

Saving Seed

Saving seed is vital to food security and sovereignty. Seeds bought are often hybrids which are incapable of germination. For this reason, it is important to understand the difference between self and cross pollinated plants.

Self-pollinating plants are also known as open pollinated plants. They have the necessary requirements to maintain their seed purity. On the other hand, hybrid plants capable of cross pollination may exchange genetic material with other varieties and render their seeds incapable of germination.

Seed should be selectively saved from the healthiest, most productive plants of each variety. It is also wise to select for various desirable qualities. Seeds should be saved from as many healthy specimens as possible so that genetic diversity is preserved. Most stored seeds stay viable longest when they are kept in dark, dry, cool, pest-free conditions. If you would like more guidance with saving seed, ask a CCAT Organic Gardener or affiliated designee or a CCAT Organic Gardener. Also, look forward to a seed saving workshop.

A Word on Water

Although we live in a temperate rainforest, it will be necessary to water the garden. There is a access to the water line available on site. Please, do your best to conserve water. This is important because it takes a lot of energy to clean and transport the water to the site. Also, over-watering can lead to runoff. There is little concern of contamination of water from the site, because we will not be using synthesized fertilizers, pesticides, herbicides, or fungicides. This being said, be over-watering and adding to surface runoff, more water is available to pick up pollutants from the adjacent parking lot. Also, by unnecessarily adding to surface runoff, the site will experience erosion at a rate faster than would occur otherwise.

If there is ever a heavy rain or water-line breakage, straw swaddles are available to filter and slow garden site runoff. These swaddles are available in the tool storage area. If you have any questions about how to use them, please ask a CCAT Organic Gardener or affiliated designee.

Lastly, if a water line is ever broken, please immediately notify Facilities Management at 707-826-3646. Next, please notify one of the CCAT Co-Directors, Organic Gardeners, or affiliated designees.

Important Contacts

At CCAT:

Contact: Current Co-directors

Email: ccat@humboldt.edu

Phone Number: 707-826-3551

For Emergency:

Contact: Arcata Police Department

Phone: 911

Contact: University Police Department

Phone: 707-826-5555

For Immediate Site Repair:

Contact: Facilities Management

Phone: 707-826-3646

For Management Issues:

Contact: Sustainability Office

Phone: 707-826-5920

Director: TallChief 'TC' Comet