Eco-Rep

To reduce food waste on campus and utilize that waste into a student run, organic food garden

Autumn 2017 Report

Important Milestones

September 21st	First meeting to set agenda and club leaders
September 29th	Acquired and positioned the boat on site
October 19th	Compost heap completed and regular collection schedule in action
November 21st	Garden closed for the winter

Establishing the Club

Felicia Lin founded Eco-Rep in the Summer term of 2017. Her main focus was to achieve a more environmentally conscious school environment and increase environmental awareness throughout our student body.

In the Autumn term of 2017, the club was officially founded and with a new batch of students having just started with us at IVY, the club lobbied for members to join during the 'Club Booth' day with a high level of interest.

The first official meeting took place on September 21st where club leaders were elected and project goals were set out on the calendar.

Student Involvement

Eco-Rep's garden, with it's prime location at the main entrance to the school, also gathered a lot of interest from students outside of the club as they passed by during lunch times, often leading to them getting involved.

Club Agenda

The first meeting with all the club's new members, voted in the club leaders and set the agenda for the Autumn term, 2017.

Club Representatives:

President – Felicia

Treasurer – Calvin

Teacher – Mr Hamill

Club Projects:

Daily collection rota of raw waste food from the kitchen

Research into the Bokashi bucket method of composting oily food

Construction of a compost bin

Upcycling of a raised bed boat

Growing plan for the garden

Students Get To Work

Students were assigned a daily collection rota, and in conjunction with the kitchen staff, raw waste food was gathered and added to the compost heap throughout the Winter term.

The Bokashi composting method was researched and a monthly plan was established to perfect the method. Once the compost was ready each month, it was dug into the garden.

Students went to work during lunchtime and after school to dig in the garden and paint the boat, build the vegetable plot, path and fence and finally to close over the patch with straw and a plastic cover for Winter.

Bokashi Composting

Bokashi composting is an anaerobic process that relies on inoculated bran to ferment kitchen waste, including meat and dairy, into a safe soil builder and nutrient-rich tea for plants.

Bokashi is a Japanese word that means "fermented organic matter." Whether it does or not, that's what it has come to mean in North America and Britain. The Bokashi host medium can indeed be almost any fine organic grain or grass-like substance — bran, rice, wheat mill run (WMR, a waste product from flour milling), used mushroom growth medium, dried leaves, even sawdust.

This medium is inoculated with beneficial microbes that flourish in anaerobic, acidic environments but smell less foul than do those in unfettered, natural anaerobic conditions. To prepare the inoculant, a brew that will attract the appropriate bacterial strains is prepared, the host material is immersed in it, and the microbes are allowed to ferment. Molasses provides an energy source for the microbes, which reproduce wildly for several days. Once the fermentation stage is over, the inoculated host can be dried, packaged, and stored for long periods. Though this is a simplified version of a process that requires several steps, it does describe what we buy when we buy Bokashi.

The bacteria belong primarily to three strains: yeasts, (*Saccharomyces* spp.), bacteria that produce lactic acids (*Lactobacillus* spp.), and (phototrophic) purple non-sulfur bacteria (*Rhodopseudomonas* spp.). These, or bacteria like them, are the active organisms in yogurt and in silage, the fermented hay that is produced all over the world as a livestock feed. All smell sour or fermented but none produce a smell nearly as foul as those associated with natural anaerobic processes.

The composting process itself is about as simple as it gets. Perhaps once a day you mix your kitchen waste (including meats and dairy products!) with a handful or so of Bokashi (basically enough to coat it lightly) then press them it into the bin, sprinkle another handful of bran over them, and close the lid. (A plate or a layer of plastic over the pile helps seal it against the little air left in the bucket.) Large bones will not, of course, disappear over the course of ten days. It is recommend cutting up small bones and even chopping other items into small pieces for maximum efficiency. If one chose to skip the chopping step, a few extra days' fermentation time would probably reduce the larger pieces to thoroughly fermented mush.

When the bin is full, cover it tightly and set it aside somewhere in the house where it's out of direct sunlight for ten days or so. Every other day, draw off the liquid, which can apparently be used as a fertilizer (in a very diluted form) or full strength to control slime in drains, pipes and septic systems.

Our first bokashi bucket

After ten to fourteen days, the waste in the tub should be thoroughly pickled. It can then be dug into a fallow patch of the garden.

Ongoing Goals & Planting Overview

Future Objectives

In the Spring term of 2018, Eco-Rep plans to recruit some new members with the new intake of students joining our school. We also have the following aims:

- Collect egg boxes to germinate our seeds
- Germinate and propagate the seeds in a staggered growing plan and begin planting outdoors after the last frost.
- Continue with the bokashi composting to enrich the soil.
- Further develop the compost heap. We hope to, with the help of the bokashi method, compost 100% of the food waste coming out of the school kitchen every week.
- When harvest comes, the club will be able to provide the students, and maybe the school kitchen (if yields are fruitful) with fresh, organic and healthy produce for everyone to enjoy!

Current Club Members

Felicia	Godwin
Calvin	Jimmy
John C	Eric
Jack	Lucy
DJ	Lynn

Thank you to all our members and non-members for your support! We look forward to working together with you again next semester