

# USP Leavenworth Horticulture Program



# Established FY 2008

- ▣ **9 acre Garden** / Yield 151,000 lbs produce.
- ▣ **4000 hr Landscape Apprentice Program** / Department of Labor. (7 inmates)
- ▣ **Green House Project** / 35,000 plants were started from seed in the spring and maintained in the greenhouse until they could be transplanted to the outside gardens

# FY2009 / Expansions'

- ▣ **42 acre Garden** / Yield 362,000 lbs produce.
- ▣ **4000 hr Horticulture** Apprentice Program / Department of Labor. (25 Paid inmates)
- ▣ **Rain Water Harvesting Project** / 700,000 gal collected and used for Field irrigation.

# FY2009 / Expansions'

- ▣ **Water Shed Project** / 3 ponds was established for irrigation purpose. / 8.5 million gallons available for irrigation.
- ▣ **Herb and Spice Project** / In mid October 2009, 1000 lbs. of garlic bulbs were planted with an estimated yield of 12,000 lbs. June 2010. Other spices to be planted will include thyme, basil and various types of peppers.

# FY2009 / Expansions'

- ▣ **Vermiculture project / Details'** are later in presentation. This project is growing into super star status.
- ▣ **1/2 Acre Composting project / Details'** are later in presentation. The Ft. Leavenworth Horse Stable is supplying about 9,000 lbs. of manure a week (468,000 lbs. a year) for the composting project. This is composted with about 7,000 lbs. of food service waste week. (364,000 lbs a year)

# Composting Project Future..

- ▣ Increase to 3 acre composting site/
  - a. 750,000 lbs food waste.
  - b. 20,000 Shredded Paper.
  - c. 70,000 Yard waste.

**Challenges in a Prison setting.  
Security, Sanitation and Safety.**

- ▣ Putting these materials to use, instead of throwing them away can **save money** and preserve and protect the environment for all.

- ▣ **Composting is an important Earth-Kind practice that can help address this critical issue. Creating a compost pile gives us a perfect place for all garden, kitchen and lawn waste to go, not in the landfill.**

# FY2010 / Expansions'

- ▣ **Activity Therapy Horticulture program /** inmates plant and tend gardens using donated seeds from local non-profit organizations. This year, it estimated 150,000 pounds of fresh produce will be donated to Homeless shelters and Food Banks in the Leavenworth & Kansas City Area.

# FY2010 / Expansions'

- ▣ **Horticulture Mentoring program /**  
Establishing a mentor program through the Prison volunteer program to help mentor and develop the inmates working the program into better citizens upon release.

# Therapy Horticulture!















*Vermiculture and Worm Composting?*

# Benefits of Vermicompost as a Soil Enhancement

- ▣ Vermicompost is the perfect soil amendment. It not only nourishes plants in ways that chemical fertilizers cannot, but enriches the structure as well.

- ▣ Vermicompost has always come out on top for producing healthier and more productive plants.
- ▣ Chemical fertilizers not only fall short of Vermicompost in producing superior plants but it also actually kills off the soil.

▣ **Eco-Friendly Technology**

▣ **That has been around for  
2000 years...**

**USP Leavenworth Vermiculture Project is self contained.**

The bedding for the worms is produced from the Ft. Leavenworth Horse Stable's manure which is donated to the Food Service composting program.

- ▣ In FY 2009. The worm farm used over 20,800 lbs. of food waste .
- ▣ Waste diverted away from the local land fill and saving money for the institution trash removal.
- ▣ The worm casings that are harvested are then used as fertilizer for the Greenhouse Project and other projects around the institution grounds

- ▣ In FY 2010 , estimated that 40,000 lbs of food waste will be used.
- ▣ In FY 2011 , estimated that 55,000 lbs of food waste will be used.

- ▣ For Every 1 lb of worms :  $\frac{1}{2}$  lb of Food Waste per day.
- ▣ At the rate of the current population growth. We are anticipating to expand in FY 2012.
- ▣ Started in May 2009: 50 lbs of worms: estimated about 1600 – 2000 lbs as of March 2010.

- ▣ 600 gallons of Black gold collected in 6 months..40 to 1 ratio = 24,600 gal of Natural Fertilizer.
- ▣ 5 tons of worm compost. Used to build top soil.

**In FY 2010, We anticipate the Garden Yield to increase 15<sup>0</sup>%- 20<sup>0</sup>% from FY 2009.. From using Worm Black Gold...**











Fert.  
N-S-N  
Avail  
on  
Seed

check



Broccoli





- ▣ The benefits better management and organizational skills, as well as, budgetary relief from the high cost of Natural Resources.
- ▣ The government also enjoys the community's involvement . This enhances positive public relations and budgetary relief for all involved.

- ▣ **In addition to benefitting the community, these programs are beneficial to the inmates who learn new and affordable marketable skills and offer them a social outlet.**

- ▣ **The simple things can help us be better Stewards for the Environment and Tax payers.**

# Forward Thinking...

## Possible Additions in the Future.

- ▣ Fruit Tree Orchard's?
- ▣ Catfish farm?
- ▣ More community out reach programs?
- ▣ Vocational Training?

**JUST OPEN YOUR MINDS..**

# Partnerships!

- ▣ Leavenworth Lions Club
- ▣ Leavenworth Master Gardeners
- ▣ Mount Olive Masonic Lodge
- ▣ Leavenworth Salvation Army
- ▣ Kansas City Harvesters
- ▣ Ft. Leavenworth Stables
- ▣ United States Department of the Labor
- ▣ KDHE

# Any questions?

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