CLASS OUTLINES

January

January 18, 2013 – Class 3 “Vegetable Families”

Goal: The goal of this class is to teach farmers how classify plants into botanical families so that they use this information for improved pest management, fertility applications, soil management, planting schedules, and seasonal crop rotations, as well as a general guide to how to grow unfamiliar vegetable varieties.

* Introduction to the idea of scientific classifications of plants
  + All plants are classified into families
  + All in Latin – universal scientific plant language
  + Plants are in families just like people :
    - siblings, cousins, 3rd cousins, etc, etc.
    - sometimes plants look similar so it is easy to see the relationship, sometimes not
* Introduce the 11 families represented in the veggies that the farmers grow
* How to make an educated guess?
  + Plants in same family tend to (but don’t always have):
    - Same pest problems
    - Same diseases
    - Similar flowers
    - Similar looking seeds
    - Similar love/tolerance of hot or cold
* Brassicas
  + Farmers are very familiar with brassicas and can generally list all of them.
    - Show slide of seeds, flowers, flea beetles, and cabbage worms, like cool weather
    - Ask farmers to list the brassicas
    - Tend to have high nutrient requirements
* Alliums
  + Farmers are very familiar with alliums and can generally list all of them.
    - Introduce the idea that smell can be used to help identify alliums
* Cucurbits
* Solanaceae
  + Talk about tomatillos as being more like a cousin than a sibling
* Legumes
  + Nitrogen fixers, very good for your soil
  + There are many kinds of legumes that we cannot grow in Maine because they need a very long season.
* Convulvulaceae
  + Sweet potatoes are basically the only edible plant in this family, all the rest are poisonous.
  + Yams are unrelated and in a different family
* Apiaceae
  + We have studied this one a lot in the last two weeks
    - Who can list all of the apiaceae family?
* Asteraceae
  + This is a huge family of plants and probably the hardest to recognize
  + What do you see in this picture?
    - Sunflower, marigold, cosmos, dandelion, zinnias, lettuce, and rag weed
    - This family doesn’t share a lot of obvious traits, but the one to know the most about is disease
      * Aster yellows is a bacterial disease spread by leaf hoppers
        + Leaf hoppers are tiny, hard to see and will eat any of the 300 plants in the Asteraceae family
        + SO important to keep fields weeded. Many of the weeds in your field are food for leaf hoppers
        + Leaf hoppers can do a lot of damage to lettuce and salad mix
* Amaranthaceae
  + Another characteristic of this family that is not listed on the power point is that the leaves of this family are high in oxalic acid
    - That is why your teeth sometimes feel fuzzy after you eat the leaves raw
* Malvacea
  + There are not many plants in this family that we eat in America – more common in Africa
  + All of the plants in this family produce slime when they are cooked
* Poaceae
  + Grains and sugar!
  + This is the grass family –
    - the grass that you walk on in the park, the winter rye that we seed as cover crop, the bread that we eat, the rice that we cook, the corn that we harvest, etc.
    - Very diverse family with very diverse growing needs.
      * Can we make any general conclusions about this family?

This slide show will be followed by a matching activity. Each farmer will receive a full set of vegetable cards representing all the veggies that he/she grows. Each farmer will use the information that they just learned to sort the cards into appropriate families.

Once all farmers have their cards correctly sorted, each farmer will pick a family and tell the whole class what the defining features of the family are.