Understanding the Seed Packet

As we shop for seeds in the many catalogs, and visit garden centers we may be taken away by the colorful pictures we see on seed packets. Before you get carried away and buy them based on the pretty picture, take a minute or two and read the packet with understanding. We need to be selecting varieties that we have space to plant. Some varieties sold in our stores may surprise you, but may not be best for your area. Others do best in certain soil types, shady conditions, or may need to be started indoors first before moving to the garden. To help you make an informed decision, below are some things to look for when buying those seeds.

**Date:** for best results, buy only the seed packed for the current year. The date is generally stamped on the back flap of the package. Poor storage conditions reduce the viability of seed. Purchasing seeds packaged from last year is not a good buy unless you know how the seed was stored.

**Variety:** Most seed packets list the name of the variety and tell you if it is a hybrid. Flowers are also identified as annuals, biennials, or perennials.

**Starting Indoors:** Starting seeds indoors in flats usually gives you a slightly higher germination rate. Germination information is usually included on the packet. If using old packets of seeds, indoors is a better choice for starting.

**Culture:** Most seed packets will contain information on how and when to plant, including the number of days to germination and days to harvest. Packets will note spacing requirements, thinning instructions if planted in the ground, growth habit, special cultural needs, and height and spread at maturity.

**QR Code:** if you have a smartphone and a free app for scanning, this QR Code will take you to the company’s web site for more information about the product.
<table>
<thead>
<tr>
<th>Hive ID</th>
<th>Yard#</th>
<th>Date</th>
<th>Who worked hive</th>
</tr>
</thead>
</table>

### Hive Temperament
- Calm
- Nervous
- Aggressive

### Saw Queen
- Yes
- No
(Marked? Yes No Color__________)

### Laying Pattern
- Beautiful (Solid & Uniform)
- Mediocre (Little spotty)
- Poor (Spotty)

### Eggs Seen
- Yes
- No

Year Queen installed____________ Type__________________________ From__________________________

### Population
- Heavy
- Moderate
- Low

### Queen Cells
- Yes
- No
Along frame bottom:__________ Converted worker cell:__________

### Disease/Pests
- Chalkbrood
- Nosema
- Varroa Mites
- Tracheal Mites
- EPB
- APB
- Small Hive Beetle
- Others:____________________

### Medications
**Add Date**
- Pharma-Vitraz
- Apivar
- Mite Away II™
- Fumagillin-B
- Mite-A-Thol*
- Tylan*
- Terramycin™
- Terra-Pro
- Apiguard
- Others:____________________

**Remove Date**
- Pharma-Vitraz
- Apivar
- Mite Away II™
- Fumagillin-B
- Mite-A-Thol*
- Tylan*
- Terramycin™
- Terra-Pro
- Apiguard
- Others:____________________

### Integrated Pest Management
- Screened bottom board
- Powdered sugar mite drop
- Drone cell foundation
- Small hive beetle trap
- Others:____________________

### Early Spring Inspection
- Reversed brood box(es) Deep Med Shallow
- Cleaned Bottom Board

### Spring Feeding/Build-Up
- Bee-Pro*: ________Dry________Wet________Patties
- Syrup:__________
- Pollen Sub:__________
- Sugar Syrup (1/1 ratio):__________
- Other:__________

### Honey Flow Preparation
- Added super(s): Deep Med Shallow
- Split hive (new hive____) Add inner cover
- Added excluder
- Requeen
- Added feeder
- Added pollen trap
- Fed Hive

### Honey Removal/Extraction
- # Supers removed
- Pounds of honey extracted
- Pounds comb honey
- Pounds of pollen
- Removed excluder

### Food Stores
<table>
<thead>
<tr>
<th>High (Everywhere)</th>
<th>Honey</th>
<th>Pollen</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Near brood
- Fed hive
  - Sugar Syrup (2/1 ratio):__________
  - Syrup:__________
  - Bee-Pro*:__________
  - Other:__________

### Hive Condition
- Normal
- Brace comb
- Excessive propolis
- Normal odor
- Foul odor
- Equip. Damage
- Replace Equipment-What:__________
- Other:__________

**Type of Foundation**: Rite-Cell*
- Plastic Frames
- Duragilt*
- Wired
- Medium
- Replace Foundation: Yes No
- Age of Foundation:__________

Notes:____________________
When Adam Howard looks out from Lied Lodge & Conference Center and surveys the 9-acre hazelnut research field at Arbor Day Farm, he marvels at the difference that 21 years has brought. Howard is director of mission engagement and can hardly contain his excitement about news that the Arbor Day Foundation’s Hazelnut Project has been awarded a five-year grant through the U.S. Department of Agriculture Specialty Crop Research Initiative.

“The hazelnut program we started 21 years ago has transcended our greatest hopes,” Howard says. “We have a passionate group of people who will help turn hazelnuts into a relevant, viable crop in the years ahead.” Those people include the charter members who grew and reported on the earliest seedlings produced in the research field and the dedicated scientists at Oregon State University, Rutgers University, and the University of Nebraska-Lincoln who make up the Hybrid Hazelnut Consortium.

The USDA grant will help enable the research team to:
- Develop new cultivars that are cold-hardy, heat-tolerant, drought-resistant, high-yielding, and resistant to the eastern filbert blight.
- Expand field trials of new cultivars to be planted and studied across the U.S. to find the best new plants to take into commercial production.
- Continue laboratory and field research at the cooperating institutions.
- Expand awareness and technology transfer to implement research results. This will be done through field events, website development, social media, and traditional mass media outlets.

Ultimately, the goals are to develop superior hybrid hazelnuts, create new rural-based industries and alternative crops, and help the U.S. expand its share of worldwide production fourfold. Simultaneously, landowners will have an opportunity to expand the number of superior hazelnut bushes both in rural and suburban areas.

**Why Hazelnuts?**

The leadership and staff at the Arbor Day Foundation were attracted to this plant not only because of its potential for boosting rural economies and helping to keep land in productive agriculture, but also because of the environmental and health contributions hazelnuts can make. Here are just some of the attributes that make hazelnuts so important.

**Hazelnuts on the Farm**
- Hazelnuts, once planted and matured, can be harvested annually for about 25 years.
- Hazelnuts provide safe wildlife habitat throughout the year.
- More protein can be produced per acre than from most row crops.
- Large root systems help stabilize steep slopes and marginal farmland, cleaning runoff and protecting water quality.
- Carbon sequestration is exceptionally high.
- Crop diversity offsets market instability, and hazelnuts offer new industry potential, including biofuel to reduce reliance on foreign and non-renewable petroleum sources.

**Hazelnuts in the Home Landscape**

Nearly 80,000 Arbor Day Foundation members are growing hybrid hazelnuts as part of the Foundation’s ongoing research efforts. These important supporters report that they enjoy growing hazelnuts and love their great taste. They’ve shared ideas and recipes ranging from meat garnishes to delicious desserts. Participants also appreciate the high nutritional value of hazelnuts, including dietary fiber, iron, and other essential minerals and vitamins and lack of cholesterol. The nuts are also gluten-free food.

Member donations and participation in The Hazelnut Project will continue to be important, especially as the project expands and increases in scope. It was the interest of members that made the new research grant possible, and it will be members who keep the hybrid hazelnut program moving forward to contribute to a greener, healthier environment.

More details about hazelnuts and the research program can be found at arbor-day.org/hazelnutresearch.
Forcing Cut Branches For Winter Flowers

James T. Midcap - NCSU Horticulture

Cut branches forced into bloom can help add sunshine to those gloomy winter days and it is not hard to coax many into flower. Branches from cherry, plum, forsythia, quince and viburnums can be forced into blooming and used in arrangements. Large branches add interest and graceful lines to casual bouquets.

Spring flowering trees and shrubs can be forced into bloom once winter conditions in our gardens have satisfied their dormancy requirements. With proper treatment they can be brought into bloom earlier than normal. With proper conditioning in water, provided with good light and proper temperatures, they will burst into flower 5 days to 2 weeks after cutting.

Some plants are quite easy to force into bloom such as forsythia, quince and pussy willow. Not all shrubs however, are as easy. Those with late spring blooms are far more difficult. Included are viburnums, lilac and weigela. They are best cut close to their regular flowering time. Cherries and plums are excellent forcing specimens. The old fashioned purple leafed plum forces earlier than cherry. Many plants can be forced 1-2 months before their normal flowering. February is an excellent month for forcing many of the earlier flowering selections. March works well for the later flowering ones.

When winter arrives the flower buds are already formed on trees and shrubs. A period of dormancy is required before they will bloom. Plants differ in the amount of chilling, moisture, light and warm temperatures necessary to stimulate the spring flower buds. By February in most years, winter temperatures have satisfied the flower bud’s dormancy requirement. Once done, you can force branches by duplicating spring conditions.

Choose a mild day to cut branches and try to cut them during the warmest part of the day when buds are filled with moisture. Choose branches that are well budded and have interesting curves. Follow good pruning practices and prune to maintain the natural shape of the plant.

Allow the flowers to develop slowly to fully encourage large blooms with good color. First, mash the bottom inch or two of the stems with a hammer and place in water. Add a floral preservative or sugar with a drop of bleach. Change the water every few days over the forcing period. Leave the branches in a cool, dark spot until bud swell begins, then move them into a well lighted area to encourage the flower color to develop. Avoid placing the branches in direct sunlight. These practices extend the life of branches by reducing the bacteria in the water and keep stems unclogged. Water uptake through the stems should provide ample moisture preventing the branches from drying out unless the room is too warm. Cool temperatures allow buds to develop slowly and maintain flower color. When color appears in the bud it is time to arrange the branches in containers. Don’t wait until the blossoms are fully opened.

<table>
<thead>
<tr>
<th>Shrubs</th>
<th>Cutting Time</th>
<th>Forcing Time</th>
<th>Vase Life</th>
</tr>
</thead>
<tbody>
<tr>
<td>Azalea</td>
<td>late Jan. early Feb.</td>
<td>3-6 weeks depends on species</td>
<td>5-10 days</td>
</tr>
<tr>
<td>Crabapple</td>
<td>mid- March</td>
<td>2-3 weeks</td>
<td>1 week</td>
</tr>
<tr>
<td>Deutzia</td>
<td>mid- March</td>
<td>2-3 weeks</td>
<td>2 weeks</td>
</tr>
<tr>
<td>Flowering Cherry</td>
<td>mid- March</td>
<td>3-4 weeks</td>
<td>1-2 weeks</td>
</tr>
<tr>
<td>Flowering Dogwood</td>
<td>mid- March</td>
<td>2-4 weeks</td>
<td>7-10 days</td>
</tr>
<tr>
<td>Flowering Peach</td>
<td>late Jan. early Feb.</td>
<td>4-5 weeks</td>
<td>1 week</td>
</tr>
<tr>
<td>Flowering Plum</td>
<td>late Jan. mid-Mar.</td>
<td>3-4 weeks</td>
<td>10 days</td>
</tr>
<tr>
<td>Flowering Quince</td>
<td>Feb. mid-Mar.</td>
<td>3-5 weeks</td>
<td>2 weeks</td>
</tr>
<tr>
<td>Forsythia</td>
<td>early Jan. early Feb.</td>
<td>3 weeks</td>
<td>1 week</td>
</tr>
<tr>
<td>Fothergilla</td>
<td>early Mar.</td>
<td>2-3 weeks</td>
<td>1 week</td>
</tr>
<tr>
<td>Japanese Pieris</td>
<td>early Feb. 3-4 weeks</td>
<td>1-2 weeks</td>
<td>10 days</td>
</tr>
<tr>
<td>Lilac</td>
<td>early Mar.</td>
<td>4-6 weeks</td>
<td>1 week</td>
</tr>
<tr>
<td>Mockorange</td>
<td>mid- March</td>
<td>4-5 weeks</td>
<td>2-3 days</td>
</tr>
<tr>
<td>Scotch Broom</td>
<td>late Jan. mid-Mar.</td>
<td>4-6 weeks</td>
<td>flowers do not last long (2-3 days but branches are very useful</td>
</tr>
<tr>
<td>Spirea</td>
<td>mid- March</td>
<td>2-3 weeks</td>
<td>7-10 days</td>
</tr>
<tr>
<td>Willow</td>
<td>Feb.</td>
<td>1-2 weeks</td>
<td></td>
</tr>
<tr>
<td>Witchazel</td>
<td>Jan.</td>
<td>1 week</td>
<td>3-5 days</td>
</tr>
</tbody>
</table>
Upcoming Classes and News

Classes are subject to cancel if not enough people call to register. Please call ahead!

- **Boyle County Bee Group:** Monday 1/23/17 6pm
  Interested in Beekeeping? Already a Beekeeper? Join our group! The new Boyle County Bee Group is an educational support group for beekeepers and want to be beekeepers, to share information and ideas. Contact Alexis for more information. Hope to see you there!

- **Winter Produce Meeting:** Tuesday 1/24/17 9:30am
  Annual fruit and vegetable meeting held at the Lincoln Co. Produce Auction. Contact Will Stallard at (606) 365-2459 for more information.

- **Shiitake Mushroom Workshop:** Saturday 2/25/17 12-3pm $20.00
  If you’ve ever been interested in growing your own shiitake mushrooms on logs this is the class for you! This is a hands on workshop where participants will take home a log they have inoculated. Space is limited, payment will secure your spot! You will need to bring your own drill and an 8.5 mm Soft Steel Screw Tip Bit (see picture). Snow day planned for March 4th.

- **Beginner Gardening:** Thursday 3/9/17 4pm
  If you are new to gardening, or just need some refreshing on the subject, this class will be a breakdown of everything needed to have a successful garden in 2017.

- **Pruning and Grafting:** Saturday 3/18/17 10am-3pm $20.00
  As part of our Garden to Table series, this grafting class will go over nutrition and growing info for apples and pears. In the morning there will be a hands-on pruning demonstration at a nearby Boyle Co. farm. Afterwards lunch will be provided, and grafting will begin. Participants will take home 3 apple trees and a pear tree on dwarf rootstocks which they have grafted, as well as a grafting knife. 15 person limit, payment secures your spot!

- **Garden to Table: Beets** Thursday 4/2/17 6-8pm $3.00

- **Boyle County Earth Day:** Saturday 4/22/17 Bluegrass Community and Technical College

- **Garden to Table: Melons** Thursday 5/18/17 6-8pm $3.00

- **Straw Bale Gardening:** Tuesday 1-3pm
  Straw bale gardening is a new take on raised beds. Easy to do if you know a few tips, this class will provide information and demonstration on how to properly plant and take care of a straw bale garden.
Country Ham and Broccoli Grits

1 tablespoon olive oil  
1 pound fresh broccoli florets  
½ cup minced onion  
⅛ teaspoon crushed red pepper flakes

2 cloves minced garlic  
4 cups 1% milk  
1 cup uncooked quick grits  
1 cup 2%, shredded cheddar cheese

6 ounces country ham, cut into ½ inch pieces  
1 large egg, beaten  
Salt and pepper to taste

1. Preheat oven to 375°F. Coat 13x9x2 inch baking dish with cooking spray. Heat olive oil in a frying pan. Sauté broccoli, onion, garlic and red pepper flakes until vegetables are tender. About 5 minutes. Set aside.


3. Remove from heat, stir in ham, broccoli mixture, cheese, egg, salt and pepper. Mix until well blended. Pour into prepared baking dish.

4. Sprinkle with reserved cheese. Bake, uncovered for 30 minutes, or until top is set and lightly puffed.

Yield: 16, ½ cup servings.  
Nutritional Analysis: 120 calories, 3.5 g fat, 1 g saturated fat, 25 mg cholesterol, 370 mg sodium, 13 g carbohydrate, 1 g fiber, 4 g sugar, 9 g protein.

Cabbage Rolls

12 cabbage leaves  
1 pound lean ground beef  
1 cup cooked brown rice  
1 (15 ounce) can tomato sauce

1 teaspoon garlic salt  
½ teaspoon pepper  
½ teaspoon dried basil  
½ teaspoon dried oregano  
½ cup chopped onion  
¼ cup chopped green pepper  
1 teaspoon sugar  
1 tablespoon cornstarch  
1 tablespoon water

Cover cabbage leaves with boiling water. Let stand until leaves are limp, about 4 minutes. Drain. When cool, trim away excess ridge on leaf for easier rolling. Mix beef, rice, ½ cup tomato sauce, garlic salt, pepper, basil, oregano, onions and green pepper. Put ½ cup in each leaf, starting at leaf end; roll, tucking in the sides. Place seam side down in a 9-by-11-inch baking dish. Mix remaining tomato sauce with the sugar, pour over rolls. Cover and bake at 350 degrees F for 1 hour. Remove cabbage rolls from baking dish, pour juice in a saucepan. Mix cornstarch and water; stir into saucepan. Heat and stir until mixture boils, cook 1 minute. Serve sauce with cabbage rolls.

Yield: 6 servings, 2 rolls each  
Nutritional Analysis: 190 calories, 4 g fat, 1.5 g saturated fat, 40 mg cholesterol, 550 mg sodium, 24 g carbohydrate, 6 g fiber, 9 g sugars, 18 g protein.
Starting Seeds

Starting vegetable plants indoors from seed can be a rewarding activity with many benefits. Growing transplants from seed allows a gardener to try out different varieties that may not be easy to find. Growing your own plants indoors from seed can also cost less than buying transplants and allows you to get a head start on your garden.

There are, however, challenges to growing seeds indoors. A gardener starting seeds indoors will need plenty of space along with adequate light and heat. For seeds to germinate, they have to be exposed to an ideal environment that includes proper moisture, temperature, and light. Having an unfavorable environment will lead to slow germination and growth or will cause seeds to not germinate at all.

When a seed begins to germinate, the first thing that occurs is the seed absorbs water and begins to swell. Having a dry spell during the germination process will lead to killing the tiny plant that is trying to emerge from the seed. Seeds should have an adequate, continuous supply of moisture to ensure germination. You will want to make sure there is enough moisture, but on the other hand do not over water and drown the seeds. The easiest way to determine if water is needed is to simply feel the soil to determine if it is feeling too dry or wet.

Temperature plays an important role in the speed of germination and the percentage of seeds that germinate. The range of temperature that seeds will germinate at varies depending on the plant. In general, 65°F to 75°F, works for most plants. Typically, our homes are cooler than the temperature seeds will need to germinate. Germination heat mats can be found through many gardening supply companies. Containers can be set on the heat mat to increase the temperature around the seeds and improve germination.

For majority of vegetable plants, having light when the seeds are germinating in the soil is not needed. Light is usually needed after seedlings emerge above the soil surface. Containers can be placed in a window that receives plenty of light, like a south-facing window. If your house does not have a window with adequate light, supplemental light can be provided using fluorescent lighting. Seedling can be grown under fluorescent lights alone. When setting up lighting for seedlings, you will want to have the ability to raise the light as seedlings grow. Lighting should be positioned 6 inches above the plants and as seedlings grow, the lights should be raised.

When it comes to being successful at starting your own vegetable plants indoors from seed, the information provided above is just the tip of the iceberg. The Boyle Co. Horticulture agent will be teaching a class on seed starting at the Boyle Co. Library on February 27th at 6pm. Participants will be provided with the information they need to start seeds indoors, and will get the chance to ask questions on all plant related topics.
Spring
Chicks
Daffodil
Tulip
Bunny
Eggs
Flower
Grow
Seed
Hyacinth
**Trowel & Error: Spring Time Tips**

- Don’t pile salt-laden snow on lawns, especially on red fescue or Kentucky bluegrass lawns, which are easily damaged by salt. Tall fescue and perennial ryegrass lawns are more salt tolerant. Water heavily in the spring to leach salts out of the grass root zone before permanent damage occurs.
- Get fruit trees, brambles and vines ordered by mid-February so they will arrive in time for planting in early March while they are still dormant.
- Trees and concrete are both easily damaged by de-icing salts. Use sand instead of salt, especially near sensitive plants such as arborvitae, beech, holly, dogwood, hemlock, Scotch pine and white pine.
- Use an all purpose houseplant fertilizer to feed your poinsettia in early January and early February. Keep in a sunny window. Water regularly.
- February is a good time to fertilize fruit trees. All tree fruits and small fruits (except strawberries) need fertilizer in February, based on soil test results. go lightly, however, on fertilizer applications around pear and apple trees which had fireblight last year.

**Sourwood Oxydendrum arboretum**

Sourwood is a strange name for this delightful tree. The name comes from the acrid taste of the leaves. More notable is the fragrance of sourwood’s flowers that sweeten the summer air, and even more so, the richness of the honey produced from its blossoms. Sourwood honey has a caramel or butter flavor, rich aroma, and pleasant aftertaste. It is claimed by many as the best of the best. Along with sourwood’s other attributes, slow growth and spectacular fall color that appears earlier than most other trees make this an especially good choice for home landscapes.

**Leaves:** Alternate on the branch, 3-8” long and up to 3.5” wide. Shape is like an elongated spearhead with finely toothed margins. Brilliant crimson or purple-red color in autumn or sometimes yellow.

**Flowers:** Bloom is in mid-summer, later than most trees, with flowers like tiny, white bells hanging from a 6-8” long drooping stalk. Highly fragrant and showy against the tree’s green foliage.

**Fruit:** Small, upturned brown capsules mature in early autumn. As the capsules dry and break apart, tiny seeds are dispersed gradually throughout the winter.

**Form:** A medium-sized tree maturing at about 30’ in height with a 20’ crown spread. Generally pyramid-shaped but with a rounded top or sometimes irregular. Lower branches sometimes droop to the ground on open-grown trees.

**Wildlife Value:** High. Flowers attract bees and other pollinators, as well as hummingbirds. Warblers and many other songbirds are fond of its seeds.

**Planting:** Prefers full sun and moist, well-drained, acidic soil with a pH from 4.0 to 6.5. Tolerates a wide range of soil textures from coarse sands and gravels to clay loam, but should be protected from soil compaction. Suitable in hardiness zones 5-9.
Getting this year’s spring issue out a little earlier than usual, because I don’t want anyone to miss out on some of the wonderful things happening this late winter! Based on your suggestions from the survey I sent out in November, I have planned some super exciting class for the year, so I hope to see you at some! I appreciate your support and look forward to this growing season. Always remember to keep calm, and trust your horticulturist.

Alexis Amorese Sheffield
Boyle Co. Horticulture Agent

Wherever life plants you, bloom with grace.

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