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Phenology: Planting on plant time, or watch those lilacs

People do not acquire knowledge in a linear manner. They do not pile one fact on top of another in an Orderly fashion until they come to a great insight or measure of skill. Facts accumulate in a random fashion, take great intuitive leaps - and sometimes they are forgotten, only to resurface with new significance and understanding.

Pat Leuchtman

Between The Rows

In Montana farmers have learned that if they cut their first hay 10 days after the lilacs bloom, they can beat the hatching of alfalfa weevil eggs.

Phenology, the study of planting according to signals sent by plants themselves, was used by the Chinese over 3000 years ago. The Indians taught the early American colonists to plant corn when oak leaves were the size of a mouse's ear and tender crops were to be seeded when the maples are in full leaf. These bits of "folk wisdom" are amazingly accurate because certain plants are sensitive indicators of temperature and moisture.

Nearly 30 years the late Dr. Richard Hopp at the University of Vermont began a project of phenological studies, working with the Persian lilac "Red rothomagensis" and the honeysuckle. The lilac was chosen because it is widely grown, sturdy and is troubled by few diseases or pests. It also has easily identified stages of development. This work was continued by Dr. Leonard Perry and a report on the data that has been collected over the years should be available within a year or so.

Phenology is a good tool because the microclimate in one garden can differ significantly from that in a garden nearby. Planting dates that are given in books, catalogs and on seed packets can only be approximate. The key to gardening success is observation of your own garden and weather and knowledge of an individual plant's needs.

You can put phenology to work in your own backyard by watching your lilacs and making note of when they reach the five main stages of development:

- First leaf is the stage when the widest part of the emerging leaf has grown beyond the end of its opening winter bud scales.
- Full leaf is the stage when nearly all (95%) of the actively growing leaf buds have leafed.
- First bloom is when 50% of the bushes' flower clusters have at least one open floweret.
- Full bloom is when 95% of the flower clusters are open, and few of the flowers have begun to wither.
- End of bloom is the stage when at least 95% of the flower clusters have withered and dried, and the flower display is over.

Cool-season crops like peas, lettuce, spinach and root crops can be planted during the lilac first-leaf stage. Tender crops like beans, cucumbers and squash can be planted when lilacs are in full bloom.

After you have observed the development of your own lilacs you can start to create your own timetable for planting crops that go in between the earliest peas and spinach and the latest squash.

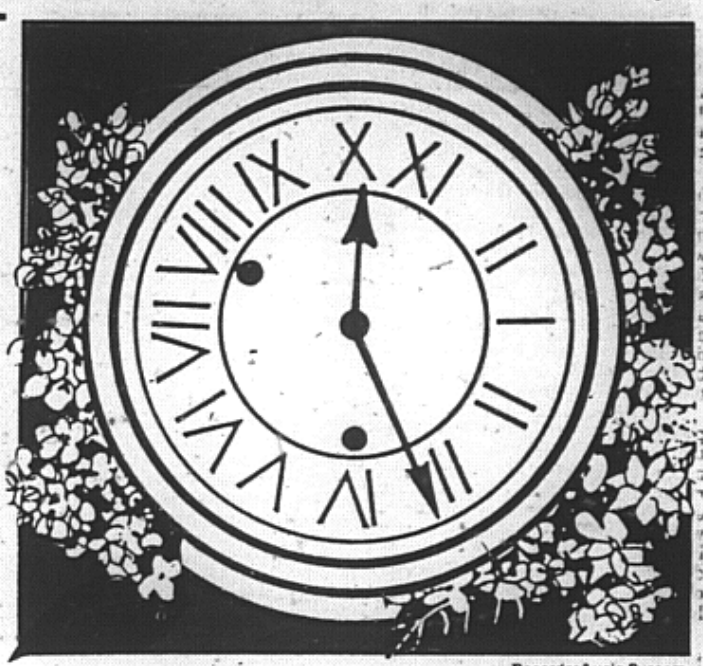
When you make notes in your garden notebook or journal about the lilac's stages of development, you might also want to note the stage of development or bloom of other plants in your garden. As I write this my lilacs are in the first leaf stage, my daffodils are budded, the early peonies are rising and the iris crisata is blooming.

Phenology is not only a helpful guide to planting. It can also help a farmer or gardener avoid serious damage done by pests. In Montana farmers have learned that if they cut their first hay 10 days after the lilacs bloom, they can beat the hatching of alfalfa weevil eggs. North Carolina farmers can reduce cabbage maggot damage by planting brassicas when the dogwood is in full bloom.

Phenological research can have large economic benefits for the commercial farmer because it will allow him to reduce his expenditures on pesticides without compromising the quality of his crops. Practitioners of Integrated Pest Management (IPM) are enthusiastic about phenology because it is another valuable tool in reducing pesticide use.

Dr. Perry does warn that no matter how much research is done, Mother Nature can sometimes pull a fast one and send an unexpected and atypical killing freeze, so it pays to listen to daily weather forecasts if you have set out tender plants.

But there is no doubt that the awareness of phenological signs is a better indicator of planting times than general hardiness maps.



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