

# Seasons of Apple Growing

## WELCOME TO THE FOUR SEASONS OF GROWING APPLES!

The majority of apple orchards are family-run farm businesses, operated in cooperation with the laws of nature. This highly seasonal enterprise is as varied as the days in a year, with each day bringing a new chance to test the orchardist's skills against the measure of the eventual harvest. An apple orchard is a busy place.

### WINTER

In January, while the trees are dormant, pruning begins. Limbs are sawed off and clipped to allow maximum sunlight into the growing structure. Pruning allows the tree to produce larger, better colored, higher quality and more valuable fruit. Equipment repairs and maintenance occupies the days too cold or stormy to be outdoors, through the winter months of February and March.

### SPRING

April is the time to prepare for spring planting. The average tree will bear fruit in 3 years with full production coming in 8 - 10 years. Most apple trees planted today are on dwarf stock, allowing for more efficient use of valuable land and labor. If Newton sat under one of these small wonders, the lesson of gravity would have been easier to learn. Since apples do not grow true to their seeds, young trees that have been grown in a nursery from cutting are transplanted to the orchard site. These trees have a desired fruit variety grafted (attached by tissue splicing) on to a root-stock selected for characteristics of size and vigor.

Sometime around the beginning of May, the buds begin to swell. Spring is near and the pace of the farm quickens. The brush from pruning is picked up or mulched back into the orchard soil. Grass that has grown tall is mowed to reduce competition for nutrients and habitat for pests. Growers using Integrated Pest Management (IPM) start monitoring the weather while hanging various insect traps to collect data for an annual spray program. Temperature, humidity, and rainfall are recorded in orchard weather stations to predict disease outbreaks and identify effective management tools. Both harmful and beneficial insects are counted to determine spray schedules. Spraying is done only when needed to protect the tree and fruit.

### SUMMER

With the opening of the "King" blossom (the largest and center - most of the five-blossom cluster), it is time for pollination to begin. Bee colonies rented from bee keepers must be moved in quickly, usually at night so the bees are "home" and not in flight. Sunny mild days are needed during bloom to encourage strong bee activity. Apples need more than one variety of pollen for the cross-pollination that ensures good fruit set. Fertilizing and tree training round out the busy June calendar. Limbs must be tied up or weighted down to spread the young tree into the perfect shape. Pomology (the science and art of growing apples) has become a very refined practice, and apple producers attend regional meetings and classes to keep abreast of the latest information and technology.

In some dry years, irrigation must be used during July. Fruit size and firmness are affected by moisture in this critical month. Spraying, mowing, and shaping practices continue, and some summer pruning is done to expose growing fruit to ripening sunlight.

August is the last growing month before the apple begin to ripen. Red apples need the assistance of cool night during harvest to trigger an enzyme which increases the amount of color or "blush." Mowing is completed and bins (the large bulk boxes picking buckets are emptied into) are positioned strategically around the orchard. Ladders are repaired and the harvest logistics are carefully planned. Storage rooms must be cleaned and their refrigeration systems tested. Most growers store some of their fruit in controlled atmosphere (CA) rooms where the temperature is rapidly brought down to 32 deg F, and the oxygen is replaced with nitrogen to slow ripening. Apples come out of these rooms months later as fresh as the day they were picked. For an apple to pass the "admissions test" to a fall CA room, it must have the proper starch and hardness measurement (to determine ripeness) at harvest.

## **FALL**

Apples bruise easily and must be hand picked. Additional harvest workers are hired both locally and from other areas and countries to help get the crop in on time. When picking begins around the end of August, there is a constant buzz of activity until the last of the fruit comes off near the end of October. Now it becomes the job of the farmers to market their fruit; either through their own farm store or packed and shipped fresh to supermarkets, restaurants, and schools nationwide and around the globe. During the harvest season, some farms invite the public to come for the fun of picking their own apples (PYO).

Many apples are process into sauce, pies, and jelly - or pressed into fresh cider and processed apple juice. Some apple varieties are designed specifically for this market. For other, cider is a delightful by-product of apples not "pretty" enough for the fresh whole-apple market.

An apple is in the pome family - a fruit whose seeds are embedded in the core of the fruit. Another surprising member of this family is the rose. Apples come in lots of colors and shapes--all of which add up to America's No. 1 snack. Select one of each type and have a taste test - each apple is loaded with minerals, vitamins, and fiber. At 85% water and 0% fat, an apple makes a low (80) calorie contribution to the five-a-day recommendation from the U.S. Department of Health and Human Services

With the harvest complete, it is time to prepare again for winter. Growing an apples takes all year, and there is always something going on in the orchard.. If you look closely, you can even see the promise of next year's crop at the tip of each branch in the snow. It is the bud that will become the apple which you might eat a year from now.