4.2 How to grow (Japanese) Apple Pears

by Chuan C. Chang

There are many varieties; the most famous is Nijusseiki (Twentieth Century), which is still one of the best. Others are Kosui, Kikusui, Hosui, Shinseiki, Shinko, and Niitaka. You can buy them from nurseries such as:

http://www.johnsonnursery.com/FRUIT%20PAGES/ASIAN%20PEARS.htm

or search the internet under "apple pears" or "Asian pears". You will need at least 2 trees to pollinate, and preferably of different variety; plant them fairly close to each other.

Prune the trees to the desired size and shape in October or February; more on this below. These trees will be dormant from December to February in New Jersey (where I grew them); in other states, you will need to adjust the temperature and times accordingly.

The flowers bloom in March-April (all dates are for NJ). Deer may come to munch on new growths, but will generally only consume the bottom sections, leaving most of the plants basically OK. However, some deer can be destructive, in which case you need protection. Erect fence posts, 4 ft above ground, 30 to 40 ft apart on the side of the orchard from which the deer come. Then string fishing lines from post to post at 2 ft and 4 ft heights. These strings are invisible to deer, especially at night, and when they bump into them, they are frightened out of their wits because they dislike being touched by something they can't see. At this time, you cannot protect the trees with netting (see below) because you need to allow bees to pollinate.

If you have a lawn bordering the orchard, erect fence posts 2 ft high along the border and string yellow nylon rope along the tops of the posts to prevent the person fertilizing the lawn from spreading weed killer and other chemicals onto the roots of the pear trees, as these chemicals will harm the fruits/trees.

Once the flowers are in full bloom, ring the trunk, about 8 inches above the ground, with tree wrap and coat it with "insect glue" or "gel trap", such as Tanglefoot, a sticky substance that prevents insects from crawling up the trees and eating everything from leaves to flowers to fruits. First place a complete ring of glue about one quarter inch thick around the trunk. Do not put too much glue at this stage because the glue is not good for the bark. Then wrap the tree wrap over this ring, thus sealing all cracks between the bark and tree wrap; this prevents insects from crawling up through gaps under the tree wrap. Wrap a section about 4 inches high, and secure the end with duct tape. You can use duct tape instead of tree wrap (sticky side towards the trunk), but duct tape is not elastic and will constrict the trunk from growing freely so that you must remove it immediately after harvest; however, it has the advantage that the underside is sticky and will trap insects that try to crawl under it. Duct tape is much easier to use than tree wrap. Now coat a thin layer of glue onto the tree wrap. You may need to add glue once or twice during the year.

Start fertilizing with 15-30-15 or 20-20-20 Miracle Grow as soon as the flowers bloom, and once every 2 weeks thereafter. If you use tree spikes, cleave them in half and pound each half in every 3-4 ft, directly under the outermost branches. To cleave, score a scratch across the middle and give it a sharp rap from the opposite side using a hammer.

Starting in early May (for NJ), when fruits are less than 1/4 inch in diameter, thin the young fruits to 3-4 fruits per flower bunch; each bunch will initially make up to 15 fruits. By late May, thin them down to 1 to 2 per bunch, preferably 1. Remove all small fruits, ones with defects or ones with short stalks. If you don't thin them, you will get a large number of small fruits, and the tree will tend to produce only every other year. By thinning and not overworking the tree, it will fruit every year, and you will get some very nice large fruits. Each tree will eventually yield 100lbs of fruits or more.

Thinning is a lot of work; assuming 500 fruits from 5 trees and 10 fruitlets thinned per fruit, you need to remove 5,000! In our orchard, we have 5 trees. Trees 1-4 are different and all make very tasty, large fruits. Tree 5 makes smaller fruits that do not taste as good as the others, so I do not harvest from that tree, but it does a terrific job of pollinating the others. Therefore, I thin this tree much more than the others and simply let it grow a lot of leaves so that it makes lots of flowers every year.

When the fruits are about an inch in diameter (June, in NJ), drape a netting with ½ inch mesh over the entire tree; the net should be large enough so that you can gather the ends of the net and close them around the trunk near the ground so that the tree can be completely enclosed. I use 14x14 ft nets sold as pond covers. Trim the tall new shoots at the top that have grown too long and would be bent by the netting. Also, the mesh size should be large enough (½ inch; ¼ is too small) so that new shoots can grow throughout the season and they can poke through the mesh. The purpose of the net is to prevent squirrels, birds, chipmunks, or other animals from eating the fruits and to prevent insects such as butterflies from laying eggs into the fruits. You cannot prevent all insects from attacking the fruits, but you will still get a large yield of perfect fruits if you use the proper netting; without it, you will get very little, if any perfect fruits. Insects such as yellowjackets are particularly destructive, as they make circular 3-mm diameter holes in ripe fruits to drink the sugar, and they can walk right through almost any netting. Once the skin is damaged, the fruit will ripen prematurely and begin to rot in just a few days.

The only way to further reduce insect damage is to enclose each fruit in a sandwich baggie a week or two before they ripen. Cut off the excess lip beyond the seal, enclose the fruit, zip the bag shut, then cut a small slit into the bottom most part of the bag so that rain water can leak out. One disadvantage of bagging is that the fruits can overheat if the sun is too hot. I do not recommend bagging and prefer to live with some fruits lost to bugs because if you bag them and have a very hot day, you could lose all the fruits to overheating.

When the fruits are about 1 inch in diameter, install a squirrel protection at the bottom of the net. Get wire meshes with about ½ inch mesh, 2 ft x 1.5 ft. Form each one into a half-pyramid so that when two of them are assembled together, they form a complete

pyramid. Invert the pyramid so that the vertex points down, and place each half around the trunk, just above the insect barrier (tree wrap). You will have to cut appropriate slits into the mesh around the trunk so that you can attach the meshes by wrapping them with strings around the trunk and the vertex of the pyramid. If you were to enclose the tree in the netting by just tying the ends of the net around the trunk, squirrels will easily gnaw through the nylon mesh and get in. The metal inverted pyramid prevents the squirrels from doing this. Although they can climb up the wire mesh and gnaw the part of the nylon net above the wire mesh, I have yet to meet a squirrel that has figured this out. However, they WILL get in if there is a gap between the wire and nylon meshes; therefore, you must carefully sew the two meshes together where they meet (around the base of the pyramid) so that there are no gaps. If the squirrels learn to climb up the wire mesh and gnaw through the nylon, you may need to cover the entire bottom wire mesh with plastic sheeting so that they have nothing to hang on to.

Once the tips of the netting are tied at the trunk, you will have four corners of the netting that form openings through which you can enter the netting and perform any maintenance, such as removing damaged or rotting fruits. These openings are easily closed temporarily with string or wiring, so that birds will not get trapped inside, and can be readily re-opened for accessing the inside. Always keep them closed because squirrels will quickly find open ones.

Fruits begin to ripen in late August and most should ripen by mid September. In early August, it may help to purchase those yellow plastic sheets with insect glue that attract most insects and trap them; hang them inside the netting. Fly strips are not as effective because they will tangle with the branches on a windy day. A very effective insect trap is the yellow colored bottle sold as bee traps; fill them with about 1 inch of any sweet drink, such as juice or soda.

Harvest the fruits as soon as they turn radiant yellow. Ripe fruits will come off easily with a small twisting motion. Although fruits are tastier when picked very ripe, the less ripe fruits will keep longer. Place in sealed plastic bags and keep in refrigerator – they will keep up to several months, though they are best when freshly picked. The sealed plastic bags prevent moisture loss, but if too much moisture condenses inside the bags, the fruits will need to be wiped dry periodically; otherwise, they will rot.

To serve, prepare a pot of ice water with a few drops of lemon juice. Then section the pears, peel and cut out the cores and any defects, and dunk in the cold lemon water (which prevents them from turning brown from oxidation of iron). Drain water and serve.

As soon as all the fruits are picked, remove the sticky tree trunk wrap, and squirrel protector, but leave the netting on because you can't remove it without breaking all the new shoots that have grown through it. It is particularly important to remove the trunk wrap to free the bark, and the wire mesh which tends to gather dead leaves and insects. Once all the leaves have fallen, you can prune the branches and remove the net. The

netting MUST be removed so that when the flowers open in the spring, the bees can pollinate. This completes the yearly cycle.

Most nurseries recommend fruit tree sprays in order to reduce the defects in the fruits. Without sprays, a bad fungus infestation can kill the trees. Fungus will grow on both the leaves and fruits. I recommend spraying with fruit fungus spray such as Immunox once immediately after the flowers finish blooming, and again after all the leaves have grown, about a month later. Some commercial orchards also spray with oily tree spray just before the flowers bloom.

Since the size of the fruits depends on adequate water supply, make a circular retaining wall of dirt at a diameter of 3-4 ft from the trunk, so that when you water the plant (during a drought or when applying fertilizer), the water will not run off. I keep the ground free of any vegetation inside this wall by spraying Roundup whenever weeds appear.

End.