

**PROPAGATION OF *PYRUS CALLERYANA*  
'ARISTOCRAT' PEAR**

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Mr. William Straw is the originator and patent owner of the Aristocrat pear, *Pyrus calleryana* 'Aristocrat.' This new thorn-free cultivar was found in 1969 growing among seedlings of *Pyrus calleryana* at the Carlisle Nursery, Independence, Kentucky. Mother Nature created and holds the mystery of the ancestry.

In our budding procedure of this plant, we start out with a good balanced, pliable soil with a pH close to 6.1. We apply 275 to 300 pounds potash and phosphate per acre. We then line out seedling understock of *Pyrus calleryana*, pencil caliper with a good fibrous root system. We had trouble with our seedlings but finally found a selection out of Whiterock Nursery, Crockett, Texas, which is one of the best. It has a good root system and we have had excellent success. For example, in one row of 510 seedlings, we may have only 30 misses. We consider this a good stand. We like to plant our understock especially deep to help prevent drying. In addition herbicides that are used have a harder time reaching the root system. It is important to set the plants upright when planting. If this is not done, root development tends to be heavier on one side. After planting, the seedlings are side dressed with ammonium nitrate to get them established quickly. Budding is much easier if the plants are in a good growing condition.

It is important to select budwood that is not too green nor too hard. Either condition will result in a failure. We have budded successfully as late as November. However, that was unusual. We start checking for budwood a week or so before actual budding time. We go through the block and look for wood with bark that will slip easily. The buds of ideal wood should separate from the wood without pulling. We find the lower branches are best for budwood. We feel the most critical part of the operation is collecting the budwood. The decision as to when buds are suitable is very important. We usually begin budding in June.

When wood is ready, we cut, or scratch, the soil away from the understock so we can bud as low to the ground as possible. In this way we avoid a long shank of exposed understock. The understock is always best and most succulent just under the ground. The budder then inserts a T-bud into the west side of the understock using the T-bud method. We like to bud towards

the prevailing wind as this makes the bud much more wind resistant.

It is just as important to have a good wrapper as a good budder. He must go behind the budder and wrap uniformly and tightly above and below the newly inserted eye. The tightness of wrapping is a second critical factor. If it is too loose, the bud will fail to take. If it is too tight, the bud will be cut off. Therefore, be sure the rubber bands are the correct length. Princep<sup>1</sup> is then sprayed on the area immediately after budding has been completed.

In two weeks we check back on the buds. We will know then what percentage of take we have attained. The buds will either be growing or will have turned black. If it appears that we have a poor stand, we still have time to go back and rebud. We insert this bud on the opposite side. Although some propagators make two T-buds the first time, it takes a great deal more time. We prefer to see what our stand is, then go back and rebud, if necessary, as early as we can. Then, if the second bud fails, we still have time to chipbud.

It has been our experience that pears tend to shoot out sideways rather than grow upwards. Therefore, we stake our buds with Gro-Straight stakes for about 3 to 4 weeks. We stake them just as soon as the tops are cut back the following spring. We obtain the Gro-Straight stakes from J. Frank Schmidt Nursery in Oregon.<sup>2</sup> These stakes are then replaced with six foot steel stakes, and plants are tied to stakes. We go back every week or so and add more ties depending on the growth of the plants.

In a good season, our buds will grow an average of five to eight feet, branched. We find that we have far less mortality if the finished plants are dug and planted in the spring. They must not be allowed to dry out. We have found the above procedures give us a high percentage of quality plants.

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<sup>1</sup> Princep is the trade name for simazine, 2-chlor-4, 6-bis (ethylamino-S-triazine).

<sup>2</sup> J. Frank Schmidt & Son Co., 9500 SE 327th Avenue, Boring, Oregon 97009