

Good Varieties for the Home Fruit Garden

(Figures indicate the number suggested for home garden)

Kind	Principal Value	ZONE	ZONE	ZONE
		I Southern Border, Lincoln Co., West & lower Valleys around Black Hills	II Counties from Minne- haha West; Protected Slopes & Valleys Generally	III Plains and Level Prairies of Northern two-thirds of State
SUMMER APPLES	For Quick Returns	Anoka	Anoka (1)	Anoka (1)
	Cooking & Eating	Red Duchess (1)	Red Duchess (1)	Red Duchess (1)
	Top Grafting	Virginia Crab	Virginia Crab	Virginia Crab
	Jelly Crabs	Dolgo (1)	Dolgo (1)	Dolgo (1)
		Florence	Florence	Florence (1)
	Sweet Crab	Whitney	Whitney	Whitney
	Varieties for Trial	Beacon	Beacon	Beacon
		Melba	Melba	Melba
		Red River Crab	Red River Crab	Red River Crab
	FALL APPLES	Main Crop	Wealthy (2)	Wealthy (2)
		Anisim (1)	Anisim (1)	Anisim (2)
For Trial		Joan (1)	Joan (1)	Joan (1)
		Goldo (1)	Goldo (1)	Goldo (1)
Top Grafting (Cooking)		Minjon	Minjon	Waukon
WINTER APPLES	Long Keepers	Hibernal	Hibernal	Hibernal
		Haralson (3)	Haralson (3)	Haralson (2)
		Wakpala	Wakpala	Wakpala (1)
		Sugar Crab	Sugar Crab	Sugar Crab
	Varieties for Trial	Northwestern (1)	Northwestern (1)	Malinda
		Victory M369	Victory M369	Victory M369
		Prairie Spy	Prairie Spy	Prairie Spy
		Fireside M993	Fireside M993	Fireside M993
		Hawkeye		
		Sharon		
	Turley Winesap			
	Delicious			
HANSEN RED FLESH APPLE	For Trial	Almata	Almata	Almata
PEARS (See Pears Below)	For Trial	Peter Piper (Golgol)	Peter Piper (Gogol)	Peter Piper (Gogol)
		Parker	Bantam	Bantam
		Mendel	Mendel	
		Patten		
PLUMS, Minn. Hybrids	For Trial	Ember	Elliot	Underwood
		Superior	Superior	LaCrescent (yellow)
		Elliot	Underwood	Radisson
		Underwood	Monitor	Fiebing
		Monitor	Fiebing	Monitor
		Tonka	Pipestone	Splendid
HANSEN PLUMS FOR ALL ZONES				
	Large Hybrids	Oziya, Cree, Tecumsch, Kahinta, Waneta		
	Fragrant Hybrids	Kaga, Hanska, Toka, Kota		
	Cherry-Plums	Sapa, Opata, Oka		
NATIVE PLUMS	For Cross Pollination	Surprise, Terry, DeSota, Wyant, Westesa, Assiniboine, Bounty		

available improves conditions still further. The result is that Black Hills weather is generally more favorable than that of Union and other counties along the southern border, classed in Zone I.

APPLES: "Varieties for Trial" in the suggested list of fruit includes several varieties of improved quality recently released by neighboring state experiment stations. Name and description of M369 and M993 by the Minnesota Fruit Breeding Farm have just been released.

PEARS: Market pears generally lack hardiness and are very susceptible to the damaging fire-blight. N. E. Hansen's Manchurian Hybrid (Peter Piper or Gogol) and some other new northern hybrids are preferable for South Dakota.

CHERRIES: Hansen bush cherries are the native sandcherries improved by Dr. N. E. Hansen of which he has named several varieties, entirely hardy throughout the state. Other cherries worthy of trial are: For the entire state, the Korean cherry and the red Nanking Cherry (*Prunus tomentosa*), bird cherry of China; For Zones I and II, the winter tender red pie cherries, Early Richmond, Wragg and Montmorency.

APRICOTS: Hardy for South Dakota include the Manchu and 11 other selections of drouth and wind resistant Manchurian seedlings introduced by Dr. N. E. Hansen; and the Scout and Morden apricots of Manitoba suggested for trial.

Grapes: The Beta, vigorous, productive and hardy throughout South Dakota without winter protection, is very desirable for jell and grape juice. South Dakota and Minnesota hybrid grapes are worthy of trial. Provide frames for climbing.

CURRANTS: All standard white and red currants hardy. Red Lake is productive. Viking is said to be immune to white pine blister rust. Native golden currants with black or yellow fruit are hardy and valuable for windbreak hedges and landscaping.

GOOSEBERRIES: Hybrids of native Dakota species with English currants have produced numerous good varieties such as the Pixwell.

RASPBERRIES: Will produce only on moist protected sites which can be sure of receiving water during the fruiting season. Good red varieties are Latham, Chief, Ruddy and Ohta. Of the raspberries, the red varieties are the more productive in South Dakota. The system of planting most desirable to follow is the narrow hedge system, with suckers allowed to spread only between the hills originally planted. Rows then are about 12 inches wide, held in place by wire trellises. Ten canes per four linear feet give greatest yields.

STRAWBERRIES: Require well protected sites. Good June-bearing types are Dunlap, Howard or Premier, Minnesota 1192. Ever-bearing varieties include Gem, Mastodon, Progressive, Wayzata, (or Lockhill) and Dry Weather. Strawberries are like raspberries in demanding an ample moisture supply while the fruits are developing. With water available when needed and plants mulched with straw at freeze-up time during winter, these berries can be grown in most localities. It is often practicable to water a small strawberry bed but not a more extensive but less productive fruit garden.

An effort is made in the accompanying chart, "Good Varieties for the Home Fruit Garden," to distinguish between the major climatic zones and suggest the varieties most satisfactory for each.

What to Plant

Planting stock to give satisfactory results must fulfill four specific requirements.

1. Only varieties known to be hardy under South Dakota conditions should be planted!*
2. Most bush and tree varieties must have been budded or grafted on hardy root stocks, such as Siberian crab in the case of apple trees, northern wild plums in the case of plum varieties, Manchurian apricot seedlings in the case of apricots.
3. A sufficient number of varieties to permit cross-pollination must be planted in mixture. While some varieties of apples, plums, cherries, and grapes may be able to fertilize themselves enough to produce fruit, many will not; and in most instances, fertilization is much more satisfactory and a better crop assured if enough varieties are interplanted to ensure cross-pollination. In the case of the improved varieties of plums in particular, it is important to have some of the native plums, wild or selected, near enough for the bees to transfer the pollen.
4. The quality of stock should be of the best—medium sized, thrifty and free from disease. One-year old trees are to be preferred, affording a better chance to trim and develop the low-headed, bush-type trees needed.

Northern nurserymen, particularly those of the Dakotas, are most apt to have the varieties that are hardy and have stock propagated by the methods suited to the northern climate. Stock from more southern latitudes and bargains from any unknown source, will seldom prove satisfactory. Ask

your dealer if his trees fulfill these two requirements before purchasing.

One point of special importance in commercial apple production is concerned with "top working"; that is, either grafting or budding other varieties on to the top. Some of the better varieties such as Delicious and Jonathan which are not hardy enough to endure South Dakota winters when propagated as budded or root-grafted stock, are said to survive and produce well when top-grafted on the permanent side branches of well-formed trees that have been growing in the orchard two years or more. Two varieties have given the best satisfaction when used for stock in top working—the Hibernial apple and the Virginia crab, due to exceptional winter hardiness and wide-angled branches which do not split.

Points About Planting

Plant as early in spring as it is possible to prepare the soil. All plants should be entirely dormant, with no buds starting at the time. Stock should be carefully handled and well protected to prevent loss. Roots should never be permitted to dry out, the stock being heeled in promptly on arrival. It cannot be planted at once. Berries and roots are set the same depth that they grew previously; fruit trees slightly deeper. Soil from the holes is separated into topsoil and subsoil as the holes are dug. In planting, the roots are spread out naturally in the hole, topsoil placed about the roots and thoroughly packed, and subsoil used to fill up the last of the hole. Fruit trees when planted should be leaning to the southwest.

Prune When Planting

A bush (low, open head) shape of trees is needed to grow apples, plums and other fruits in South Dakota. The shorter the trunk and the lower the branches, the greater the shading of the trunk and the less danger from sunscald, which is so serious in the northern Great Plains Region.

If unbranched year-old trees are planted, they should be cut off to about 12 inches above the ground. Branches will develop from dormant buds of the stub. If there are several good sized branches, three or four may be left. The lowest branch should be but a few inches above the ground on the southwest side of the tree. For the framework of the tree, three to five other branches are selected arranged spirally around the trunk, from four to six inches apart. The leader and remaining branches are removed without leaving stubs.

Additional pruning is necessary as the tree grows that it may develop a strong satisfactory framework, and subsequently improve in production. For correct information, see South Dakota Extension Circular 388, "Fruit Tree Pruning in South Dakota," or Farmers Bulletin 1522, "Home Fruit Garden on Northern Great Plains."

Pruning Berries and Grapes

Before strawberries are planted, all fully developed leaves are picked off, leaving only the growing center leaves. Removal of flower stems as they develop until the middle of July increases the plant vigor, the production of runners and fruit later on. The canes of raspberries should be cut back to six inches at time of planting. Grape vines are usually cut back leaving but one or two buds.

Cultivation and Fertilization

Clean cultivation throughout the growing season is essential, to control weeds and conserve moisture. Plums need continuous cultivation throughout their bearing life. A man with a hoe should always follow the cultivator, to remove weeds that cannot be reached with cultivator. In cultivating terraces, a single disk can be arranged to throw the dirt up on each side and maintain the terrace channel so it will continue to retain water.