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Growing POTATOES in the Home Garden

UNIVERSITY OF MINNESOTA
DOCUMENTS



E.M.HUNT

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SEED POTATOES

It is recommended that either "certified" or "war approved" seed, preferably the former, be planted. These are identified by an official State Department of Agriculture tag on each bag. Such seed costs more than "common stock," but the added expense is more than justified by the higher yield and better quality of crop that can be expected. It is advisable to obtain new seed each year. Potatoes are subject to several diseases whose symptoms are not easily recognized on either tubers or plants. The presence of one or more of these diseases does, however, materially reduce the yield. High-yielding seed stock can be maintained only under carefully controlled conditions of isolation, disease control, and storage. As home-produced potatoes may become infected in a single season there is no assurance that seed saved from a high-yielding crop will perform satisfactorily the following year.

PREPARING THE SOIL

Plow or spade the soil in the manner usually followed for garden soil preparation. If the soil is soddy or if coarse manure is applied, fall spading or plowing is desirable. Before planting in the spring, harrow or rake sufficiently to make a reasonably smooth planting surface and to destroy weeds which may have started early.

Since the potato seed pieces are quite large and will be planted deeply, and since the resulting plants are sturdy, it will not be necessary to prepare a fine planting surface such as small garden seeds require. However, sufficient working to break up clods and destroy weeds will save work later on.

FERTILIZERS

Although potatoes are adaptable to a wide variety of soils, they perform best on fertile, mellow soil. Fresh or strawy manure can be applied in the fall and plowed or spaded under. Well-rotted manure may be applied before spring plowing or may be applied on top of the plowed soil and thoroughly worked in by disking, harrowing, or raking. Apply manure at the rate of 20 tons per

Potatoes Are a Productive Garden Crop

THE POTATO is an important food crop. Probably no other vegetable is used as regularly and in such quantity in the average American home. Its culture is simple. On any soil suitable for general garden crops it is a dependable and efficient food producer.

EXPECTED YIELD

A 100-foot potato row, planted with 8 pounds of seed, should yield 1 to 2 bushels. Obviously the 10 to 20 bushels which a family might require cannot be produced in a small, backyard garden.



The Warba—recommended for Minnesota gardens

However, even in the small garden, after space has been provided for such vegetables as tomatoes, green beans, and leafy greens, the potato might be considered as desirable as any other crop for planting on any remaining space.

RECOMMENDED VARIETIES

The early varieties Warba and Cobbler are particularly recommended for garden planting in all parts of Minnesota. Midseason varieties such as Chippewa and Pontiac are generally satisfactory. They are smoother than the early kinds mentioned but are not as high in quality. Late varieties are not recommended for the home garden except that Sebago may be useful where late blight disease is a serious problem.

Warba (also Red Warba)—Very early maturing, productive, good quality. Round or blocky, eyes deep and pink.

Irish Cobbler—Early maturing, productive, good quality. Round or blocky, deep eyes.

Chippewa—Midseason maturity, good quality. Smooth, oblong, somewhat flattened.

Pontiac—Midseason maturity, productive. Smooth, uniform tubers.

Sebago (blight resistant)—Late. Recommended only for northeastern Minnesota areas where its resistance to late blight may compensate for low yield caused by late maturity.

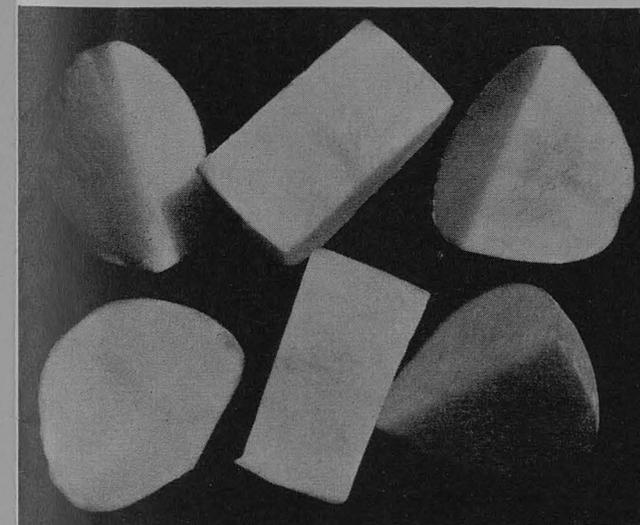
acre or approximately 3 bushels per 100 square feet.

If manure is not available, commercial fertilizer may be used to increase fertility. The most effective method is to spread the commercial fertilizer in the bottom of the planting trench and mix thoroughly with the moist soil just before the seed pieces are dropped in. A 4-12-4 mixture

(Victory Garden Fertilizer) may be used in this manner, 4 pounds per 100 feet of row. A side dressing at the same rate may also be made soon after the plants are up. Open a trench 4 inches deep along the row and 6 inches away. Apply the fertilizer in the trench and cover by cultivating or raking soil into the trench.

PLANTING

Time of Planting—Plant as soon as the frost is out of the ground and the soil is dry enough for good seedbed preparation. Although the planting date will vary with the locality and the soil type, such early plantings should usually be made between April 15 and May 15. On peat or muck soils it will be wise to delay planting until May 15 to June 1.



Blocky seed pieces give best results

Early planting is necessary in most cases to obtain the highest yield. Also, by making an early planting of an early-maturing variety the home gardener can have potatoes of a usable size by the middle of the summer. Potatoes harvested at this time will, under good storage conditions, keep well into the winter. They will not store as long as potatoes matured late in the growing season, however. For this reason the gardener who has considerable space to plant to potatoes and intends to grow a full year's supply may wish to plant an early-maturing variety for late summer and fall use and a later-maturing variety for winter and spring use.



Use Certified Seed



Plant Potatoes Early



Control Insects and Weeds



Cutting the Seed—Sprouts arise only from the potato eyes, hence each “seed piece” must have at least one eye. Cut the seed potatoes into blocky, uniform pieces about the size of a hen’s egg, thus providing plenty of growing material for the starting plants. So-called “potato eye” seed pieces are too small to provide sufficient nourishment and result in weak plants. When cut as recommended, approximately 8 pounds of seed is needed to plant a 100-foot row, spacing the seed pieces 14 inches apart.

Plant the seed immediately after cutting; otherwise the viability will be lowered by loss of moisture and entrance of rot organisms.

Planting the Seed—Plant the seed pieces in contact with moist soil, 4 to 5 inches deep. Usually in small garden plantings a trench is opened with a hand hoe. If commercial fertilizer is to be used, spread it evenly in the bottom of the trench and mix it thoroughly with the soil. Space seed pieces 12 to 18 inches apart and fill the trench with soil.

The distance between rows will depend on the method of cultivation to be used. Hand-cultivated rows may be spaced as close as 24 to 30 inches. Horse- or tractor-cultivated rows are usually spaced 30 to 36 inches.

CULTIVATION

The main object of cultivation is control of weeds. From planting time on, cultivating frequently enough to destroy weeds in the seedling stage will save much work. If used frequently, the garden rake is a most efficient cultivating tool. When the plants first come through the ground, rake lightly over the plants as well as the space between the rows.

All cultivations should be shallow (2 inches or less) as potato roots grow near the surface. “Hilling” or ridging soil along the rows is necessary only if the tubers become exposed. They should be kept covered to prevent sunburn.

IRRIGATION

In any summer a dry period may occur during which occasional watering will be beneficial. If a sprinkler attached to a garden hose is used, it is usually necessary to allow the sprinkler to cover one area for approximately two hours in order to adequately moisten the soil.

On fairly level ground it may be more satisfactory to run the water from the hose directly

into furrows between the rows. Best results will be obtained if the following rules are observed:

- Water only when the soil really needs it. Take a handful of soil from six inches below the surface and compress it tightly in the hand. If the ball cements well and holds its shape, there is moisture enough. If it crumbles easily, water is needed.
- Once watering is begun, continue until the soil is moistened 8 to 12 inches deep.
- Water thoroughly each time and do not repeat for at least a week.

PEST CONTROL

Numerous insect and disease pests may attack potato plants, reducing the yield. Because many diseases can be avoided by planting "certified" or "war approved" seed, use of such seed is a fundamental step in disease control.

In the home garden, dusting or spraying appears to be practical only when materials are applied primarily for the control of the Colorado potato beetle (potato bug). Unless this annual pest is controlled, serious injury to the plants is almost certain. Destroying the adults by hand when they first appear aids in control. The adults do not attack the plants but they litter the new leaves with



Colorado potato beetle

clusters of orange-colored eggs which soon hatch into hordes of leaf-eating "new" bugs. These new bugs must be destroyed immediately with a poison dust or spray. Dusting is recommended in the home garden. Use calcium arsenate, lead arsenate, cryolite dust, or one of the commercially prepared potato dusts. Besides controlling Colorado potato beetles, some prepared dusts contain copper or other ingredients that may be effective in preventing injury from flea beetles, leafhoppers, and other pests.

Apply the dust with a hand duster or a home-made "shaker" consisting of a cheesecloth bag. Dust thoroughly, covering the undersides of the leaves when possible. The dust will "stick" best if applied when the plants are moist with dew.

HARVESTING

Potatoes may be harvested for immediate use as soon as the tubers are large enough, but the size of the tubers and therefore the yield will continue to increase as long as the vines remain alive. They should be dug as soon as convenient after the vines are completely dead. Do not dig when the soil is wet. If the soil is in proper condition, relatively little soil will adhere to the potatoes and no brushing or washing will be needed.

Avoid bruises or other injuries in digging and handling. Before storing the potatoes allow a sufficient exposure to the air to dry surface moisture. Avoid more than a few minutes exposure to bright sunshine as they sunburn easily.

STORAGE

Potatoes may be stored soon after digging in a bin or any convenient container in a dark cellar or storage room. A temperature of 36° to 40° F. is best. They must be protected from freezing. Under these conditions sound, late-matured potatoes will remain in good condition 7 to 8 months. Even under higher temperatures sound potatoes will store satisfactorily 2 to 3 months after digging. Beyond this period, sprouting or shriveling will occur unless cool storage is provided.

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