

POINTS ABOUT POTATOES.

Different Varieties and How They May Be Readily Distinguished.

To the majority of people there are only two classes of potatoes, the good and the poor. Farmers recognize four principal classes, but with the experts who make a study of their development the classes go far beyond such a simple division, while the number of varieties is something overwhelming to a novice in potato lore. At the recent Industrial there were over 200 varieties shown.

Experiments which are now being



BURBANK CLASS.

carried on to increase the quantity of starch in the potato have met with great success.

In Canada attection has been directed rather to the production of new varieties than to improvement by selection within a variety. These new varieties are produced every year, and when one is grown that has some quality which makes it superior to preceding sorts, it is sure to find a foothold with potato growers and so takes its place as a market variety in the class to which it belongs.

Most of these varieties are the product of careful crossing of the best sorts and the gradual development of the resulting seedlings. When one is produced that possesses such characteristics as to separate it from all its predecessors, it becomes the founder of a new class. Each variety derived from it, and resembling it more or less, is given a name to distinguish it from other varieties, but all belong to the same class.



HEBRON CLASS.

so that while growers recognize both variety and class, dealers acknowledge

The four principal classes are the Burbank, Hebron, Rose and Peerless, the three first being for fall and winter use and the last for spring and early summer. In deciding what varieties to plant, it is well to consider the demands of the market which is expected to furnish buyers, and the kind of soil and treatment required. Each variety has its likes and dislikes, and it will pay the grower to gratify them.

In order to distinguish the different types of potatoes, it may be said that the Burbank class includes all white kidney-shaped potatoes, the leading varieties at this time being "Morning Star," "White Star," "Dandy," "White Flower," "Dutton's Seedling," etc.

The Hebron class includes all fleshcolored or pink and white mottled potatoes, the principal varieties being "White Elephant," "June Eating," "Gen. Garfield," "Albino," etc.

The Rose class includes all red potatoes, but is subdivided into three im-

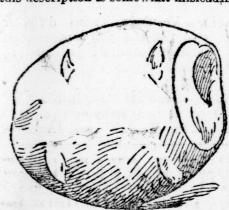


portant sections. The first, illustrated, is made up of all red or rose-colored potatoes that are short and cylindrical in form, as "Early Electric," "Early Mar-ket," "New Zealand," "Everett's Six Weeks," etc.

The second division of the Rose class resembles in shape the Burbank, but the color is red instead of white. The present prominent varieties are "Summit," "Pearl of Savoy," "New York Central" and "Paris Rose."

The third section of the Rose class includes all the other shapes and sizes of red potatoes, such as "Dakota Seedling," "Dakota Red," "Ideal," "Maggie Murphy," etc.

The shape of all potatoes of the fourth or Peerless class is round or oval. As this description is somewhat misleading



PEERLESS CLASS.

they may better be defined as large, flat potatoes, being much broader and longer than they are thick. Potatoes of the Peerless class are not generally marketed until spring on account of their superior keeping qualities. The prominent varieties are "Rural Blush," red: "Rural New Yorker," No. 2, white; and "Blue

Victor," dark bluish purple in color. The best all round white potato is the "Rural New Yorker," No. 2. It is prolific, vigorous and of excellent quality, while most of the tubers are of a medium and merchantable size

DRAINING A SWAMP.

The Depth and Capacity of Drains That Will Do It.

A correspondent of the Country Gentleman makes this statement and propounds his queries: I am draining a swamp which in some places is muck down three feet and in others not more than two feet, and then it is hardpan. How deep should I lay tile in order to drain it, and how large tile had I better use? The paper answered:

The land spoken of is difficult to drain because of the varied character of the soil. If the drains are not placed much below the hardpan where it comes nearest the surface, then the moisture from the places where the muck is deep will often rise to the surface by capillary at-

The objects in draining are many; one is, to carry off the stagnant water in the soil, and another to prevent cold water from rising to the surface by capillary attraction where, by evaporation, the land is cooled and the growth of many of the cultivated plants ar-

rested. In the land described the drains should be laid 31 feet deep and not more than 40 feet apart. One thousand tiles will be sufficient for an acre. Before entering upon the work a few rules should be carefully observed in underdraining

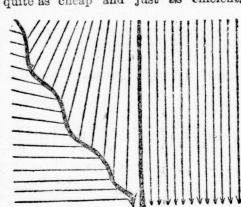
The work should be well done. If there is danger of silt entering the

joints of the tiles, strips of tarred building paper 2 by 4 inches wide, should encircle the joints for three-fourths of their upper circumferences.

Avoid so far as possible mains and sub-mains; that is, do not join the drains, but make each one parallel or nearly so, to the others, even if the drains have to depart from a straight line, or deep digging has to be resorted to in order to get through high knolls.

Figs. 1 and 2 show the two systems of draining. It will be seen that the main drain in Fig. 1 is not a drain, but a conduit for carrying off water. In some cases these mains are not to be avoided. In that case they should always be a few inches deeper than the laterals and the laterals should enter near the top of the main and at a sharp angle, in order that the flow of water in the main may not be disturbed. In case the laterals enter at right angles or nearly so to the main drain, the capacity of it is reduced, so that it is not difficult to reduce it one half by a little carelessness or by a lack of knowledge of the principles of good

It is always safest to use pipe tile. For a long while in England inch pipes were used, but they had to be furnished with collars in order to keep the joints in perfect line. It was found in practice that a little larger tile without collars was quite as cheap and just as efficient.



Where drains are laid deep and without

a fair amount of descent, a two inch tile will carry the water of 2,000 to 5,000 linear feet of drain. From 5,000 to 15.-000 feet a three inch pipe will be required. This of course means that the drains are to carry off only the water which falls upon the land; if additional water is to be carried, then the tiles must be increased in size accordingly. In spongy land, or where it is difficult

to get a firm foundation for the tiles. two methods are in vogue. Boards of about six inches width of some fairly durable wood are laid upon the yielding bottom of the ditch. The tiles are laid upon these boards, and where clay is handy they may be partially imbedded with it. In other cases the smaller tiles are placed instead of larger onesthat is, the large tiles are made to serve as collars to keep the tile in line and from sinking. In any case, it may be said that too much pains can hardly be taken in draining this class of land. In time, as the water is carried from the land, the parts of the ditch where no clay is present will be inclined to sink, while the other parts do not; so it might be well to give the ditch extra fall where it leaves the peaty land and enters

upon the clay. To give all the information that is desired, a map of the land should have been furnished, giving the size of the field, its surroundings, and the direction of the outlet. My advice to the questioner is to spend a great deal of time upon planning the work before entering upon it. If well done, it will last for a century; if badly done, it is often more expensive to repair the ditch than it was to lay it at the first.

Weight and Yield of Eggs, A correspondent furnishes the follow-

Geese, 4 to the pound; 20 per annum. Bantams, 16 to the pound; 60 per an-

Houdans, 8 to the pound; 160 per LaFleche, 7 to the pound; 130 per

Hamburgs, 9 to the pound; 200 per Turkeys, 5 to the pound; 30 to 60 per

Game fowl, 8 to the pound; 130 per

Leghorns, 9 to the pound; 150 per annum. Black Spanish, 7 to the pound; 150 per annum.

Plymouth Rocks, 8 to the pound; 120 per annum. Langshans, 8 to the pound; 150 per

annum. Brahmas, 8 to the pound; 130 per an-

THE SUNDAY SCHOOL.

LESSON VI, FOURTH QUARTER, INTER-NATIONAL SERIES, NOV. 11.

Text of the Lesson, Mark iii, 6-19-Memory Verses, 13-15 - Golden Text, John xv, 16-Commentary qy the Rev. D. M.

6. "And the Pharisees went forth and straightway took counsel with the Herodians against Him, how they might destroy Him." In Luke vi, 11, it is written that after Jesus healed the man in the synagogue with the withered hand on the Sabbath "they were filled with madness." The Pharisees and Herodians stand for religious hypocrisy and worldliness. A hypocrite must be an enemy of Christ, for He is truth itself and light and without guile, while James tells us plainly that "the friendship of the world is enmity with God," and John says that "the whole world lieth in the wicked one."

7. "But Jesus withdrew Himself with His disciples to the sea, and a great multitude from Galilee followed Him." Worldliness and hypocrisy cause Jesus to withdraw Himself. Religious formalism will never draw the people who are hungering for something that is real. The world with all its unreality has nothing to offer such, but they will follow Jesus to the seashore, or the Salvation Army barracks, or the humblest place of worship where the simple gospel is preached by such as live it out in daily life.

8. "And from Judæa, and from Jerusalem, and from Idumea, and from beyond Jordan, and they about Tyre and Sidon, a great multitude, when they had heard what great things He did, came unto Him." He Himself said, "The works that I do bear witness of Me that the Father hath sent Me" (John v, 36). If there is none of His works in our lives, how can we prove that we are His?

9. "And He spake to His disciples that a small ship should wait on Him, because of the multitude, lest they should throng Him." It is not to the careless, aimless, surging crowd that He reveals Himself and makes His power known, but to such as seek Him with humility of mind and definiteness of aim. His word is always true, "Ye shall seek Me and find Me when ye search for Me with all your heart" (Jer. xxix, 13).

10. "For He had healed many, insomuch that they pressed upon Him for to touch Him, as many as had plagues." It was the healing of the body they sought, not the deeper and more serious healing of the soul. Yet He healed many, for He had compassion upon them, and it was His custom as He healed to preach the word (Math. iv, 23).

11. "And unclean spirits, when they saw Him, fell down before Him and cried, saying, Thou art the Son of God." These demons from the pit knew Him and testified as to who He was, while men knew Him not and received Him not, though they saw His works. In the first chapter of Isaiah He bad said long before that the dumb brutes, the ox and the ass, put His people in Israel to shame.

12. "And He straitly changed them that they should not make Him known." wants no help from them. In John v He says that His Father, and His works, and His word all bear witness unto Him. The light is His witness, for God is light, and in Him is no darkness at all. We cannot be in full fellowship with Him if we seek honor of men rather than the honor which cometh from God only. May His approval be everything to us, and our great ambition to be well pleasing in His sight (John v, 44; II Tim. ii, 15; II Cor. v, 9, R. V.

13. "And He goeth up into a mountain and calleth unto Him whom He would, and they came unto Him." In Luke vi, 12, it is written that He continued all night in prayer to God. He did nothing without much prayer. Are we in any measure like Him in this? After prayer He chose a few out of many to make them a blessing to many (John xv, 16.) Election is always the choosing of some that others through them may be benefited.

14. "And He ordained twelve, that they should be with Him, and that He might send them forth to preach." In the last verse we emphasized "unto Him." Let us here emphasize "with Him" and "forth to preach." Having come unto Him, we must abide with Him in order to be qualified to go forth to preach. "Abide thou with me, fear not," said David to Abiathar (I Sam. xxii, 23), assuring Him that whoever touched the one life touched the

15. "And to have power to heal sicknesses and to cast out devils." His commission in Math. x, 7, 8, reads, "As ye go preach, saying, The kingdom of heaven is at hand; heal the sick; cleanse the lepers, raise the dead; cast out devils. Freely ye have received, freely give." While to the 70 He said, "I give you power over all the power of the enemy, and nothing shall by any means hurt you" (Luke x, 19). See what high authority for medical missions, "Preach the gospel; heal the sick.'

16. "And Simon He surnamed Peter." The account of this change of name is found in John i, 42, and reminds us of the change of Abram to Abraham and Jacob to Israel. It is suggestive of the old and the new, the natural and the spiritual. Petros, which is always the word translated Peter, means a piece or fragment of stone, while Petra, on which Christ said. He would build His church (Math. xvi, 18), means a large rock, a ledge, a cliff. It is used in reference to Christ in I Cor. x, 4; I Pet. ii, 8. He never said He would build His church on Petros (the man Peter), but on Petra, the solid rock, even Himself and His truth.

17. "And James, the son of Zebedee, and John, the brother of James, and He surnamed them Boanerges, which is the sons of thunder." Young says in his Concordance that this word signifies "sons of rage, soon angry," and refers to their flery zeal, signs of which may be seen in Luke ix, 54, and Mark ix, 38. They, with Peter and the others who were true disciples, were completely changed when filled with the spirit at Pentecost.

18. "And Andrew and Philip and Bartholomew and Matthew and Thomas and James, the son of Alpheus, and Thaddeus and Simon, the Canaanite." Andrew was one of the first two who followed Jesus when John the Baptist cried, "Behold the Lamb of God," and then he brought Simon (John i, 40, 41). Jesus Himself sought Philip, and then Philip brought Nathanael, supposed to be the same as Bartholo-

mew (John i, 43-45).

19. "And Judas Iscariot, which also betrayed Him, and they went into an house." This is a last which shall never be first. He was numbered with them and had obtained part of the ministry (Acts i, 17). but Jesus knew he was a wicked one when He chose him (John vi, 70). Had he been truly one of them he would have sontinued with them (I John ii, 89).

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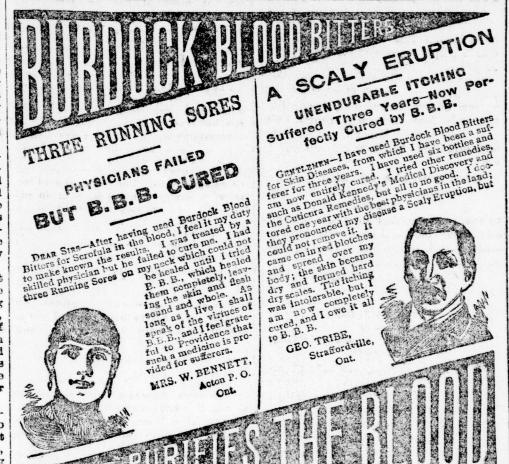
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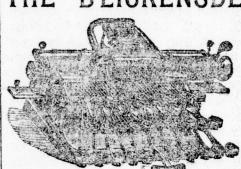
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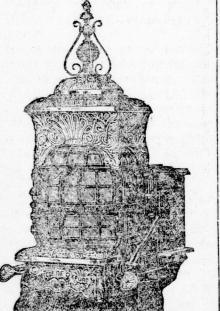
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