

# In Field and Garden

## FRUIT GROWING IN B. C.

Mr. R. M. Winslow, Provincial Horticulturist, has issued the following bulletin in regard to Fruit Pit or Baldwin Spot in Apples:

This disease in Apples has been reported to the Department from practically every apple growing section of the Province this year. Not only is the Interior affected, but the Coast as well, while probably the greatest losses are reported from the most prominent fruit sections. During the last six weeks, enquiries on the subject have increased greatly, indicating a rapid development of the disease just previous to and following shipment.

During the season of 1909, a similar outbreak occurred, though not to as great an extent as this year. In some cases there have been losses up to 25 per cent. of the fruit picked, and we are advised of other cases where large shipments have had to be sacrificed on arrival at destination, because of development in transit.

This trouble goes under a confusing variety of names. The principal ones commonly given by fruit growers are: Baldwin Spot, Fruit Spot, Dry Rot, Bitter Rot, Brown Rot, Physiological Dry Rot, and Fruit Pit. In Germany the common name is Stippon, or Stippich-werdon; and Bitter Pit in South Africa. No scientific name has been given, because no specific cause has yet been discovered.

When usually noticed, the appearance is that of roundish brown spots, just below the surface of the skin of the apple, or perhaps up to one quarter of an inch deep. When near the surface, there is a smaller circular depression just above the spot. On the color of portion of the apple, this depression is surrounded by slightly deeper color, and on the green parts of the apple the depression is deeper green, changing later to brown. The brown spot is pithy in character, dry, and comparatively tough. The spots are generally from one-third to three-sixteenths inches in diameter, and of not quite the same depth. As the trouble develops, more spots occur, and finally the brown may extend in a more or less complete net work through the outer tissues of the apple. The affected flesh is dry and flavorless, but not bitter. The appearance and edibility are very much impaired, and, when for cooking purposes, badly affected fruit is not of much use. In the third stage, the apple becomes practically entirely brown, and quite worthless.

In its first stages, the Fruit Pit is hard to distinguish from the effects of hail. Another type affects Early Apples particularly, causing a more or less complete browning of the tissues surrounding the core. In this case, the apple becomes valueless commercially before its outward appearance is much affected.

Variations of the above forms, and very similar forms, are found in the Apple, Pear and Prune.

This disease has been known and been under investigation, for thirty years, principally in Germany, and during the past ten years especially in United States and Canada. We have consulted all the available authorities in Canada and the United States on the subject. They are agreed that it is not caused by any fungus, bacterium, or insect. The organism causing it is absolutely unknown. Spraying experiments have proven valueless. Scientists are now thoroughly agreed in designating it as a physiological trouble in the same class as Water Core. The true Baldwin Spot of the Middle West, the true Bitter Rot of the Middle West, the true Apple Scab or Black Spot—are all fungous diseases, and the life history of the organism, like that of Typhoid and Tuberculosis, is well known to investigators. The disease above described is none of these.

While the absolute cause is unknown, there have been discovered certain inducing causes. These are:

1. Light yields of sappy, usually large, fruit.
2. Heavy wood growth, from two to four or five foot in length.
3. The light yields and heavy growth are due to the following causes:
  1. A heavy crop the previous year.
  2. Young trees.
  3. Heavy winter pruning.
  4. Excess of water by rainfall, seepage and irrigation.
  5. Clean cultivation.
  6. Nitrogen in the soil in excess over Potash and Phosphoric Acid.
  7. Unhealthy or Winter Injured Trees.

Any one or any combination of the above conditions may be sufficient to bring on Fruit Pit. The Remedies are:

1. A good, heavy crop of fruit.
2. A reasonable growth, consistent with the age, size and health of the tree.
3. To secure healthy crops and a mature growth, the following are of importance:
  1. Rational winter pruning, replaced by Summer pruning if absolutely necessary.
  2. The maintenance of the proper moisture supply, less irrigation, proper drainage.
  3. Less clean cultivation. Put the orchard in sod, if necessary.
4. Decrease the amount of soil nitrogen by lessening cultivation, by putting the orchard in sod, or planting intercrops, and where necessary balance the Nitrogen supply by adding Potash and Phosphoric Acid. Unhealthy trees should be given proper conditions as



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above, to regain vigor. Properly cared for they will produce a much higher class of fruit. Badly diseased trees had better be removed.

It is the application of the above remedies under local conditions which calls for the skill of the grower.

More rational methods of cultivation are absolutely essential to permanent control of this disease. Its prevalence this year has aroused much needless apprehension in the minds of fruit growers. The disease can be avoided almost entirely by the proper methods. It is significant that good intentions, rather than wanton neglect, have brought it on, to a very large degree. The methods above recommended, skillfully applied, will result in much greater yields of fruit per tree and per acre. The cost of production per box will be considerably lessened, and the general quality and color of the fruit raised in equal degree.

In view of the possible injury which may be caused our Province by needless alarm, it is to be hoped that fruit growers will investigate the subject rationally, and, having formed their conclusions, work out the remedy best adapted to their own orchards. It is encouraging to note that the prevalence of Fruit Pit in one orchard has no effect whatever on the orchards of the same district. Contagion and infection are impossible; on this account, no Governmental or Municipal efforts at control are possible or need be undertaken. This does not absolve any progressive fruit grower from endeavoring to bring his neighbor into line with proper methods so as to eliminate this trouble, and with it, Water Core, Winter Injury, to some extent Aphid, from the district.

I have been instructed by the Deputy Minister of Agriculture to prepare for general publication a bulletin dealing fully with this subject, which will be issued in time to be of service for the coming season.

In the meantime, fruit growers who have seen special phases of the subject not previously brought to our notice, are asked to correspond with us accordingly. Co-operation in the matter will do much to secure a reasonable attitude in the matter and the adoption of feasible methods of control.

## GARDENING NOTES FOR BEGINNERS

The state of the gardens this week recalls a memorable observation of Mr. Jowocks: "Hurrah! Blister my kidneys; the dahlias are dead!" As there is no fox-hunting to compensate us for the departure of summer, we cannot quite take his view of things. The whole aspect of the gardens has been changed. Where nine days ago green foliage of shrubs and the coloring of flowers delighted the eye, now fading leaf and dead summer plants strew the beds. The masses of creepers and sweet peas that hang dejectedly over trellis and fence demand clearing away and burning or burying. On the whole, little permanent damage seems to have been done. The frost did not penetrate far enough below the surface to hurt bulbs, but facts must be faced; the winter has begun and the sooner all tender things are removed into cellar or greenhouse the better, and a sufficient amount of heat kept up to obviate the effect of the damp.

It is a good time for a clean-up of the potting sheds. All old earth should be got rid of, pots washed and brushed out, and enough mould brought in under cover for the work of the next few weeks. A supply of broken sherds

drainage should be placed handy—the remains of old pots do excellently, and the sieves examined for broken meshes. Shallow boxes 2 to 3 inches deep may be prepared for spring seedlings, and holes bored in the bottoms with an auger. These again should be well brushed out or scrubbed with water.

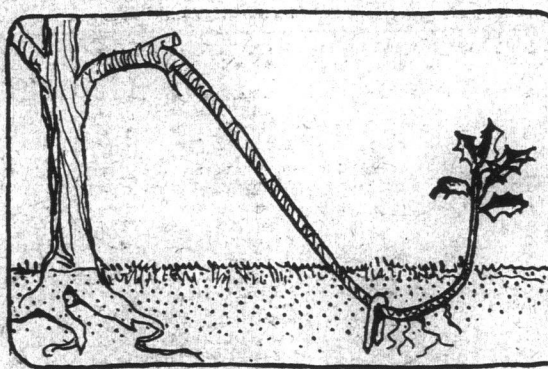
In sowing seeds in pots it is useful to cover the surface with a layer of silver sand, and to scatter the seeds on that. In addition to being a substance loved by young roots, it enables the eye to see at a glance how many seeds are being sown. Let the potting shed be well lighted, as that will show up untidy corners and accumulations of rubbish. Gardening tools last twice as long if scraped clean time they are brought in, besides being pleasanter to use. The bonfire may be safely lighted and kept going this weather. The ashes will lighten heavy soil considerably, and where wood has been burned make good top dressing for grass plots or beds.

## New Potatoes at Christmas

These can be procured from Christmas onwards with the aid of a dark cellar. The tuber is covered with eight inches or more of earth, and will soon sprout and develop little potatoes. By pushing the earth gently aside these may be picked as soon as they are big enough, and the earth is replaced until the next tubers are ready.

## LAYERING HOLLY.

This method of producing young trees has been so successful in this city in one instance that it will doubtless be adopted generally in preference to seeding or grafting, and the accompanying illustration shows how simple the process is.



Bend one of the lower branches down and peg it into the ground roughly about half way, and leaving the extremity of the branch above ground. Pile the earth over the pegged down point some twelve inches deep and tread it down.

This may be done to all the lower branches and in the special instance referred to 600 trees were obtained this October from three trees that had been so mated 21 months ago. The young trees were well rooted from one and a half feet upwards in height and some even had berries. For the rest, it may be added that Holly can do with a great deal of water in summer, and thrive in a rich soil well cultivated, but it must be thoroughly drained as it must have no excess of water round its roots in winter.

## CHRYSANTHEMUMS.

Each garden flower has its special season

of beauty, and as the year advances they follow in rapid succession. The National Chrysanthemum Society, through its annual exhibitions, and frequent gatherings, has encouraged the general culture of a flowering plant not only of easy growth but of intrinsic beauty and of strikingly decorative value at a time of the year when gardens have begun to fade and conservatories are in need of all the floral color that can be found.

The exhibitions of the society have served not only the improvement of the chrysanthemum itself as a flower, but also its more artistic presentment in form, habit, and decorative purposes. The remarkable popularity of this society was again fully demonstrated on the occasion of the most important of its annual shows, which opened November 1st, and continued on the 2nd and 3rd; for, despite the difficulties which growers have experienced through the mild, moist, flower-forcing weather recently experienced, they brought their best contributions from all parts, and made up an excellent and representative display. Judging the show critically, we should say that the individual cut blooms were not quite up to the normal standard as regards size, particularly the "incurved." The bunches of cut blooms and the plants in growth, were shown in larger numbers and of better quality than has been seen for some years, and the large masses standing on the floor lent a wealth of color that was exceedingly pleasing.

It will be interesting to watch if there are signs of a slackened regard for a flower that has been of late years much exalted. The great evil when a multitude of prizes is offered is to create a desire merely to win them without studying the value of the plant apart from the showboard. It is this craving that has given rise to the monster blooms, crammed together on the tables without any idea of individual beauty, simply to show how big they can be made with feeding, stopping, and a rigid system of severe culture; and it seems extraordinary that it is these overgrown specimen blooms, about the growth and preparation of which the general public can know nothing, which attract the attention of the majority of the visitors. If the exhibitions are to have an educational value, be made enjoyable to those who appreciate graceful form, and give a new zest to the cultivation of a most useful flower by the masses, they cannot well contain too many classes of the more informal decorative types, and it is pleasing to note an advance in this direction. Those who know the charming beauty of the plant when reasonably dealt with, and allowed to develop with, at the most, one or two stoppings to admit of freedom of bloom, feel aggrieved at the specimens tortured to produce one or two giant mopheads. It is mostly the Japanese incurved and reflexed that are served in this manner, and these popular types, when treated in the ordinary way, exhibit some of the most fantastic forms with all varieties in shape and color, some hues being exceptionally brilliant.

The growers for market have in recent years developed a type of plant which is in great demand. They root their cuttings almost up to summer, with the result that the growth remains dwarf, the plants are well clothed with foliage, with a mass of blooms on top sufficiently large to show the distinctive character of the variety. There are special varieties adapted to this kind of cul-

ture, and they are most useful for decorative purposes to those who require a quantity of flowers rather than individual quality. Some pretty new varieties were submitted for certificates; among the best of them were:

Charles Dickens, a rich yellow single, from Mr. Norman Davis; Celia, another fine single yellow, from Messrs. Cragg, Harrison and Cragg; R. G. Burge, single white, from Mr. P. Ladds; Caterham Bronze, from Mr. F. Brazier; Mrs. Andrew Walker, rich chestnut, from Messrs. W. Wells and Co.—Daily Telegraph.

## WINTER EGGS.

The laying hen is usually searching for what she needs to make eggs. She takes what she wants in the way of food and leaves the rest alone.

If you compel her to take what she doesn't want or take nothing, why, of course, she will take what you provide rather than starve to death, but she won't lay as many eggs.

Therefore we like the Hopper method of feeding. We always provide a self-feeder hung on the wall just high enough so the hens can eat what they want without wasting it on the floor.

A better method is to provide a platform 16 inches or so above the floor, so the fowl can jump up and down for the feed and water they desire, and then go back to the litter to work for the grain that is scattered in it.

In one apartment of the self-feeder is grit; another, charcoal; another, oyster shells; another equal parts of finely cracked corn, wheat, barley and oats; in another, beef scraps; in still another is placed dry bran.

You might think that the hens will eat too much, but they won't; they will eat only what they want.

When you find a hen that lives off the feeder and gets fat and lazy, she is usually too lazy to work and too lazy to lay eggs, and had better be sent to the butcher.

Scatter the whole grain, such as wheat, barley, and corn, in the litter. Feed them whole corn at night, especially on cool nights. They need a cropful to keep up the bodily heat over night.

Give them table scraps and green food at noon. For green food we use cabbages, mangel-wurzels, sugar beets, chopped apples, etc. Onions are also relished, but they are liable to flavor the eggs.

Noon is also a good time to feed green cut bone. Give them a little every day, and only what they will eat up clean.

It is a rich food, a great egg producer, and a little will go a long way. If you notice a looseness of the bowels after feeding it, cut down the amount.

Keep them always eager and their appetites sharp for fresh meat and cut bone, and you will get all the eggs you can expect.

Once in a while feed a mash in the morning composed of bran, middlings, beef scraps, etc., mixed with a little milk or water. It must not be wet and sloppy, but dry and crumbly. Feed them only what they will eat up quickly and cleanly. They shouldn't be allowed to trample on any that is left over, or to leave any to become sour and foul.

Fowls should have plenty of fresh water, and never warm it. They like a cool, fresh drink, the same as we do.

Provide a dust-bath, so they may help to rid themselves of lice. Use plenty of liquid louse-killer, and keep the whole pen scrupulously clean.

If a variety of food is given there is no need of fear about plenty of eggs. Do not feed whole grain in hoppers. Only the ground food, beef scraps and bran are fed there.

If these simple suggestions are carried out, consistent with your local conditions, the hens will do the rest.

Two dozen eggs every day will be just like finding \$1.20 in change in the nest, according to prices for fresh eggs in the local market.—By W. W. Storms in Fruit Magazine.

## FARM NOTES

In selecting steers for winter feeding, quality should be made one of the strong points. Poor quality cattle seldom give good returns for feed consumed, and usually sell at a reduced price when finished.

Messrs. Trieman Bros., of Lowden Lake, are reported by an Albertan contemporary as having threshed "Marquis" wheat that yielded sixty-one bushels per acre. This is interesting in view of this variety having so lately gained the championship of the continent at New York.

The barnyard and straw stack may furnish a fair pen for the brood sow, but it is a poor shelter for young pigs. The latter cannot stand the cold well, and should always be placed in a fairly warm pen, with plenty of good bedding, as soon as the cold weather arrives. Large gains cannot be expected when the pig's energy is nearly all utilized in supplying the heat necessary for the body.

Mrs. Hen, having performed her oviparous function, took a constitutional around the yard. Returning to the nest she found it empty and clucked angrily.

"What's the trouble ma'am?" asked the rooster.

"It's mighty funny," she grumbled, "that I can never find things where I lay them."