

HARBIN, MANCHURIA, WHERE ALEXIEFF, THE RUSSIAN VICEROY, HAS TRANSFERRED HIS BASE OF OPERATIONS FROM PORT ARTHUR.



A change of base having been deemed advisable by Russian military strategists, Alexieff, the viceroy-commander at Port Arthur, under whose administration the naval disasters sustained by the czar's ships at that port occurred, has left Port Arthur for Harbin, in Manchuria, of which this is a recently-taken view.

GENERAL VIEW OF ENTRANCE TO PORT ARTHUR, WHERE BIG GUNS FROWN FROM FORTS, DOMINATING HARBOR SEAWARD.



The land defenses of the Liaoning peninsula, showing powerful guns composing the artillery strength of Port Arthur, where Japanese sea strategy is tirelessly seeking more vulnerable places in Russia's armor. This vitally important geographical point is vividly depicted in a sweeping general view of the scene.

HORTICULTURAL BOARD BULLETIN.

State Board of Horticulture Issues
New Pamphlet to Utah
Fruit Growers.

THE State Board of Horticulture has just issued for free distribution among the fruit growers of the state bulletin No. 3, containing the horticultural law of Utah, rules, formulas and recommendations for the destruction of orchards.

Following is the full text of the chapter on the cause and

PREVENTION OF PEAR BLIGHT.

There is probably no disease of fruit trees so thoroughly destructive as pear blight, or fire blight, as it is very aptly called, which attacks pears, apples, quinces and other pomaceous fruits. It has such a hold in some sections of this state as to seriously menace the pear growing industry. Whole orchards, many of large extent, have been entirely destroyed by this insidious disease, and unless prompt, united and persistent measures are taken to eradicate this contagion, it will entail untold loss. Fire blight is to the orchard tree what smallpox or cholera is to the human species, being fully as contagious and deadly, hence the need of

careful handling and prompt measures to extirpate this disease from the orchards of the state.

The situation is made more serious by the recent discovery of this same disease in apricot trees in Brigham City orchards, where its deadly effects were more rapid in developing than in the pear or quince trees, the trees succumbing very quickly after the first appearance of the malady.

Prof. M. B. Waite, assistant director division of vegetable physiology and pathology, U. S. department of agriculture, Washington, D. C., has made a thorough study of pear blight, its cause and prevention. For the benefit of the Utah fruit growers, whose orchards are threatened with destruction, the following description of the pear blight, and suggested means of checking its ravages are epitomized largely from a lengthy paper by Prof. Waite:

Pear blight is a highly contagious bacterial disease of the pear and allied fruit trees. It attacks and rapidly kills the blossoms, young fruits, and new twig growth, and runs down in the living bark to the larger limbs, and thence to the trunk. While the bacteria themselves rarely kill the leaves, all the foliage on the blighted branches must of course eventually die. It causes the foliage to turn to a uniform very dark brown, the change taking place sometimes in two or three days. The leaves do not fall from the trees, but remain upon the branches, giving the parts the appearance of having been scorched by fire. The dead leaves are so conspicuous as to make the blight easily detected. In the autumn and winter it is especially easy to recognize the diseased branches, owing to their retention of the blackened leaves. The bark of affected stems becomes shrunken and brown or nearly black.

The most important parts of the tree killed by the blight are the inner bark and cambium layer of the limbs and trunk. All parts of the tree below the point reached by the blight are healthy, no more injury resulting to the unaffected parts of the tree than if the blighted parts had been killed by fire or girdling.

Blight varies greatly in severity and in the manner in which it attacks the tree. Sometimes it attacks only the blossom clusters, or perhaps only the young tips of the growing twigs; sometimes it runs down on the main branches and trunk, and again, it extends down only a few inches from the point of attack. The sudden collapse of the foliage on blighted branches has led many to believe that the disease progressed more rapidly than it really does. It rarely extends further than

two or three inches from the point of attack in one day, but occasionally reaches as much as one foot.

It is an easy matter to determine when the disease has expended itself on any limb or tree. When it is still progressing, the discolored, blighted portion bleeds off gradually into the normal bark, but when it has stopped there is a sharp line of demarcation between the diseased and healthy portions.

There is no known remedy, the only method of checking the malady being to cut out affected parts and remove them as fast as they appear.

In the application of the cutting out remedy, the only one yet discovered, there are three vital points to be considered, namely, the thoroughness and completeness with which the work is carried out, the time when the cutting should be done, and a thorough knowledge of the disease so as to know how to cut.

LIFE HISTORY OF THE MICROBE.

Blight first appears in spring on the blossoms. About the time the tree is going out of blossom, certain flower clusters turn black and dry up as if killed by frost. This blighting of blossoms, or blossom blight, as it is called, is one of the most serious features of pear blight. One of the most remarkable things about this disease is the rapidity with which it spreads through an orchard at blossoming time. This peculiarity has thrown much light on the way the microbes travel about, which they do quite readily, notwithstanding the fact that they are surrounded and held together and to the tree by sticky and gummy substances. They are able to live and multiply in the nectar of the blossom, from whence they are carried away by bees and other insects, which visit the blossoms in great numbers for the honey and pollen. If a few early blossoms are infected, the insects will scatter the disease from flower to flower and from tree to tree until it becomes an epidemic in the orchard.

From the blossoms the disease may extend downward into the branches or run in from lateral fruit spurs so as to do a large amount of damage by girdling the limbs. Another way in which the blight gains entrance is through the tips of growing shoots. In the nursery, when trees are not flowering, this is the usual mode of infection. This is often called twig blight, but it is the same disease in another form.

The greater part of the damage from blight occurs the month or two following blossoming time, but twig blight may be prevalent at any time through the summer when new growth

is coming out. In certain cases the blight keeps up a sort of slow battle with the tree through the summer, so that at the close of the season, when the tree goes into a dormant condition, active blight is still at work in it, and continues through the winter. The germs keep alive along the advancing margin of the blighted area, and, although their development is very slow, it is continuous. It has been found that this microbe stands the cold well; it may be frozen or placed in a zero temperature and not suffer.

When root pressure begins in early spring the trees are gorged with sap. Under these favorable conditions the microbes which have lived over winter start anew and extend into new bark. The warm and moist weather which usually brings out the blossoms is particularly favorable to the development of the disease. At this time it spreads rapidly, and the gum is exuded copiously from various points in the bark and runs down the tree. Bees, wasps, and flies are attracted to this gum and carry the microbes to the blossoms. From these first flowers it is carried to others, and so on until the blossoms are all killed or until the close of the blossoming period. After the blossoming period insects accidentally carry the blight to the young tips and so are instrumental in causing twig blight also.

The key to the whole situation is found in those cases of active blight (comparatively few) which hold over winter. If by a careful and thorough going over of the orchard, before the leaves appear or growth begins, every blighted specimen on twig or branch can be found and destroyed, the pear blight question will be solved, for the reason that without the microbes there can be no blight, no matter how favorable the conditions may be for it; to use a common expression, there will be none left for seed.

EXTERMINATION OF THE BLIGHT MICROBE.

We now come to the only really satisfactory method of controlling pear blight—that is, exterminating the microbes which causes it, by cutting out and burning every particle of blight when the trees are dormant. Not a single case of active blight should be allowed to survive the winter in the orchard or within a half mile or so from it. Every tree of the pome family, including the apple, pear, quince, Siberian crab apple, wild crab apple, the mountain ash, service berry and all the species of Crataegus, or hawthorn, should be examined for this purpose, the blight being the same in

all. The orchardist should not stop short of absolute destruction of every case, for a few overlooked may go a long way toward undoing all his work. It would be well to look the trees over several times during the winter to be certain that the blight is completely exterminated. In order to do the inspecting thoroughly it is necessary to go from tree to tree down the row, or in case of large trees to walk up one side of the row and down the other, as in simply walking through the orchard it is impossible to be certain that every case of blight has been cut out. Cutting out the blight may be done at any time in the winter or spring up to the period when growth begins. The best time, however, is undoubtedly in the fall, when the foliage is still on the

trees and the contrast between that on the blighted, and that on the healthy limbs is so great that it is an easy matter to find all the blight. It is important to cut out blight whenever it is found, even in the growing season. At that time of year, however, it cannot be hoped to make much headway against the disease, as new cases constantly occur which are not sufficiently developed to be seen when the cutting is done. In orchards where there are only a few trees, and the owner has sufficient time to go over them daily, he will be able to save some which would otherwise be lost. However, when the trees stop forming new wood, the campaign should begin in earnest.

A careful inspection of all pomaceous trees should be made two or three times during the summer and a sharp lookout kept for the first appearance of the blight. It usually takes two or three years for the disease in an orchard to develop into a serious epidemic, but the early removal of the first cases will prevent this and save a great deal of labor later and many valuable trees.

It is only necessary to add to these instructions on pear blight, the importance of disinfecting the knife or saw when cutting out the blight, as suggested in Rule 10, in Rules and Formulas, by the use of a 4 per cent solution of carbolic acid.

Copies of the bulletin may be had upon application to the secretary, Joseph H. Parry, Salt Lake City.

WALKER'S STORE

THE NEW GOODS ARE IN.

Spring goods are here, in all departments—the latest and the best to be had. Patterns and styles that are not common, not to be found in every store. We have endeavored to bring from the markets exclusive styles and pattern "something different" is what we aim at, and is what you want. If you buy Walker's you need not fear that half a dozen others will be attired like yourself.

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A splendid showing is made in suit department as is manifested by the following:

At \$20.00

Fine Etamine Cheviot Suits, Eton Jacket with trimmed shoulder pieces, stitched silk blind vest, crush silk girdle, plaited walking skirt to match.

At \$22.50

Fancy Tweed Eton Suits with silk braid and broad cloth trimmings; shaped cloth girdle.

At \$27.50

Etamine and Tweed Suits with Eton or Blouse Jackets. Etamines are trimmed with silk pipings, crocheted buttons, solid color silks with fancy designs in Soutache. The Tweeds are trimmed with braidings and fancy buttons, broadcloth collars.

At \$25.00

Fancy novelty, blue mixture, Eton Suits—skirts and Jackets trimmed to match, with blended silk braid and fancy buttons.

At \$30.00

Cheviots, Tweeds and other weaves, in Blouse or Etona tailored or fancy, in a variety of styles and trimmings.

At \$35, \$37.50
and \$40.

A variety of fancy and plain materials in Eton, Blouse, Box, Combination Eton and Blouse and hip length jacket suits. Numerous different styles in excellent designs with most carefully executed tailoring.

At \$42.50
and \$45.00

Mannish mixtures in light weight walking suits in Etons or hip length fitted jackets. Etamines and Granites in dress suits, reversible front etons and blouses with new styles of trimmings; deep lace or ruching in cuffs.

At \$50 to \$75

Tailored dresses and walking suits in plain and fancy fabrics with absolutely correct design and workmanship.

At \$50 to \$200

Fancy dresses and costumes which make a perfect beauty show, and represent the best ideas of domestic and foreign designers. Everyone on show exclusively our own.

NOTE. Those who usually have difficulty in suiting themselves in large sizes will find here a liberal assortment in 40, 42 and 44, prices in these, \$18.00 to \$75.00.

DRESS GOODS.

New Silks and Dress Goods in all the popular weaves and styles. Silks for shirt waist suits, in small checks, hairline stripes, pin dots. Embroidered Pongee in newest colors, dots and figures.

Dress goods for the new instep suits.
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BOYS' DEPARTMENT.

In this department we have ready for inspection and are showing an exclusive line of suits for boys 2 to 16 years of age, consisting in styles of Russian Blouse Sailor, single breasted with belt or pants, Norfolk with box plait all handsomely made in mixtures and homespun.

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A very handsome line of children's spring coats in fancy mixtures plain blue, plain red, made up in the full box reefers.

Boys' shirts, blouses and shirtwaists made in handsome designs of madras and cheviots, large range in patterns and prices.

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Mrs. Petri of New York is here with a large stock of the newest fads in best grades of genuine hair goods, which she is offering at greatly reduced prices, much lower than is usual.

\$15.00 switches for \$8.00 | 8.00 switches for 4.50
12.00 switches for 7.00 | 5.00 switches for \$2.00 up

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PETRI'S FACE CREAM, a splendid preparation for all skin affections.

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