

THE ADVERTISER

H. G. HARRIS,
Editor and Publisher.

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Address: H. G. HARRIS,
or The Advertiser, Kentville.

Potato Improvement and Seed Selection.

Address Given by Superintendent Blair at the N. B. Potato Growers' Convention at Woodstock, N. B.

This subject opens up a very broad and many sided question. I do not propose to deal with the question of improvement of the potato through the development of new varieties. I fancy the object at the present time is to set forth methods whereby we may grow up to their full vigor. I think there is sufficient evidence entirely trustworthy to convince us that there is no decline in a variety due to old age. Without doubt a variety will deteriorate under certain climatic or soil conditions, or owing to a disease which prevents normal development, but because such is the case is not evidence that the variety has "run-out," it only proves that the variety has been surrounded by conditions unsuitable for it to retain its former vigor. The question therefore is not so much the introduction of new varieties—although the introduction of disease resistant varieties is important—as it is the keeping of present good varieties up to a certain standard of excellency, particularly as to vigor.

Some of our growers of the Garnet Chili potato say that the variety has "run out" and that they wish they could get a variety that would yield like the old Garnet Chili. On talking to other growers I found that they considered the present Garnet Chili equal to the first introduced stock of this variety. This variety, owing to the fact that true seed could be secured from different growers—which is not the case with many of our white varieties—offered a good opportunity for some experimental work to find out whether there was a difference in the stock grown by different men. We were also interested in the work because the Garnet Chili shipped from Nova Scotia to Bermuda had in some cases given very inferior yields and we wished if possible to find out the cause.

This variety was secured from eight different growers and

planted in rows alongside each other under similar conditions. The results at harvest time were as indicated in the table below

Garnet Chili Potatoes from Different Growers.

| Number of Grower | Marketable Bushels | Unmarketable bushels | Total bushels |
|------------------|--------------------|----------------------|---------------|
| 1 | 220 | 20 | 240 |
| 2 | 94 | 26 | 120 |
| 3 | 212 | 14 | 226 |
| 4 | 186 | 20 | 206 |
| 5 | 26 | 10 | 36 |
| 6 | 32 | 14 | 46 |
| 7 | 176 | 34 | 210 |
| 8 | 52 | 22 | 74 |

You will see that the lowest yield was 36 bushels per acre and the row adjoining yielded 206 bushels. It seems reasonable for the man who was growing Chili potatoes from seed lot No. 5 to think this variety had "run out," and also for the man who was planting lot No. 1 to consider the variety was as vigorous as ever. Seed from these plots will be again planted to see whether they can be brought up to a uniform yield.

Now the question is what has brought about this change in various seed lots. There is no doubt but that seed selection has played an important part, but it can be truthfully said no hill selection had been practiced, and if it is the case that hill selection only is of value we will have to consider that selection has not been a factor in bringing about results here shown. In the case of grower No. 3 I know he has been careful to plant only uniformly good, medium size, tubers of this variety, and he has always taken his seed stock from the best dug areas.

At planting time when placed together there was a noticeable difference in the different lots but they would all be considered good seed stock. The difference here shown would not, I think, have been so marked had the soil in which they were grown been free from the disease called Rhizoctonia, commonly known as "Rosette" or "Little Potato." The soil at the Kentville Station even on the newly broken areas apparently has this disease in it. Our soil is decidedly acid, a condition suitable for holding potato scab in check, but one decidedly favorable for Rhizoctonia. Sandy soil are apparently most suitable for the development of this disease and there is no doubt but that the disease is more prevalent in some soils than others.

The growth started slow on plots 5 and 8 and in many cases the sprouts were not able to get above the ground before being killed by this fungus. An examination of the tubers revealed the fungus destroying the sprouts soon after they started, and below this diseased area new sprouts would start which would meet a similar fate. In many cases the sprouts would succeed in reaching the surface before being attacked as indicated by discolored areas along the stem below the surface of the ground which would ultimately kill the stalk or materially reduce the power of the plant to function properly. I have here several specimens of this disease in the various stages as produced in our greenhouse which you can examine. These specimens I think clearly indicate the condition that existed on the poor plots. The strong growing plots such as No. 1 and 3 were very free from injury and this seemed to be due to the power of the growing sprout to resist the disease because of having the vitality to force the growth so rapidly that the fungus could not break down the tissue. The buds were strong, grew rapidly, and where the stems were injured they seemed to outgrow the injury somewhat unless it happened that the stalks were entirely girdled. Had these potatoes been plant-

GinPills FOR THE KIDNEYS Why Demanded

"Gin Pills did for my husband and me what no other remedy could. I have advised two other parties to use them, one of them being my mother who has been a great sufferer for upwards of 20 years, and one box cured her, so as to enable her to sleep on her left side, something she could not do for many a year. The doctors told her they could not cure her, but could relieve her by an operation for a floating kidney, but on account of her age they did not think it advisable for her to go. Upon my advice she tried Gin Pills which cured her and for which she is ever ready to speak in terms of praise."

MRS. THOMAS H. PLESTID
Richmond, P. O. Box 115
P. S. 1414

Your druggist sells GIN PILLS—50c. the box.

National Drug & Chemical Co.
of Canada Limited, Toronto.

ed on a soil entirely free from this disease and had the seed been treated to kill any of the disease carrying bodies on the tubers I am sure that the results would have been much more uniform, but under the conditions that existed, and conditions that are liable to obtain on 50 per cent of our farms, the only hope for success apparently is seed stock of high vitality.

Now you ask what has brought about this low vitality to start with? Suppose for instance that the plot yielding 240 bushels per acre had been grown for years on soil practically free from this disease is it not reasonable to suppose its vitality would be stronger than that year had been subjected to even a moderate attack of this disease. This disease certainly hinders normal development hence a weakened plant must result. If therefore such a disease gradually weakens a plant it is reasonable to suppose that a drought, intense heat or excessive moisture will bring about similar results. It seems to me we are bound to have a fluctuating variation in the vitality of tubers owing to environmental conditions, and any condition which is likely to give most normal development from the time the set is planted to the maturity of the crop will give us the strongest vitality. On the other hand my observation leads me to believe that a check during the early life of the plant—about the time of tuber formation—has a greater effect on the vitality of the tuber than a check during its later development.

It might be of interest for me to mention my experience at Macdonald College where we grew about 20 acres of potatoes for use at the College. I found it impossible to secure a profitable crop without importing New Brunswick seed each year. The summers were hot, and very dry, which condition it seems brings about a tuber development lacking in vitality. The tubers planted alongside imported seed it would not produce a crop by one-third as good, and the second year was about worthless. Thus a potato tuber may be so weakened in vitality in one season as to be worthless for profitable crop production under certain soil conditions. The Macdonald College soil is a favorable one for Rhizoctonia, and in the fall at digging time the tubers were covered with the black spots indicating the presence of this disease.

Here again there were conditions that were successfully combated only by using seed from sections where tubers of high vitality were produced! The soil was so impregnated with the disease that treating the tubers was of no value. The low vitality in the tubers grown from imported seed was without doubt largely due to the heat and absence of moisture rather than Rhizoctonia, although this was a factor as well, but the crop from these tubers the following year was a failure primarily because the sprouts of the tubers were not sufficiently vigorous to resist the rhizoctonia fungus. No amount of selection work—and we did such work for four years—ever gave us results that compared at all favorably with imported stock, and this leads me to believe that in very many

Good Farm For Sale

Situated between Coldbrook and Kentville, with a total of 220 acres. 17 acres orchard in good bearing, produces about 1500 barrels, 50 acres cultivated land, cut 30 tons hay last year, could be made to cut 50. A fine pasture, one of the best in Kings Co., with streams through it. Good quantity of timber hard and soft, house in good repair, 8 rooms, 1 barn, hoggpen, sheephouse, woodhouse and wagon shed and auto house, the farm is in good location, and good clay soil. Good reasons for selling. Price reasonable. Apply at once to—Box 216, Kentville.

DRESSMAKING

Mrs. Walter Frale, and Miss Una Frale, are prepared to do sewing of all kinds at the home

EGGS FOR HATCHING and Day Old Chicks. The kind that Hatch, Live, Crow and Lay.

We are booking orders for hatching eggs from fully matured, carefully mated, farm raised birds, selected for their prolific laying qualities, vigor and standard requirements. We can supply eggs in any quantity from our utility matings of

White Plymouth Rock Barred Plymouth Rock White Wyandottes Price \$1.00 per setting of 15 Eggs

Our Barred Plymouth Rock utility pen is headed by two cockerels from hen that laid 230 eggs in 365 consecutive days.

Day old Chicks We can supply a limited number of White Plymouth Rock Barred Plymouth Rock at 16 cents April 15 cents May

No chicks hatched after June 1st., except for special orders.

Hatching Capacity 1000 Eggs

Eggs For Hatching Exhibition Stock Price per setting 15 eggs \$2.00 to \$5.00

Barred Plymouth Rock Cockerel mating strain. Pen 13 headed by "Canadian Boy" 1st Cock Kentville 1916. (1st Cockerel Kentville 1916).

Pen 14 headed by "Ivanhoe" 2nd, cockerel Kentville 1916. Barred Plymouth Rock Pullet mating strain.

Pen 11 headed "Crusader" cockerel brother of 1st pullet, Boston 1916 Pen 12 headed by "Bobbie" from Brights strain S. C. White Leghorn First Prize Pen, Kentville 1916.

Our Exhibition Pen White Rocks is headed by "Snowbird" 1st cockerel 1916, Kentville, a bird that attracted much attention at the show. Every pen comprises one or more prize winners.

Our winnings in Plymouth Rocks at Kentville, 1916, were 15 prizes, including 7 firsts. Call and inspect our stock before purchasing elsewhere.

Elm Farm Poultry Yards

WOODSIDE, KINGS CO., N. S. Phone "Canning, 33-11"

SHERIFF'S SALE

1916 A No. 2880 In The Supreme Court

Between: Holmes C. Masters, Plaintiff, and Louis F. Best, Defendant

To be sold at Public Auction, by the Sheriff of the County of Kings, or his deputy at the Court House at Kentville, in the said County of Kings, on

Saturday, the 29th day of April, A. D. 1916,

at the hour of eleven o'clock in the forenoon, pursuant to an order of Foreclosure and sale made herein the 29th day of March, A. D. 1916, unless before the day of Sale the amount due to the Plaintiff including the Plaintiff's taxed costs be paid to the Plaintiff or his solicitor.

ALL that certain tract of land situate at Berwick, in the County of Kings, and bounded as follows:—Beginning at the North West corner of lands of Charles H. Beardsley, on the east side of the Pleasant Valley Road, thence Easterly in the said Beardsley's North line to lands of William Somerville, thence Northerly in said Somerville's West line to the Shaw Road, thence Westerly in the line of said Road to the Valley Road, thence Southerly in the East line of said Road, to the place of beginning, containing some thirty-six acres, be the same more or less.

TERMS:—Ten per cent deposit at time of Sale remainder on delivery of Deed.

F. J. PORTER Sheriff of the County of Kings.

W. E. ROSCOE, of Roscoe & Roscoe, Ab-rdeen St., Kentville, N. S., Solicitor for Plaintiff.

Dated at Kentville, this 29th day of March, A. D., 1916.

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DRESSMAKING

Mrs. Walter Frale, and Miss Una Frale, are prepared to do sewing of all kinds at the home

Strawberry Plants For Sale

Senator Dunlop (perfect.) This berry has been very highly recommended since its introduction in 1900. In all localities where it has been planted there is satisfaction in this variety. The plant is healthy and an enormous bearer. It commences to ripen soon after the earliest and continues until the close of the season, booking orders now. Prices on application.

Rufus S. Newcombe, Brooklyn Corner, Kings Co., N. S.

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is all very fine for men like

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The Strangle Hold was successfully applied to my business when it was destroyed by fire

ON JUNE 17th of last year and CHAMPIONS

of industry have succumbed to less. But I am now prepared to supply the wants of

All Comers with the best building material obtainable and guarantee entire satisfaction in every detail.

REMEMBER it will pay you

Mr. Builder to get my prices. Don't forget the place

REDDEN'S Kingsport, N. S.

Short Horn and Holstein Bulls

The UNION AGRICULTURAL SOCIETY have bonused Pure Bred Short Horn Bulls at Messrs C. C. H. Eaton's, Walter E. Eaton's and Joe E. Kinsman's, also Pure Bred Holstein Bull at Robert W. Rand's. Also Guernsey Bull at Chas. G. Cox's

Terms of Service—\$1.00 with 100 cent membership fee of \$1.00 to Society. Accounts due Nov. 20th, 1916 payable to Secretary of the Society.

Canard, Dec. 17th. mes.

Minard's Liniment Relieves Neuralgia.

Your Bread, on the flour the best in the

PURE FLOUR More Bread



The last Even so, take it porarily suspended Flour are on t with delicate cr delicious served or with plain sw the plate is cleared could be paid to M to the uniformity a Grocers sell and an

HORT HUNT BROS. CROSS &

A church, claimed to smallest in America, cently dedicated in Man N. H. The main audito eighteen by twenty-elig with seats for about persons. In a tiny gal