

such an analysis, grasps the subject in an orderly way, and he himself has made a distinct advance; his education is extended and he has new power for grappling with other subjects.

Let us take a simple example from literature. "Bingen on the Rhine" is an old favorite. Many are the boys and girls who have read it, and learned it by heart, without ever thinking that there was a plan in its composition. Would the appreciation of its beauty and pathos, or the ease of its recitation, have been less if the youth had seen this plan in it?

Bingen on the Rhine:

1. The dying soldier.
2. His messages:
 - (a) To his brothers and companions.
 - (b) To his mother.
 - (c) To his sister.
 - (d) To his sweetheart.
3. His death.

I am quite aware that the use of "plans" of this kind is quite usual in teaching, but my contention is that pupils do not make such plans for themselves, and this fact is largely responsible for the inability which they show when cast upon their own resources. The greatest intellectual benefit of this kind of work is that it teaches the student to fix upon the key to a situation or a subject, and to see its various parts in their true relative positions.

Assa. East.

S. J. A. BRANION.

Horticulture and Forestry.

The Outlook for Apple Growing.

(Continued.)

In connection with the theory of inherent hardness of individual specimens, I would cite the case of the only "Transcendent" crab tree growing at the Experimental Farm. The tree in question is the only survivor of a large consignment planted some years ago, and while there is absolutely nothing left of the balance (which have long ago succumbed to winter-killing), this specimen is today apparently quite hardy, not winter-killing in the slightest degree, and has for several seasons produced a good crop of fruit of an excellent sample. The second method pointed out in last issue of the "Advocate," along the lines of which something may be accomplished towards the production of a hardy apple for Manitoba and the Northwest, is "Sowing the seeds of Manitoba grown fruit" wherever procurable. Of course, such seedlings will not all be of value, but it is quite within the bounds of probability that a very valuable fruit (for Manitoba) will be evolved by this means. The following illustrates our own experiences along this line: In 1898 a large number of seedlings of the standard crabs were planted at the Brandon Experimental Farm, the following varieties being represented in this test: Transcendent, Gideon, Hyslop, Snyder, Jumbo, Rose of Stanstead, and Martha. A portion of these were obtained from Ottawa, the balance being grown from the seed of Manitoba fruit. With the exception of the last mentioned (Martha), all these have proven too tender, having been repeatedly cut back to snowline. With the seedlings of Martha, however, the case has been entirely different. We have some twenty of these specimens, all of which have proven hardy since planting in 1898, and one of them fruited last season. The tree in question is an upright and shapely grower, and the fruit was produced abundantly. The calyx was persistent, and the fruit firmly attached to the tree (a very necessary qualification for Manitoba). The color is a clear lemon yellow, with the faintest suggestion of red on the sunny side, the flavor resembling that of the Transcendent, attaining to about two-thirds the size of that variety. Should this be the only result we may obtain, we have cause for congratulation, but as there are several trees which have not yet fruited, other equally gratifying results may be anticipated.

The specimen in question can be thoroughly recommended as sufficiently hardy for general cultivation in Manitoba, and I need scarcely add that propagation of such specimens will be pushed along as rapidly as possible, in order to obtain material for distribution to the farmers.

With the larger apples, as yet we have only two specimens, one each of "Wealthy" and "Tonka," and these again illustrate the superiority of Manitoba-grown trees over imported ones. They were obtained from Mr. Stevenson, of Nelson, and were root-grafts on to *Pyrus baccata*, of scions taken from his own trees, and, though previous importations from the East of the same varieties have repeatedly proven failures, these may be considered as fairly hardy, and a few fruit set last year, which was unfortunately stolen before attaining maturity. In your next issue I will give you a brief account of our experiments along the lines of cross-fertilization with the apple.

HARRY BROWN.

Trees Beautify the Farm.

In 1887 Mr. Stewart, M.P.P., of Pilot Mount, brought some blue spruce from Cypress River and transplanted them near his home. At first they made very slow growth, owing chiefly to being surrounded by the natural prairie sod. Later, when this condition was changed and cultivation was given them, better results were at once noticed, and ever since steady growth has been fostered by cultivation, until now they are large, thrifty and ornamental. About seventy trees were experimented with at that time with good results.

A row of spruce on the south side of an orchard is a splendid means of holding the snow around the roots of fruit trees and bushes. Being so placed it also retards early blossoming, and saves the fruit from the occasional early frosts. When choosing a location land having a slight slope is desirable; drainage calls for this, and should the slope have a north-eastern exposure, the double purpose, that of drainage and checking undue early growth, will be served. This row of spruce also has other purposes; its usefulness as



A FRUITING SEEDLING OF "MARTHA" CRAB.
Photographed March 18th, 1903.

a wind-break saves much fruit that otherwise would never get a chance to remain on the parent stem until sufficiently matured for use in this windy Western country; and, again, what about its influence as a beautifier? This in itself should be sufficient to repay for all labor.

A double row of Manitoba maples, twenty feet south of the spruce, adds both beauty and usefulness to this portion of the farm. Rows of other trees could also be planted, and a dense wind-break provided if desired. Willow and Russian poplar are good for this purpose; the willow being especially adapted for the outer row of all, as it grows bushy down to the ground, and also stands the stinging of wire for fencing.

White Scotch birch is well adapted for high knolly land, and makes a beautiful tree, suitable for wind-breaks or ornamental purposes. The lilac bush grows well, and adds very much to the appearance of the garden, especially in spring. The small fruit crop would be very much increased, as well as the beauty of the garden and house surroundings greatly enhanced, if a systematic plan of planting and caring for a few leading varieties of our hardy trees received the attention which their usefulness justly demands.

Questions and Answers.

1st.—Questions asked by bona-fide subscribers to the "Farmer's Advocate" are answered in this department free.

2nd.—Our purpose is to give help in real difficulties; therefore, we reserve the right to discard enquiries not of general interest, or which appear to be asked out of mere curiosity.

3rd.—Questions should be clearly stated and plainly written, on one side of the paper only, and must be accompanied by the full name and address of the writer, as a guarantee of good faith, though the name is not necessarily for publication.

4th.—In veterinary questions, the symptoms especially must be fully and clearly stated, otherwise satisfactory replies cannot be given.

Veterinary.

[Answered by our Veterinary Editor.]

Subscribers are kindly requested to read the conditions at the head of this department before writing or mailing their enquiries.

NETTLE-RASH OR SURFITT—PECULIAR CASE.

Mare, seven years old, not in foal one morning found her in the stable with breast, neck and under the belly covered with flat, hard lumps the size of a saucer, the ones on her neck being as big as eggs. I gave her saltpetre and sulphur, one teaspoonful of each, in bran mash twice. Also gave her one teaspoonful of St. John's Condition Powder in gallon oats once a day. For roughage, I have been feeding quite a lot of green sheaf oats and frozen wheat in the straw, also hay and dry oats once a day, but did not work her hard. The lumps have now almost disappeared. She always had a good appetite, and looked bright in the eye. What was the matter with her, and what should I have given her?

2. Horse, nine years old, last spring and this spring for about a month has spells of snorting while eating. His halter shank gets quite wet. He seems to get mad with it. He rubs his nose against the manger, and lifts his front foot, tossing his head up and down. When watering him at the tub, he will put his head down, then suddenly jerk it up. He does not drink more than half as much as his mate. He is in good condition, and is fed hay three times a day, oats once. His tongue is dirty yellow looking at the sides, for the rest he looks all right. J. B. Riversdale, Assa.

Ans.—1. The technical name of this affection is urticaria. It is a frequent form of skin disease in the horse, and consists of an eruption of roundish or oblong elevations, which arise very suddenly and usually overspread the greater portion of the body. The cause is generally attributed to some disorder of the digestive organs, such as would be induced by a sudden change of diet, or giving a drink of cold water when the animal is in a heated condition. It has also been observed after sudden exposure to cold. The treatment consists of a mild oleaginous purgative: raw linseed oil, one to one and a half pints. Apply to the skin a lotion composed of bicarbonate of soda, four ounces; water, one quart.

2. The symptoms in this case point to some irritation about the head, probably in connection with the ears. Would advise you to thoroughly examine his ears, mouth and nose. The trouble may possibly be in the brain, which, as a matter of course, would be a very serious matter. Not knowing the nature of the case, I am unable to prescribe any treatment.

ASCITES OR ABDOMINAL DROPSY.

What was the cause of a two-year-old steer dying. His water was dripping from him. He was given quite a quantity of sweet nitre, but it failed to relieve him. He was opened when dead and was full of water, but had none in the bladder. No blood was to be seen. E. E. J.

Cardston, Alta.

Ans.—Your steer died from a disease known as ascites or abdominal dropsy. The causes are various, such as disease of the coats of the abdominal cavity (peritoneum), disease of the heart, liver, kidneys or portal blood vessels. Cattle that are poorly sheltered and fed on imnutritive food during the winter are subject to this disease. When it is the result of chronic disease in any of the tissues or organs I have mentioned a cure need scarcely be anticipated, but when it is caused by bad care and feeding, the proper treatment would be a radical change for the better in both, combined with a course of mineral tonics.

TAPEWORM IN SHEEP.

Would you kindly say what is good for tapeworms in sheep, and how to give the remedy to a large band of 2,500 head. Will green grass in spring kill them? Irvine, Assa. G. M.

Ans.—The most effectual medicine for the expulsion of tapeworm in sheep, or any other animal, is oil of malefern, but to give it to such a large number of sheep as you mentioned would be a rather tedious undertaking, as it would have to be administered to each one individually. I would advise you to try the following, which may be given to them collectively: common salt, fifty pounds; sulphate of iron, finely powdered, eight pounds; arca nut, powdered, six pounds; mix thoroughly, and distribute over bare ground where sheep can have access to lick it. Repeat once a week for three times. Green grass will have a tendency to expel the worms.