

## PRACTICAL FARMING.

### SPRAYING FOR FRUIT.

The spraying of fruit trees for the purpose of killing injurious insects and fungi is known as being so efficacious that it is now looked on as one of the usual operations of the fruit grower. As the season is fast approaching when the work of spraying will have to be commenced, a few remarks on the subject will be in place. What is known as Bordeaux mixture is composed of lime, bluestone and water. This is for the killing of all germs of leaf blight of a fungous origin. For the destruction of leaf-eating insects, Paris green and water is used. When it comes to sucking insects, such as the oyster shell and the San Jose scale, something greasy has to be provided. The best mixture is made of whale oil soap and hot water, though hard laundry soap is fairly good. When the power of these mixtures was first recognized, it was the custom to make them much stronger than later experiments have found necessary at the present time the liquid for spraying is made as follows: Four pounds of bluestone, 8 pounds of lime and 100 gallons of water. This mixture is for blights. That for use for the leaf-eating insects is made by adding a half pound or less of Paris green to 150 gallons of water. For sucking insects, say 2 pounds of whale oil soap to 1 gallon of hot water. If not convenient to get the whale oil soap, hard laundry soap may be substituted, though it is not as good for the purpose.

The time to start spraying trees, whether for fungus or insects, is just as the buds are starting. There are spraying requisites advertised in all leading agricultural papers. All portions of the tree should feel the effects of the spraying. If for insects, such as apple and plum curculio, spray again just as the flowers fall, then again in about three or four weeks, or earlier should rains appear to have washed off the poisons. For leaf blights and fungus attacks of the fruit, such as plum and grape rot, besides the spraying when the buds are about to burst, other doses should follow. The second one should be just when the foliage is fairly expanded, then when the fruit is first formed, and say twice more, at intervals of about a month. When foliage alone is considered, I have found two sprayings ample, one when the leaves were formed, another near midsummer. It is probable that no more than this would be required for fruit. The San Jose and other scale insects are to be combated when the trees are bare of foliage. Give one washing of the bark as soon as the leaves fall, another in midwinter and a third towards spring, on badly infested trees. If but few scales are on the trees, one washing to be towards spring will suffice. The San Jose scale is a formidable foe, as before noted in these columns, and at the first appearance of any scale, the trees should be washed at once, let the intruder be San Jose or what it may.

We may add that the proper proportion of Paris green may be added to the bluestone mixture when the one compound will suffice for both fungus and insects. This has been done with great success.

### RIPENING OF CREAM.

As the flavor of butter comes largely from the action of certain germs or ferments, it seems to me, says Prof. McKay, that the right degree of acidity, other conditions being favorable, determines the flavor of the butter. As many of the lactic acid germs require oxygen, stir the cream frequently. The granular appearance of cream is not always a correct indication that it is ready to churn. It is frequently in this condition when the acidity is very low. From experiments at the Iowa station, it seems that as good butter can be made from the milk of strippers as from fresh cows; provided the cream is properly ripened. It also seems that if butter made from frozen cream is not good the fault is not due to the freezing, but to the excessive heat in thawing it out. Cream ripened at a low temperature, and for a long time, with but little stirring, has a bitter taste and lacks flavor. We were enabled to secure a difference of from one to two points from the same cream divided and ripened at different degrees of acidity and different temperatures, regardless of the starter used. I believe that the right degree of acidity not only governs the flavor of butter, but also that of cheese, under favorable conditions. To get uniform results with alkali tests, cream should be separated so as to contain about the same per cent of fat daily.

### THE GARDEN.

The margin between the possibilities and actualities of the average farm garden is a thing of goodly dimensions. It is, naturally enough, a difficult thing for the farmer to realize to what extent of practical usefulness he may put a single acre of ground provided he is willing and careful to bestow upon it the right kind of attention. This, is so because of the fact that in his farm work he looks more to general results. But when he comes down to work on a smaller scale he finds things quite different. It is only recently that a committee took upon itself to investigate somewhat as to what was actually being done on some of the small truck farms, near one of our large cities, and they reported that one farm of forty acres yielded annually \$16,000 worth of fruits and vegetables; another of six acres yielded \$6,000; another of ninety acres returned \$20,000, and another of twenty acres returned \$8,000. These figures represent good receipts, but even after making reductions for fertilizers and other necessary expenditures, the net returns although not stated, were no doubt handsome. Apart, however from the profits from exclus-

ive truck farming, the garden acre on the farm can be made an important item in the domestic economy of the home, if we take into consideration all the expense attaching to the purchase of garden produce necessary to the health, comfort and well being of the family.

### FEEDING APPLES.

It is a disputed thing whether feeding apples to cows is beneficial or hurtful. It does make a little difference whether the cow is a summer or a winter milker. Our own idea, writes John Gould, is against feeding a fresh cow apples, though it is not objectionable to feed a quantity to the cow that has been in milk several months. Only a few quarts should be fed daily to any cow. A prominent dairyman says that something extra should always be fed in connection with the apples, such as clover, wheat, bran, cottonseed meal, or the like, to balance up the food found in the apples. How would it have resulted to have fed the extras mentioned and left the apples out? It seems like the case of the man feeding corn meal and saw dust, half and half, though he had noticed that dropping out some of the sawdust had no injurious effect. It has been stated that where pomace could be had, and this solid matter fed with grain, there seemed to be a fair value to it, and on the score of succulence was found to be of benefit.

### MAKING CIDER VINEGAR.

First have a good, strong, iron-hooped barrel. Next have good apple cider. Cover the bungholes with mosquito netting or other material that will keep out the flies. The bungs ought not to be put in, except temporarily, for at least a year. Keep the vinegar barrel in the garret or other place where the air is warm and sultry. The cellar is a bad place in which to make vinegar. To hasten fermentation occasionally turn the cider out of one barrel into another, thus exposing it more fully to the air, and by adding a gallon of strong vinegar or a little "mother" to each barrel. There are other methods by which the process may be hastened still more, such as trickling it through beef chips or shavings; but these are hardly to be recommended, for those who are content to wait on the natural process rarely fail to find themselves amply repaid through the high value of their product.

### FARM NOTES.

Mother Earth refuses to yield her favors without a good deal of coaxing, and it takes a scientific man to coax her successfully.

Farmers need more curiosity than many seem to manifest. It takes but slight trouble to make a post mortem examination of all creatures dying from unknown causes and often rich results arise from it.

The cheapest winter food for swine is roots. They may not have so much nutriment in themselves, but they cause the hog to get more out of his other food, just as good cover pasture causes the hog to get more out of grain.

Weeds that we look upon with especial disfavor pigs have a great liking for. The other day we noticed a young sow eating ragweed at a ravenous rate. We do not know of any cheaper feed than this. There is a good margin between corn and pork, but a much greater one between ragweed and pork.

Eggs for hatching to be kept until a sufficient number are accumulated from one or two select hens should be put in a cool place but not where they will become frozen. Wrap them in tissue paper and pack them in a starch box, filling between the eggs with oats. Turn the box three times a week, so as to turn the eggs half over. Kept in this manner they should hatch if six weeks old.

## Aunt Rachel's Treatment.

Crash! An ominous sound came from the kitchen as I was sitting for a quiet talk with my friend, Mrs. Morrison. We had just been enjoying a well-prepared dinner at her table, and her husband and the two or three gentleman guests had gone.

"Something broken?" I said.

"It sounds like it," she replied.

I expected her to get up and run nervously to the kitchen, but she quietly continued the conversation. A moment later there appeared at the door a Swedish girl with a most woe-begone look on her face, and a tear on either cheek. I could not forbear an exclamation of dismay at perceiving that in her hand she held the fragments of my friend's largest meat dish, belonging to her fine dinner set.

"Broken?" asked Mrs. Morrison, looking at it as she might have looked at the wreck of a kitchen bowl.

"You might have selected something else to break, it seems to me, Lena," she added, with a little shake of the head, but still with a smile.

"It slipped right out of my hands," said the girl in great distress.

"O don't stop to fret over it, Lena. You don't break many dishes. Can't it be no use to save the pieces. It can't be mended."

"Well, Ruth!" I exclaimed as Lena, greatly comforted, took her departure, "Pope must surely have known some ancestress of yours when he wrote: 'And mistress of herself when china falls.'"

Any one would think to see how coolly you take the ruin of that handsome dish, that you could have a new set any day, if you wanted it."

"Which is very far from being the

case, as you know," said my friend soberly. "I am afraid I cannot match the dish, and if I can, I can scarcely afford the money for it just now."

"But you do not seem to mind the accident at all," I persisted, quite unable to understand her equanimity.

"O yes, I do—after a fashion," she went on very deliberately. "That set was a present from dear old Aunt Rachel, and I am sorry to see any piece of it broken. But if you are wondering because I do not fret over what can't be helped, I can only assure you, Eleanor, that I cannot afford to. It is bad enough to lose the dish without that."

"Any one will admit that fretting is of no use," I said. "But you are about the only woman I have ever seen who really lived up to the idea."

"I didn't begin that way," replied Ruth setting back into her chair with a thoughtful expression on her pleasant face. "I was very much given to fretting over small annoyances when I was a good deal younger. It was that same dear old Aunt Rachel who cured me by vigorous treatment."

"I should like her recipe, if you can give it to me."

"O it is only the same old one you hear or read any day of your life: 'Don't fret; it is thankless, rebellious and utterly useless, never does a bit of good, and always does harm,' with other such plain truths; I think it must have been had ever been able to find troubles in trifles. As I prayed that the shadow of death might not so early darken our home, I believed I should never again allow myself to be moved by small troubles. I did not have an opportunity to test my resolution very soon; for as baby recovered, I became ill myself. For many days I lay far beyond all resolving for the future; but, indeed, beyond all hope of any future, so far as this world is concerned. The winter had passed before I won my way back to life, and began to take up its cares again one by one."

"I held well to my good resolution as I rejoiced in being able to oversee the house-cleaning, until I came to the parlor carpet. The room had been shut for months, and had not been properly aired and swept, and the moths had made fearful ravages all round the edges of the carpet. You will be astonished to hear, Eleanor, that all my equanimity broke down at sight of it."

"No," I said, sympathizingly. "I don't wonder that you would be fairly sick over such a wonder at all. I have known women that."

"It was a beautiful carpet, and I had been very proud of it. I did not find that anything else had suffered from neglect through my illness; but forgot all the other pleasant facts in view of this distressing one. Even when the baby crept over, crowing in delight at the bright floor, and trying to pick them up with his chubby little hands, I forgot how much I would have given not so very long ago, to hear a merry note from him. Well, just as I was at the very culmination of my 'pet,' Aunt Rachel's kindly face beamed upon me for a week's visit."

"Thankful to see thee so well, dear," was her greeting. "The Lord has been good to thee. Not that I don't mean that He would have been good if thee hadn't got well."

"Yes, I'm very well now, thank you, Aunt Rachel," I said, after the first inquiries were over. Well enough, you see, having got past my great trouble, you set to settling down to small worries. Look here— isn't this enough to turn the soul of a housekeeper sick?"

"It is a pity," she remarked, viewing the mischief.

"Of course some things had to be neglected while I was sick," I continued, petulantly; "but I never dreamed about such a thing as this."

"She looked at me with her quiet eye, always so full, I used to think, of the very peace of heaven."

"Surely, Ruth, thee isn't going to make the matter worse by vexing thy soul over a mishap?"

"O, it's all very well for you to talk that way, Aunt Rachel," I replied, "but I can't afford a new carpet just now."

"Thee doesn't need a new one. The bad pieces don't show much."

"But I shall always know they are there, and it will take away all my peace of mind."

"The eyes looked straighter into mine as she talked on something like this: 'Thy peace is worth little to thee or to any one else, if it can be so easily broken. Ruth Harvey, thee is starting out in life; beware that thy disposition to fret thyself about small things does not prove a curse to thee and thine. Every thought of discontent about matters beyond thy control is not only a sin against the God who orders for thee, but a sin against thy own soul, and an added weight to every annoyance. If cherished, such thoughts become a nest of stinging serpents, in thy breast. Thee will grow old and wrinkled before thy time. Thee will be peevish, complaining and fault-finding. Thee will be a terror to thy husband and children.'

"Yes," continued Mrs. Morrison, "she said all that and more. She said: 'Is one thread of that carpet woven into thy real peace of mind? Can it or any other small thing really concern thy welfare, or that of those dear to thee, either for this world or the next?'"

"I never heard it put quite so strongly before," I said thoughtfully, as my friend paused. And if I hadn't seen Tom, I should have said it was very good talk indeed, but that no woman could live up to it."

"I had a week of it, you see," said Mrs. Morrison. "When Aunt Rachel went away, one of the last things she said to me was: 'I want thee to bear in mind what I said, dear, that ever-fretful thought thee wastes on small accidents is only so much added to their burden.'"

"I think I took it well to heart, for I concluded, Eleanor, that life's burdens are heavy enough without any such addition."

## YOUNG FOLKS.

### STORY FOR BOYS.

Harry Allen, Frank Johnson and Tom Smith were sitting on the ground in the shade of a huge walnut tree in Mrs. Smith's yard.

Harry's father was a merchant who (as he thought) had outgrown the town in which he lived.

Frank's father was a merchant who thought he could do better in a town a hundred miles farther west. So the two families were going to leave L—the next day, and this was the boys' last talk with Tom before going away.

Tom's mother was a widow who had to work hard to feed, clothe and educate her two children.

The boys were all fourteen years of age.

Harry is tall and slim, with black eyes and black hair. Frank is shorter, with brown eyes and dark hair. And Tom is what they call "chubby," with blue eyes and light brown hair.

"Boys," said Tom, "where do you suppose we all will be seven years from now, when we are all twenty-one? Let's lay our plans for the future and see if we can carry them out. Harry, what are you going to do?"

"Well," said Harry, "I'd like to do just nothing, but I suppose I'll have to go to school, and then 'get through' college some way without studying hard enough to have brain fever; and then I'd like to spend my vacations at some fashionable 'resting place,' and when I 'get through' I'll just step into the store and wait on the ladies. That's the easiest thing I can think of."

"Well," said Frank, "I don't want to get brain fever, either, but I do want an education. My father has no store for me to step into, and I don't want to be a mechanic. Mother says I will never be strong enough to do hard work. You know I have dyspepsia. Sometimes I come home from school so hungry I have to eat every half hour till bedtime. Then I won't be hungry again for a week—just live on tea and coffee."

"I do that way sometimes," said Harry. Tom wondered what their mothers were thinking about, and was very glad he had been taught that health was better than wealth.

"Now, Tom, tell us what you are going to do."

"Well, I expect you will laugh at me, but I'll try not to mind it. First of all, I'm going to get an education, and you know that means work for me in school, out of school, through vacation and all out of the time. I have not decided what I'll be when I'm a man; whatever I'm best fitted for, I hope."

"I don't see anything to laugh at in that," said Frank.

"But I hadn't told you my one ambition. I'm just bound to go around the world if I live."

"Ha, ha!" laughed Harry; "that is extravagant. I don't want to take any such trip. It would be too tiresome."

Frank only smiled. He liked Tom's pluck and would not have been averse to a trip around the world himself, but he said it made him dizzy to think of working to make money to pay for it.

"Frank, you and Harry must come to see me in seven years, and we will compare notes and see how our plans have worked."

"Maybe you won't be here," said Frank. "You may be gone on that trip around the world."

"Oh, no, not so soon as that," said Tom, laughing. "If I'm living I'm almost certain to be here. You see, we can't afford to move, and boys who have to work can do better where they are known, if they do right."

"All right, we'll meet you then, here under this tree, if it stands. So long."

"And boys, there is another thing I wish you would promise me before you go away."

He looked from one to the other, as if he were afraid to say what was on his mind. He had tried to keep from saying anything about it, but his conscience would not let him off. He had said to himself, "It's none of my business; it won't do any good." But still he could not get it off his mind.

"Well, what is it?" said Frank, seeing he hesitated.

"Why," said Tom, "I wish you would promise me not to smoke any more cigarettes till we meet again."

"Oh, come now, Tom, do you want to rob us of the best thing we have? What good would it do you for us to quit smoking?"

"It would do me ever so much good to see you boys free from such a bad habit and enjoying as good health as I have. You would want to go around the world with me, then."

"Oh fudge!" said Harry. "We would not have any better health if we did quit smoking."

Tom was discouraged. "Well, boys," he said, "I wish you would give it up, but you won't for your own sakes of course you won't for mine."

"Tom can't you come to the station and see us off to-morrow?" said Frank.

"I would like to, but I'm afraid I can't. Do you see that wood-pile over there at Judge Stanhope's? Well, I have to saw and split all that up this week, and this is Wednesday. Sorry, boys, but you know I'm going around the world."

And so they parted.

"Tom's a jolly good fellow, but awfully 'cranky,'" said Harry, as they went down the street.

Frank was silent. He could not help wishing that he could be more like Tom, but he had not the moral courage to say it.

Tom felt sad over the parting, but had no time for repining. That wood-pile was staring at him, and he marched right up to it and went to work, and thought and planned as he worked. That tour of the world seemed a long way off as he thought of the years of work and study before it could be. But he believed, as much as he believed that he was a living, breathing boy, that he would accomplish it.

Well, time went on. The two families left for their new homes, arrived safely at their destination, and were soon doing fairly well though not "getting rich" as fast as they had expected.

The boys did not give up smoking. They entered school when the fall term opened and studied as they had always done—just enough to "get through," as they expressed it—and spent their vacations about as they pleased.

Harry's father gave him all the money he wanted to spend, while Frank (whose father had no bank account to draw from) "got around" his "soft-hearted" and softer minded mother and got all the money from her he wanted.

The Stanhopes had no children and they wanted to do something for the Smiths, but Mrs. Smith was a very proud woman, and Tom and his sister Jessie were just as proud as their mother. There was no false pride about them. They wanted work and wanted pay for their work, but not a cent more than they earned. No charity, if you please, while we are able to work!"

When school days were over for Tom and Jessie, Judge Stanhope concluded he had done without a secretary just as long as he could, and would Tom like such a position? Of course, Tom would like nothing better. So that was settled. Then Mrs. Stanhope suddenly discovered that her eyesight was failing so fast that she must have some one to read to her and write letters for her, and would Mrs. Smith spare Jessie for a time as a kind of companion? So Jessie was also installed at the Stanhopes.

The time had come for the promised visit of Harry and Frank. As the time drew near for the arrival of the train on which they were to come, Tom was about to start for the station when he remembered they were to meet under the walnut tree. So he went out and sat down on a rustic seat which he had made under the tree, and was soon lost in a review of his past life. Suddenly he was recalled to the present by Frank, who called out: "Here he is, Harry."

Tom rose and faced his old-time friend with a beaming face, but the next moment a wave of grief and pity swept over his soul such as he had never before felt. There stood Harry with bloodshot eyes and bloated cheeks, dissipation written on every feature while Frank looked almost pitiable. "O! what will mother think?" was Tom's thought. But he forced himself to be cordial, and led them into the house.

Mrs. Smith was as sorry as Tom when she saw how the boys looked. And, Oh! how her heart ached for the mothers of those two boys. When they were all gathered in Mrs. Smith's little parlor after supper, Tom said, "Well, Harry, I suppose you and Frank have finished your course in college?"

"After some hesitation Frank said, "Yes, we are through with school and ready for work now, if we can find positions to suit us."

"I suppose Harry finds a position in his father's store."

"Oh," said Harry, "the 'old man's' dead broke."

"Broke! How did that happen?"

"Oh, got in debt. Sold out by the sheriff. He's a clerk himself now."

"I'm very sorry to hear it," said Tom and his mother at the same time.

"So'm I," said Harry, "it leaves me in a bad fix."

"Selfish as ever," thought Tom. "Never gives a thought to his poor father and mother and his sisters, who, no doubt, have to work for their living."

Mrs. Smith sighed and turned to Frank. "How are your family getting along?"

"O, we are all sick," said Frank in a doleful tone. "Mother thinks we all have dyspepsia. She thinks it's the water. Perhaps it is; at any rate the supper I ate to-night is the first I have eaten in years, it seems to me, that did not make me feel miserable for hours after eating it."

Mrs. Smith made no reply, but she thought perhaps the difference was in the diet instead of the water.

"Well, Tom," said Frank, after a moment's silence, "tell us what you have been doing. Done with school, I suppose?"

"Yes, graduated at the close of last term."

"And what are you going to do now? Go around the world? Do you remember how ambitious you were seven years ago?"

"Yes," said Tom, laughing, "and I am just as ambitious yet."

"What! You don't mean to say you still have that tour in your head? When do you think of starting?"

"I don't know. The time is as indefinite now as it was seven years ago, but I am going."

Frank looked at Tom with admiration, and wished as he had when they were boys that he could be like him.

"For the present," said Tom, "I'm Judge Stanhope's secretary."

"Lucky dog, as usual," said Harry drowsily.

"Mother always taught me there was no such thing as luck, and I believe it," said Tom, looking fondly at his mother.

And so the evening passed.

In a few days Frank and Harry became restless and went away. Frank said if he could get work that was not too hard he would like to stay awhile, as he thought his dyspepsia was better what little time he had been there.

By some means Mrs. Stanhope heard of Tom's pet ambition of making a tour of the world. So one evening the Judge and Mrs. Stanhope called on Mrs. Smith and told her that they had long thought of making a tour of the world, but had never felt that the right time had come until now; and they would like to have Tom and Jessie accompany them as secretary and companion, if she thought she could spare them.

"Of course they may go. A tour of the world has been Tom's dream since he was a child."

So the Judge and his wife went home happy.

Such a happy family as the Smiths were that evening is seldom seen. But in the midst of their happiness came a letter from Frank, telling of Harry's death from delirium tremens, and asking if Mrs. Smith would let him (Frank) board with her awhile. They sent him a telegram of only one word, "Come." He came in a few days, looking much worse than he did when they last saw him. He looked very thoughtful when he found Tom was preparing to make his long-wished-for tour of the world, and wondering if he might not have done as much. He stayed with Mrs. Smith, got well of his dyspepsia and became as useful a man as it was possible for him to become after wasting the better part of his life.

Tom did no more than any boy can do who will take care of his health, his morals and his money.