

EFFICIENT FARMING

FLIES AND LIVE STOCK.

The fly is a destroyer of profits. The annoyance that the various types of live stock suffer from this cause during the summer period can be determined with fair accuracy and expressed as loss in pounds of milk, pounds of pork or work not done. Animals get no rest from morning until night. The worry is greatest during the period of greatest light and temperature.

The common stable fly, also known as *Stomoxys calcitrans*, resembles the common house fly in size and shape. The stable fly bites much harder, giving quite a sharp sting. It is also a blood sucker and a very persistent tease. The thin skin covering the legs, flanks and abdomen of cattle and horses is the area they attack when bent on satisfying their thirst and hunger. At other times they may rest quietly on the animal's back or on the stable wall. Any person that has to milk cows during the summer period is well acquainted with the annoyance that these little creatures can create.

And when the stable fly is ably assisted by the house fly and the horn fly, both the cow and the milkmaid have anything but a pleasant time in their endeavors to be at least half efficient in milk production. The stable fly breeds principally in decaying refuse, horse manure, rotting straw—materials that are too frequently found quite close to the farm buildings during the summer period when it is possible to keep them at a distance. To prevent the stable fly from annoying the animals, providing darkened stables, pens, sheds or other shelters in which the animals can retreat is a good practice. Spraying or brushing the animals over with liquid fly repellants is also advised. There is no repellent of very enduring efficiency, but a number of such now in common use are worth while even if

their effect is so short as to require daily or twice a day application. This may seem a lot of work, but a man with an auto spray holding two gallons of liquid can go over a line of twenty cows in five minutes. A successful preparation that can be used as a spray is made by mixing the following:

Three lbs. laundry soap, 4½ quarts coal tar dip, 4½ quarts fish oil, 3 quarts oil of tar. Dissolve the laundry soap in water and then add the other ingredients and more water to make 30 gallons of spray.

Poisons and traps are sometimes used and can be made very efficient agents in stable fly control if used with ordinary intelligence and thoroughness. Formaldehyde is one of the best poisons to use in fly destruction. Mix two ounces of formaldehyde with 1½ quarts of milk, sweeten with brown sugar, and place in a window where the flies congregate. In stables and pig pens properly darkened, one window may be left uncovered to provide the necessary light to attract the flies to the poison dish. If the stable man will at the beginning of the season provide shelves on which to place poison dishes high enough up to be out of the way and where there is light, keep the same replenished from day to day with formaldehyde, milk and sugar, and see that all other moisture is covered up, millions of flies can be destroyed with little effort. A general clean up daily to prevent the pest increasing by breeding is very necessary to fly control; in fact, there is little use in trying to poison or trap flies if we are so shiftless and neglectful of sanitary conditions as to permit them to breed wholesale. Clean up is the first and last word in stable fly control.—L. Stevenson, Ontario Agricultural College.

THE PERENNIAL PHLOX

The phlox is one of the most satisfactory hardy perennials, as the plants multiply rapidly, bloom freely, and make a great display in the border. To get the best results they should have an abundant supply of moisture and a damp situation should be chosen for them when possible. Their worst insect is a tiny insect called the red spider, which, however, is not very troublesome except in dry seasons. Where the red spiders are abundant the leaves become yellowish where they are working and their presence may be known by these lighter patches. As they are feeding on the under side of the leaves any spray which is used must be applied there. To do this effectively, one person should hold back the foliage with a stick or rake handle and another do the spraying. Cold water frequently and forcibly applied will be found effective and any of the contact sprays such as nicotine sulphate, whale oil soap, or kerosene emulsion, will control it if used frequently. A little flowers of sulphur mixed with these will make them more effective.

The cultivation of the phlox is a very simple matter. Soil that will produce good garden crops of any kind is quite suitable for phlox. The plant multiplies by an increase in the size of the plant, which may be divided into even smaller portions which may be used for starting new plants. There are obtainable either from a friend's garden, from the nursery, or as horticultural society premiums, and may be planted in either early spring or in the fall.

The phlox is well suited for a perennial border and as it grows from one and a half to two feet tall it should be set fairly well back. From three to six feet apart in the border, according to the space to be given to the other varieties of perennials, is a suitable distance. The colors, although varying from white through many grades to red, do not clash in the border, particularly when set at the wider distances. It is a mistake to allow the phlox to remain in the same spot for many years. About once in three years they should be divided and the centre portion discarded. By this means the quality of the bloom is kept up and stock is increased for planting or distribution to friends.

There are many good varieties of perennial phlox, but in the following list we may find some of the best.

Antonin Mercie—Bright violet suffused with white, large white centre. Consul H. Trust—Pure red with French purple centre.

Eclair—Bright rosy magenta shading lighter. One of the earliest. Elizabeth Campbell—Salmon pink shading lighter. A very pleasing color. Etna or Mounet Sully—Bright crimson red with darker centre. Both very good.

Wm. Robinson—Salmon, large flowers. Widar, or Lamartine—Bright violet with large white centre.

Pantheon—Crimson pink suffused with white about centre.

Pyramide or Fiancee—Flowers pure white. Both very good.

Sema—Lilac rose with conspicuous crimson eye.

Europe—Pure white with crimson carmine centre.

Miss Lingard—White with a lilac centre, is an early free-blooming variety which should be in every collection.

Tapis Blanc—One of the best whites. Dwarf.

George H. Stroblein—Orange scarlet.

Mme. M. Carvalho—Mottled white and pink.

—Ontario Horticultural Society.

Nature's Method of Hatching.

In hatching eggs by the natural method, it is a good plan to start several hens at the same time. This is not always possible with the lighter breeds, but with Plymouth Rocks and other heavy sorts it is generally not difficult to find three or four hens wanting to sit. On the seventh or eighth day after setting, the eggs should be tested by holding them before a light. The infertile eggs can be detected by their showing a uniform lightness, whereas the fertile eggs show a dark spot with a cloudy portion around it. If enough infertile eggs are found, it may be possible to discard one of the sitters and give all the eggs to the remaining hens. It requires some practice to do the testing properly. If one does not possess a regular lamp or electric light tester, the testing can be done by holding an egg at a time at the end of a tube made by rolling a piece of paper and placing the egg against the lighted lamp after dark. Exhibition Circular No. 2 of the Experimental Farms, obtainable from the Publications Branch of the Dept. of Agriculture at Ottawa, says that it is a good plan, when learning to test eggs, to crack an egg occasionally to see what is inside. The loss of a few eggs by this plan may prove a gain in the end.

Spraying Cherries.

The Department of Entomology of the O.A.C. has for several years conducted experiments in the spraying of cherries, especially sweet cherries, chiefly with the object of getting further knowledge of the best way to control brown rot and leaf spot. This work was continued during 1923 but an innovation was made in that some of the trees in each plot were sprayed with a fungicide (no arsenical being used) when in full bloom. The object was to test whether this would lessen the crop by interfering with pollination. If it did not do so, then this method could be used in years when the weather during bloom was wet and when in consequence most of the blossoms would be so injured by the brown rot disease that they could not set fruit. It was a pleasure to find that both at Simcoe and Grimsby trees thus sprayed suffered no injury and that the fungicide did not interfere with pollination or in any other way lessen the crop. So far as we know this is the first experiment of this kind in Canada upon cherries, though we have had similar experiments in spraying apples in full bloom with similar results.

The Sunday School Lesson

The Assyrian Exile of Israel, 2 Kings, Chaps. 11 to 17. Golden Text—*I will delight myself in thy statutes: I will not forget thy word.*—Psalms 119: 16.

The Kingdom of Israel, founded by Jeroboam I., after the death of Solomon and the revolt against his son, continued for a little more than two hundred years from about B.C. 924 to 721, and then fell before the assault of the Assyrian armies. The story of the kingdom, as told in the First and Second Books of Kings, is a painful one. Of nineteen kings, no less than ten died violent deaths. There were repeated conspiracies and bloody revolutions. Only in one case did a king have four successors of his own line. More than once the land was torn by rival factions contending for power. The last of the kings of Israel died in an Assyrian prison.

Yet this land of Israel might have been prosperous and happy if it had been well and wisely ruled. There was indeed, one period of about forty years, in the early part of the eighth century, in which there was comparative peace and prosperity. The strong king, Shalmaneser (2 Kings 14:22-29), kept in peace at home and won victories abroad. The hundred years of petty warfare with Syria came to an end, and for a time, Syria formed a bulwark against the pressure of the ambitious and growing empire of Assyria. It was at that time that Amos could speak of Israel as "chief of the nations," and describe the luxurious living of the people of Samaria, ch. 6:1-6. And Hosea, a little later, wrote of Israel as "planted in a pleasant place," a luxuriant vine which putteth forth his fruit, saying, "Surely I am become rich, I have found me wealth." The lands of the kingdom of Judah were limited in extent and poor, but Israel had the populous and fertile valley of Jezreel, the well-watered hills of Ephraim and Galilee, and the rich pasture lands east of Jordan. Moreover, Israel was on the great highway of overland travel, and had opportunities of highly profitable trade denied to Jerusalem and Judah.

In spite of periods of prosperity, and golden opportunities of wealth and power, and in spite of the faithful teaching of great prophets (Elijah and Elisha in the ninth century, and Amos and Hosea in the eighth), Israel became more and more corrupt. His princes, Amos declares, "store up violence and robbery in their palaces," they "oppress the poor" and "crush the needy," their very worship at Jehovah's altar, and the kingdom, came to be regarded as "planted in a pleasant place," a luxuriant vine which putteth forth his fruit, saying, "Surely I am become rich, I have found me wealth." The lands of the kingdom of Judah were limited in extent and poor, but Israel had the populous and fertile valley of Jezreel, the well-watered hills of Ephraim and Galilee, and the rich pasture lands east of Jordan. Moreover, Israel was on the great highway of overland travel, and had opportunities of highly profitable trade denied to Jerusalem and Judah.

A period of civil war, about or shortly after B.C. 740, opened the way to the entrance of Assyrian influence, Israel became tributary to that greedy and ambitious empire, and after futile revolt and a long siege, Samaria fell, and the kingdom came to an end in B.C. 721. The seventeenth chapter of Second Kings, from which is taken our printed lesson, contains a long review of its character and conduct, and reflections upon its downfall.

Ch. 17:9-12. *They built them high places.* From v. 7 onward the writer dwells upon the causes of Israel's destruction, and chief among these he places idolatry. The people were not loyal to Jehovah; "they feared other gods." They imitated the practices of other nations, and especially of the Canaanites. Baal and Asherah were carved altars, and the kingdom came to be regarded as "planted in a pleasant place," a luxuriant vine which putteth forth his fruit, saying, "Surely I am become rich, I have found me wealth." The lands of the kingdom of Judah were limited in extent and poor, but Israel had the populous and fertile valley of Jezreel, the well-watered hills of Ephraim and Galilee, and the rich pasture lands east of Jordan. Moreover, Israel was on the great highway of overland travel, and had opportunities of highly profitable trade denied to Jerusalem and Judah.

Vs. 13, 14. *Yet the Lord testified unto Israel.* The prophets had borne faithful testimony against these evils, at least such of the prophets as were true to their mission. They had been preachers of righteousness and teachers of the law. It is now very commonly believed that the Book of Deuteronomy is a prophetic new edition of the ancient law written for the instruction of the people, and containing also such exhortations to its observance as tradition ascribed to Moses. If so, it will illustrate to us very clearly the kind of teaching given in this age by Jehovah's true prophets, and will prove to us the great influence which that teaching had upon the minds of at least some of the people, though it was disregarded by many.

Vs. 15-18. The "covenant" made with the fathers is often recalled by the historians and prophets. See Gen. chs. 15 and 17, and Exod., ch. 24. In that covenant the fathers of Israel had bound themselves solemnly to keep the law of their God. The disobedience of their children in this later age was a breaking of the covenant bond. For that which was of highest value, they had substituted empty and worthless things, "they followed vanity, and became vain." Molten images. The writer has in mind the images of Jehovah which Jeroboam had made and had set up in Bethel and in Dan, 1 Kings 12:25-30. He charges the people with such worship of the stars, and Baal, and with the horrible custom of the sacrifice of children. Therefore, he concludes, "the Lord was very angry with Israel, and removed them out of His sight."

APPLICATION. Our chief purpose, in this lesson, is to discover the causes that brought about the decline and fall of Israel.

1. Her rulers regarded the people as their prey. Particularly was this true during the last two decades of the nation's history. When the famous king, Jeroboam II. died, a period of anarchy set in. Of the six kings that succeeded him, four were the victims of the assassin's blow. Ambition of the feeblest type controlled the general and selfish policies of the torn and desolated kingdom.

2. Israel put her trust in diplomacy and politics of an infamous type. Assyria had accused herself under the vigorous leadership of Pul, and Israel was tributary to the world-power. But a pro-Egyptian party schemed and plotted, and finally succeeded in persuading Pekah to rebel against Assyria. Pekah paid the penalty of rebellion with his life. Hoshea was placed as Israel's puppet on the throne and for some years he was a faithful vassal. But when the opportunity appeared to be favorable to break away from Assyria, he yielded to the pro-Egyptian party, and rebelled. That brought about the end. It took three years to subdue Samaria, but at last the proud capital was overthrown, and the flower of her population was dragged into exile.

3. The people had a divided mind and heart. This is the burden of the accusation of the writer of the Kings. Why had the people, so he reasons, availed so steadily and so fatally in the direction of Baalism? Some of the features of the nature religions which they copied, were foul and repulsive. Licentiousness was often a part of worship. Children were thrown into a fire to satisfy Moloch. No wonder the writer of Kings fumed over his indignation at such heathen practices. The fact is that life becomes unseparably vile when these practices are sanctioned by religion.

We must keep religion pure and ethical through and through, or we fall into strange and irrational customs that damn all religion. James defined pure and undefiled religion as visiting the widow and the orphan in their affliction, and as keeping oneself unspotted from the world. Jesus, too, always brought religion to the touchstone of every-day conduct. Who was the truly religious man? Not he who said glibly, "Lord, Lord," but he who did the will of the Father.

Caring for Furnace Smoke Pipes.

Furnace smoke pipes are ruined in summer, not in winter. I will illustrate: A few years ago when I set up my coal furnace in the fall I found the ten-inch smoke pipe badly corroded, with several holes through it, and many spots which I could push in with my thumb. The elbow joints were strong enough to hold it together, so I wired asbestos paper around it, and set it to work. Then I ordered a new one. This new one lay in my dry cellar all winter, for the old asbestos-covered pipe did its work well through the whole season. That set me thinking. I recalled that though I had beaten my pipe clean every spring, it would always be dripping in the fall, though it was kept in a dry shed.

At the end of the first winter with the new pipe I washed it out thoroughly with a scrubbing brush, rinsed and dried it. The galvanizing crystals were almost as bright as they were in October. Then I put it in the same dry shed. It did not change a particle that I could perceive through the summer. However carefully a stove pipe is knocked or beaten to clean it, it retains a coating of hygroscopic matter, whether you have burned coal or wood. This absorbs water from the damp summer air and forms a corrosive liquid which eats into the pipe rapidly as we learn to our cost.

To take proper care of a furnace smoke pipe, therefore, one should scrub it out very thoroughly. My pipe has lasted me for years, and is still in almost perfect condition.—F. S. C.

The loss of little pigs will mean the loss of big profits.



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For Home and Country

When and How Are You Going to Recreate Yourself?

BY GIBSON SCOTT.

The English Women's Institutes inaugurated something which might prove adaptable in some degree to Canadian Institutes. It was a W.I. Summer Tour of two weeks, though, of course, the time could be longer or shorter to suit time and purse, and any place could be agreed upon by the members.

This tour was to Switzerland and cost about \$50 each, including everything. The party consisted of twenty-five members with the Institute secretary, who endeared herself to everyone through her unfeigned kindness and thoughtfulness as conductor, says the English "Home and Country" magazine. The headquarters of the party was at Spiez, on Lake Thun, with a glorious view of the snowy mountains. The members had season tickets for the lake steamers of which they made full use, visiting lakes Thun, Brienz, the town and castle of Thun, Interlaken, the Falls of Griesbach, and Kandersteg, where the party was entertained by two of the members summering there, to tea, at the conclusion of which there was a talk by a Swiss on the Swiss Educational and Local Government Systems. The members climbed the Grindwald Glacier and some adventurous spirits even started at midnight to see the sun rise on the mountain tops, one being lucky enough to find the much-sought-after Edelweiss flower.

They were especially interested in the people and their home life. The general condition of well-being was noticeable, and the happiness and contentment of the young people whose life offered few distractions. The school girls have a custom of singing when out on excursions. "The Swiss seem to enjoy life to the very full, and sing for the very joy of it," wrote one.

The household cooking utensils, stove arrangements, the cultivation of the land, so different from ours, in wooden farm implements were closely examined, and facts and impressions eagerly stored up for the benefit of the W.I. members at home. The color of lakes and mountains and flowers, the swirling mountain torrents with spray, the glittering snowfields,—nothing was missed.

Here in Ontario we have the most wonderful falls in the world, some of the grandest lakes and most beautiful landscapes, with the motor cars, which are still a luxury for millionaires, over there. Why not organize for June this summer some Institute tours of shorter or longer duration to suit the members?

One country Branch clubbed together and rented a lakeside cottage for a month to which the members went for a few delightful rest days each according to a schedule planned with the secretary during the hottest days. It was kept occupied!

Better to spend some of our time and a little money on the recreation which will keep us from taking that over-needed rest in bed with a doctor in attendance next winter. What the home-maker owes to herself is worthy of thoughtful consideration too, if she is to be really efficient.

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RINTE

and the OR

HEA

Dr. Middleton

Ordinary sore throat by many scientists is caught sore throat. Keeping this in mind those who are nursing throat to wear a mask that the patient wear should be made of of buttercloth or closely woven, was should be changed the one in use may. The usual proceed should be adopted. kerchiefs and towels should at once be boiled. All cups, forks used by the also be sterilized. There is one point however. One rare case directly from sick. It is generally coming into close crowded room, with "carriers," viz., persons themselves but who or throat the kind germs that cause. For more than a this subject was nurses in Johns H. It was found that after they had spent "crowded into closed

SATISFIED

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Ready-W
"Tommy, why are
"Please, teacher,
slippery that every s
back two."
"Then how did you
"Oh," replied Tom
walk back home."

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