

## DAMAGE BY SPRAYING

Shade Trees Injured by Ignorant or Careless Persons.

Widespread Treatment of Different Pests Has Made Necessary Testing of Many Remedies—Many Oils Are Injurious.

(By F. W. MOORE.)

We have at different times had occasion to observe injuries to shade trees brought about by various causes, in many cases resulting from treatment applied by careless or ignorant persons. The present widespread treatment of different pests has made necessary the testing of many remedies, some of which have proved to be more injurious than the pests themselves. These materials have not only been used by careful people trained in the use of different methods for controlling insects and fungi,



Effects of Spraying Heavy Oil on Trees—The Oil Penetrated the Bark and Killed the Tissue.

but by others who are reckless to the point of seeming to delight in taking chances.

Many kinds of oils have been used for spraying insect pests, some of which have proved reliable and others injurious. Kerosene oil can be used on some plants under certain conditions without causing injury, while in other cases it will kill them. We have seen quite a few shade trees killed by spraying with kerosene and water to exterminate woolly aphis; the oil soaked into the bark, reached the cambium and sapwood, destroying the tissue.

Gas oil, a heavy oil used in the manufacture of water gas, is very injurious to trees when used as a spray. A few years ago several hundred shade trees were severely injured in one of the eastern cities by spraying the trunks with this oil to kill clusters of gipsy moth eggs, it being used without any knowledge whatever of its adaptability to this purpose.

Ordinary house paint has sometimes been used on smooth-bark trees with great injury.

Occasionally commercial oils used for spraying fruit trees for the San Jose scale cause local injury, and some shade trees have been known to be affected by their use.

Oils and other materials to keep down the dust in roadbeds are now much in use, and we have observed some injury from this source, when the trees were located close to the highway and the buttresses of the roots were exposed.

Salt used on sidewalks, in gutters and trolley lines in winter has been known to injure the root systems of trees. Arsenate of soda, potassium cyanide and other chemicals are extremely poisonous to trees and will cause death.

## GENERAL FARM NOTES

Do not wait until apples are dead ripe before picking for winter storage.

Wait until the vines are touched with frost before digging sweet potatoes.

Do not be in a hurry to bring in the pumpkins. They will rot if housed too early.

The water in the cistern may be low and it should be well cleaned before the fall rains.

When the peplant wilts under the first frost cover the roots thickly with coarse manure.

Store sweet potatoes in a perfectly dry and warm place. Dampness will quickly destroy them.

Take the last of the sweet corn, cut off the kernels and dry in the sun. It is fine for winter use.

A fine place in which to store fruit during the warm days of autumn is a thick-walled room in the barn.

If you will clean out the stove pipes and chimneys now you will have a better draft next winter and maybe prevent a fire in the chimney.

Cabbage should be stored in the ground, roots up, covered with five or six inches of earth. But do not cover until freezing weather comes.

## GOOD MANAGEMENT OF BOAR

Task of Keeping Him From Herd Is Rather Laborious, But It Is by Far the Best Method.

The best hog raisers do not permit the boar to run with the herd. There are reasons why this should not be done. If one is to control the time of farrowing and the use of the boar it can only be done when he is kept by himself.

It is a too common practice to sell the boar when the season is over rather than keep him for future use, depending upon getting another young one. This is a ruinous practice and is largely responsible for small litters and weak bone. Get a good boar and keep him for a few years. Maturity is good for him.

Have a small yard with grass, if possible, hog tight and away from the sows, so he will not be worried. A quarter-acre, with a good house and shade will afford ample exercise in the open air. When grass is not available in his lot, give him cut green stuff daily as long as it lasts. Feed sparingly of fattening foods and supply plenty to keep him in good trim and growing if not fully developed. Mill stuff, skimmed milk, clover, alfalfa—anything that furnishes protein, is advisable. Of course, supply ashes, salt and charcoal.

This keeping the boar away from the herd is more trouble than letting him run, but it is the only way to know just what you are about in hog raising.

## SUNLIGHT FOR THE POTATOES

Tubers Should Not Be Stored in Dark Places as It Is Injurious—Keep Free From Frost.

Aside from the reason that the tubers will sprout if stored in the dark this practice generally makes it necessary to treat the tubers in the spring for scab, while if they are stored where it is light, during the winter, and taken out and aired occasionally where there is no danger of being frost bitten they will be in excellent shape so that a sun and light bath for a week or ten days just before planting will be as good or better than a dose of chemicals to prevent scab. This is not theory but the plan has been practiced by many growers for years. Another thing in the care of seed potatoes is not to keep them where they will get too warm; they should be kept from frost, of course,



Fine Quality of Potatoes—Even in Size.

but the temperature should not be above 40 in order to have the best results. Kept on light shelf-trays so that they can be taken down and shifted about occasionally, they will keep in excellent shape if handled as suggested.

## FARMER OWNS HIS EQUIPMENT

Often Happens That It Would Be More Economical to Hire From Others—Interesting Data.

(By S. L. MACDONALD, Colorado Agricultural College.)

The writer is of the opinion that many a farmer is tempted to purchase his own equipment when in reality it would be more economical to hire from others.

Let us endeavor to ascertain how many acres of grain a farmer should cut as his annual average before the purchase of a self-binder is justifiable. We assume the following data:

Initial cost of binder	.....\$140.00
Annual depreciation, 8 per cent, first year	..... 11.20
Annual rate of interest, 7 per cent.	..... 9.80
Annual repairs	..... 4.00
Cost of twine per acre	..... 20
Horse labor per hour	..... 15
Man labor per hour	..... 11

Assuming that one man and three horses with a six-foot binder can cut 15 acres in ten hours, we deduce that cost of labor per acre is 30 cents.

As against these items let us suppose that the farmer could hire the grain cut for one dollar per acre.

The above data gives us the conclusion, by elementary algebra that a man should cut an average of 65 acres annually before the purchase of a binder will save him money.

## Improving Grass.

Nitrate of soda at the rate of 150 pounds per acre, applied to the lawn just before sprinkling or before a rain, hastens the growth of grass and gives it a darker color. It is well to apply two or three times during the summer.

## Guard Against Flies.

Do not buy meat, groceries or fruit from any store where flies are tolerated, and, above all, keep these disease-bearing insects away from the creameries by every possible means.

# The Governor's Lady

A Novelization of  
Alice Bradley's Play  
By GERTRUDE STEVENSON

Illustrations from Photographs of the Stage Production

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## SYNOPSIS.

Daniel Slade, suddenly advances from a penniless miner to a millionaire. He is ambitious to become governor of the state. His simple, home-loving wife fails to rise to the new conditions. Slade meets Katherine, daughter of Senator Strickland, and sees in her all that Mary is not. He separates from his wife and takes rooms at his club. Editor Merritt, who has been attacking Slade, is won over to the latter's support because he cannot otherwise supply the money demanded for a European trip for Mrs. Merritt. Katherine agrees to marry Slade when he is free. Bob Hayes, in love with Katherine, has a stormy session with her over her affair with Slade. Mary, anxious to make it up with Slade, appears at Strickland's house during a political conference. Slade informs her that separation is final.

## CHAPTER VIII—Continued.

Slade nervously assured himself that all the doors were tightly closed. He suppressed the twinge of shame for his stealthy action by assuring himself that it was not fear—simply business caution. To his cowardly wrenching of his wife's heart he gave no thought at all. It was a move in the game. He made it as dispassionately as one moves a chessman on the board. Mary was looking at him with a new light in her brown eyes as he turned to her again. She spoke again.

"It was all right until you made that lucky deal, Dan, with the money I helped you to make and you pulled me out from behind my stove and tried to make me a parlor ornament. I'd hate to think where you'd be today, if yer had. Five years ago you took all the work I loved to do out of my hands and now you're punishing me because I did work."

"No, I'm not," Slade remonstrated, moved in spite of himself by her simple, eloquent argument.

"Yes, yuh are, Dan, you're just as good as whipping me for layin' up the foundation of every dollar you've got and here I am at my age, sitting in idleness in a great big barn of a house with my job gone," she finished pathetically.

"Well, that's life," declared Slade unfeelingly.

"Then it's a pretty poor thing," and she shook her head sadly. No, it ain't life. It shouldn't be. There's something wrong in a man's getting so far up he can't live with the wife he married because she cooked and worked instead of playing. It ain't just!"

"Oh, what's the use, Mary?" Slade sighed wearily, as though he, and not she, were the injured one.

"Dan," Mary lowered her voice and looked at him earnestly. "If I brought up a girl today and we were poor, would you advise me to say, 'Take piano lessons, learn languages, keep up to the times, never mind doing your share or being economical?'"

"I'm not going to argue," Slade replied loftily.

"Yuh can't, Dan," declared Mary with conviction. "There ain't no argument. It's one-sided. Suppose I'd changed and you'd stayed the same, what would all your friends say? 'Poor Slade, his wife's crazy—or bad—probably bad.' No, yer can't get me to see it!"

"Well, whether you see it or not, that's just where we stand. You'd better let me call Robert to take you home."

"Walt, Dan," she pleaded. "Will you see me again at home, if I go now?"

There was a tense pause. Slade did not reply.

"I see, I see," she dropped wearily into a chair and suddenly the tears started in her eyes.

"Please, Mary, remember where you are," Slade was a trifle less cold. "I'll let you know my plans. All you have to do is abide by them. You say you'll do anything for me, that's all I ask you to do, abide by my plans. I wish you much happiness, the best of everything, a life beyond anything you ever had," and he was rapidly being carried away by his own magnanimity. "I shall always think of you with the greatest affection," he concluded, taking on a patronizing air and trying to make himself believe his own empty sentiments. His self-esteem had been severely torn in the last few moments of his wife's talk. He had almost caught a glimpse of himself as he really was, but he was regaining what he was pleased to consider control of himself.

more," her voice quivering. "I'm the only one who tells you all the truth. Everyone else is afraid of you."

"Don't let them flatter you," she said, with more maternal than wifely solicitude. "They can. I found that out. Father! You're an awful fool with your money. You never had but one real friend. That's me. You'll find it out."

"I'll look out," Slade promised, and there was a note of relief in his tone at her change of attitude.

"Do you want me to go away from our house right off?" Mary asked, as if the idea of actual leaving had just occurred to her.

"Oh!" Slade hesitated. The details did seem rather cold-blooded. "But it'll be better when it's all settled—"

"All right," Mary's voice was patient and colorless. "I'd like to feel I was goin' where you wanted me to go—wherever 'tis—and—doin' what yer wanted me to—"

"Thank you, Mary," and the surface politeness seemed strangely out of place from this man who was turning the wife of his youth adrift.

"Of course it'll be arranged that you get the best of the divorce. I'll attend to that. You simply leave it to me—"

"A divorce," interrupted Mary. Her eyes widened with amazement, and she came up to him, her mouth open with surprise. "A divorce?"

"A divorce—why, yes—a separation—what's the difference?" Slade was stooping now to deceive the little woman, who was herself the soul of truth and honor.

"What?" the woman gasped.

"A separation is the same thing as a divorce," and he lied shamefully.

"Is it?"

"It will be done quietly," he went on.

"Why, Dan Slade!" She could not believe her ears. "Give up your name! Why, you might as well ask me to give up my eyes. I've got it now—you're looking for a younger. You can't have a divorce, Dan!" All her tears were dry now and a new fiber in her voice.

"I will have it," stormed Slade, enraged because her mood had changed at the word "divorce," just when he had been congratulating himself that the difficulty was all nicely adjusted.

"That's all there is to it. I will have it."

"Anything else, Dan. Anything else—not a divorce. You mustn't ask me to take the name I've carried all these years and throw it away. I'm giving in, but leave my name. I'm givin' up everything else."

"You might as well stop!" he warned her threateningly. "You're going now, tonight, the first train East to-morrow. Go where you like, spend what you like, do what you like, spend what you like. To what you have I'll add a million more, but I'm going to have this done in my own way."

"Oh, Dan!" she shrank from his wrath. "I'm going home."

"No, you're not, until this thing is settled. My mind's made up. I don't want to quarrel with you, and I should if you fought me."

"I won't let you. You can't do it."

"I can't do it, eh?" The word came over her with darkening face and shaking fist. "Don't you know better than to stand there and tell me that? Have I got to hear it from you? Haven't you seen what happened to man, woman and child, all of 'em, who ever told me that to my face? I'll do it! I'll do it now, by God!" and he strode angrily up and down the room.

The angrier her husband became, the calmer and more determined was Mary Slade.

"Dan," she began very gently, but firmly, "you're stubborn, but you ain't a bit more stubborn than I am when I'm right, and now I am."

## EFFECT OF LONG ASSOCIATION

Marked Facial and Other Resemblances Noticed Among Those Who Have Been Together Years.

That persons who live together for a very long period not only acquire the same mannerisms, but grow a strong facial resemblance is an established fact. But it is little known that the same condition often exists among mistress and servant being associated together for a long period of years. There is usually a strong desire on the part of most servants to ape their mistresses, and this, added to the fact of constant nearness, often extends to facial resemblances.

There are in a small town in New York state two unusual instances of this kind. Two widows live there, each of whom has been attended by a wom-

"Robert! You can take me home now, please!" She turned back just once to the man gazing moodily into the fire.

"I'm goin' to fight yer, Dan!"

## CHAPTER IX.

Thirty years of one way of living becomes a habit—so much so that it is almost a human impossibility to adjust oneself to any other mode of life. Mary Slade, living year after year with Dan Slade, interested in his work, watching him rise and succeed, had come to think of the man as only another part of herself. With him out of her life she felt as if a part of her own body had vanished without which she was restless and ill at ease.

As she sat in the little old cottage where with Dan she started out on married life, she experienced a feeling of detachment as if either this were not the right place, but some sort of inferior substitute, or as though the real and vital part of herself were absent.

The room was just the same as it was the day she and Dan had walked out of it to take up their new life in the handsome mansion in town. Not a thing had been changed or disturbed. The same crooked hatrack, with her old knitted shawl dangling on one hook, hung behind the door. The same well-worn ties were carefully pinned on the plush-upholstered chairs. The same cheap little ornaments that so delighted Mary's simple heart in the old days still cluttered the mantel. The same near-crystal crowded the sideboard. The tablecloth remained laid from meal to meal after the time-saving custom of middle-class families.

Everything was the same but the atmosphere of contentment that once filled the room; everything the same but Mary's happiness in her husband's love. Outside the window the rose bush Dan had helped her to plant still nodded and blossomed in the sunshine that poured in a flood of golden joy through the windows of the shabby room and emphasized all the worn places in the comfortable old chair where evening after evening Dan Slade had sat reading his newspaper and dreaming of the great future he was confident the fates held in store for him.

In spite of herself Mary's thoughts were of her husband—the first bitter thoughts she had ever harbored against the man. She turned sick at heart at the thought of it. Dan and herself estranged, hopelessly at odds, fighting each other in the divorce court, fighting even over the possession of the little cottage that had shared in the first happy flush of their youthful love and happiness. This, the only place where she could find peace in her loneliness, Dan was trying to wrest from her. It was too near to town, too near to the scene of his new activities, he had sent word to her. She must vacate. She must go so far away that his charge of "desertion" would stand fire in a court of law.

Face to face with the fact that Dan was trying to drive her even from this shelter, trying to drive her out into a strange and alien world, of which she knew nothing and which knew nothing of her, Mary could scarcely believe that Dan was so changed—that even now he would be willing to snatch away from her the place which held the memory of happier days.

She had not seen her husband since the night in Senator Strickland's library, when the awful knowledge had been forced home to her that he not only wanted a permanent separation, but insisted on having an absolute divorce. Over and over again a thought came into the woman's mind. It was intuitive, instinctive. Try as she might to silence it, she could not put it out of her thoughts. It was that ever-recurrent feeling that another woman had entered Dan's mind and heart. Again and again she pushed it from her, but always and ever the obsession clung to her like a black shadow that haunted her during the day and persisted even in her dreams at night.

From the kitchen came the voice of her maid-of-all-work singing an old-fashioned tune.

It was one that in her young days Dan had loved to hear her sing—one whose sweet melody and melancholy sentiment he had loved in the days before his heart had become hard and his mind intense on the cold, hard problems of finance and political advancement. It was the song in which all lovers from the beginning to the end of time find a responsive note: "Nita, Juanita, be my own fair bride."

(TO BE CONTINUED.)

## Fundamental Principles of Health

By ALBERT S. GRAY, M.D.

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## FOOD AND DELINQUENTS.

Under a recent date an Associated Press dispatch credits Charles C. D. Hillis, formerly private secretary to President Taft, now president of the New York Juvenile asylum in Dobbs Ferry, with the discovery that bad teeth make bad boys.

What is the cause of bad teeth in children under fifteen years of age? It is universally admitted that the fundamental cause of the early decay of children's teeth is anemia, a lack of sufficient building material during the growing period. Obviously a lack of brick and mortar will result in an imperfect building, and the same lack of material must result in an imperfect body.

Wilson Bruce, following other witnesses before the Scottish commission inquiring into the startling superiority of industrial school children, added that if we fed and clothed the elementary school children as suitably we should "make a new race of them."

The commissioners noted this contrast between the ill-nourished elementary school children of respectable parents and well-developed industrial school children of those who have "altogether failed in their duty."

The countess of Warwick, writing in "A Nation's Youth," says: "What a fine moral have we here. Be a bad parent, or confess yourself unable to control your own children, and they will be attached to an industrial school, given three meals a day, largely at the expense of the ratepayers, and they will become bright and intelligent boys, developed physically and mentally in a satisfactory way."

This touches upon and brings sharply to the front the whole subject of sophisticated foods around which a commercial battle royal is at present raging in this country. In no field of knowledge is there so general a lack of personal information founded on experience as in the fundamental one of food. It is generally admitted, and there are hundreds of proofs of the proposition, that man, through the results of centuries of civilization, has gradually lost the instinct of nourishing himself until he has become the most helpless and dependent of all animals. Left to themselves under normal conditions, the beasts, guided by an innate instinct, select natural foods that enable them to live without disease. Man, on the other hand, has not only lost this instinct that the beast still possesses, but as the result of the misuse of his intelligence and his freedom to select food for himself and for such of the beasts as he has turned to domestic uses, deliberately imposes preventable diseases upon both himself and them.

Eating has become an art which has to be learned by man, and unfortunately the subject is considered so unimportant that quite generally our foods are selected on the statement of persons whose only interest is in the profit to be derived from the manufacture and sale of the commodity, and then after the purchase in this slipshod manner it is too frequently turned over to some incompetent kitchen drudge to be prepared for eating.

In order that an intelligent choice of proper diet may be made it is absolutely necessary that we should possess a certain smattering of scientific knowledge. This does not consist in the memorizing of a few terms sufficient to enable us to babble about carbohydrates, proteins and fats, of calories and of balanced rations, but to have a thorough understanding of the real meaning of the closing paragraph of the fourth article of this series, which we here again repeat for emphasis: "The now prevailing standard of food values which measures the heat units produced from foods and completely ignores all other elements and factors is not only woefully inadequate in the light of modern science, but constitutes a grave menace to the health, to the morals, to the sanity and to the life of any people."

The chief reason for the improvement in inmates of well-governed asylums and industrial schools over the rate of development shown by children under home conditions undoubtedly lies in the fact that food matter is bought in bulk and largely on the horse-food basis, that is to say, the whole grains are bought, cooked and served, rather than the more expensive refined processed matter. Of course we are assured by "experts" that the food is "improved" and made "more digestible" by the elaborate process through which it is passed, but any successful raiser of cattle, hogs, chickens, pigeons, dogs or cats can tell of disastrous results following the feeding of any of these animals for any material period of time on "refined" food matter. And humanity still waits the coming of some Moses to free it from the bondage of the observance of universal law to which all living things are subject.