



LIVE STOCK

OBSTACLES MET BY AGENTS

Extension Workers Exercise Patience and Tact in Overcoming Much Resistance.

(Prepared by the United States Department of Agriculture.)

In boys' and girls' club work prejudice and preconceived opinion, founded on lack of knowledge or misrepresentation, are two obstacles that county agents and demonstrators meet every day. To surmount them is not the easiest task; to convert opposition into hearty support is an achievement calling for unusual patience and tact. That both of these virtues are possessed in large measure by a majority of the extension workers may be deduced from the reports constantly coming to that bureau.

A farmer in Maryland had no use for "book farming." He upbraided his son, a member of a boys' club, for following the agent's instructions in seed-corn selection. He called the test for 100 per cent germination "foolishness," and walked off in utter disgust. The boy, encouraged by his instructor, kept at it, demonstrated the proposition, grew the selected seed, and got a typical high-grade crop, a decided contrast to dad's. That settled it. The "foolishness" turned out to be "a good idea." The farmer has become an enthusiast.

At the very outset a woman demonstrator in a northern county of Texas was opposed by the parents of a bright village girl, anxious to become a member of a boys and girls' club. The mother was not a believer in "these new-fangled ideas," and the father had no sympathy with any "crazy theory stuff." In spite of the absence of any form of invitation, the demonstrator



A Meeting of Youthful Pig-Club Members.

spent the night with them. Before the family awoke in the morning she went into the kitchen, made biscuits according to the "new-fangled idea," helped in the preparation of the breakfast and—well, the biscuits conquered.

Today that little girl is the leading member of a club. During the past season her garden was such a success that she will have a bigger one this year, and the co-operation of her parents. And, according to them, "any time that agent comes this way she'll find welcome on the door."

One more instance, the three covering some of the important phases of agent work in the South: The colored farmers of a certain county in a far Southern state used to pay no attention to crop rotation or diversification. They grew the same crops in the same fields, only such produce as suited their particular whim. Nor did they see any necessity for home sanitation. They didn't know anything about the necessity for either, and cared less. As for the county agent, he was an intruder. They have different ideas today. Not only do they grow the right crops, but also they take pride in the appearance of their fields and buildings. There is a friendly rivalry among them now, and the one-time intruding agent is besought to set them right in all their problems.

Thus opposition can be overcome today more than ever through the proper approach, the stick-to-it attitude, and the tact of the county and field agents and demonstrators of the extension service.

LIVE STOCK NOTES

When barley is fed to live stock, the grain should be crushed.

Quality is more important than size in selecting the breeding stock.

At present prices there is no cheaper grain feed for breeding ewes than oats.

No intelligent sheep raiser, no matter if he owns a large or small flock, will breed ewe lambs.

Both barley and oats should be ground for pigs, and a high protein feed like ground soy beans, tankage or linseed oil meal fed with them.

ORCHARD GLEANINGS

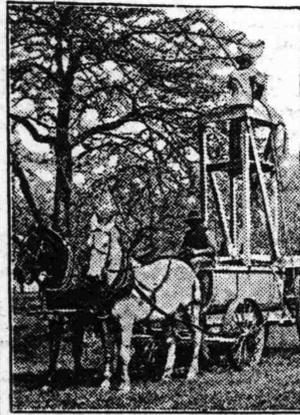
SPRAY FOR INSECT CONTROL

Combination Treatment Can Be Made for the San Jose Scale and Apple Aphids.

(Prepared by the United States Department of Agriculture.)

Orchardists who have the San Jose and other scale insects to contend with should arrange to spray their trees with proper insecticides before the foliage puts out in the spring. The prospects of continued remunerative prices for fruits should be an incentive to give orchards all needed care to maintain them in productive and vigorous condition.

Commercial lime sulphur concentrate is the principal insecticide used for San Jose scale spraying. It is usually



Gasoline Power Pump Spraying Outfit.

sold in a density of 33 degrees on the Baume scale, and when of this strength should be used at the rate of one gallon to from seven to nine gallons of water. In spraying for San Jose scale very thorough work is essential, since only the insects actually hit with the spray are destroyed. The spray pump used should develop good pressure to insure thorough work.

During recent years many apple growers have adopted the so-called "delayed dormant" method of spraying. Briefly, this consists in deferring the San Jose scale treatment until the tips of the buds of the apple are showing green. By adding to the lime-sulphur solution 40 per cent nicotine sulphate at the rate of 1 part to 800 or 900 parts of water an effective combination treatment can be made for the San Jose scale and apple aphids which congregate on the opening buds. Necessary insecticides should be obtained or contracted for, so that nothing will interfere with carrying out an effective spray program.

ARSENATE OF LIME IS GOOD

Satisfactory Substitute for Arsenate of Lead, Present Cost of Which is High.

(Prepared by the United States Department of Agriculture.)

Experiments thus far made by the bureau of entomology, United States department of agriculture, indicate that arsenate of lime may be used in all situations where paris green has been employed, and that for some fruits (apple, pear, quince) it will often be a satisfactory substitute for arsenate of lead, the present cost of which is much above normal, when used with lime or fungicides containing lime.

DIGGING OUT TREE BORERS

Work Should Be Done Regularly in Spring and Fall—Use Knife or Suitable Tool.

The most effective method of reducing injury to fruit trees by certain borers, as the peach and apple tree borers, is to "worm" the trees regularly in the spring and fall of each year. Previous to worming, the earth should be removed from around the crown of the tree to a depth of four or five inches and the trunk brushed or scraped free of bark and loose dirt. Remove the borers by means of a knife, stiff wire or other suitable tool.

AMPLE RANGE IN VARIETIES

Plan Should Be to Have Supply in Fresh State During Big Part of Year and for Canning.

(Prepared by the United States Department of Agriculture.)

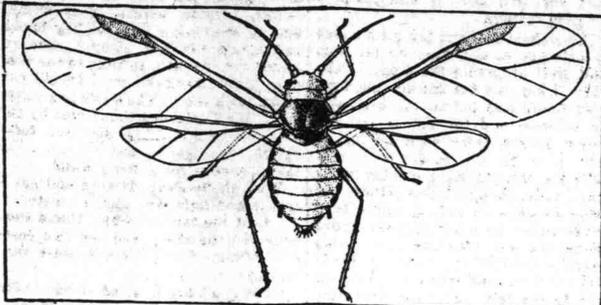
A sufficient range in variety of fruits can be produced in home orchards throughout a large portion of the country to provide a supply in the fresh state for the table during a large part of the year and for canning and otherwise conserving for use as desired.

TOO MANY NEGLECTED TREES

Twenty-Five or Thirty Apple and Plum Trees Will Furnish Sufficient Family Supply.

A farm orchard of 25 or 30 apple and plum trees, well cared for, will furnish all the fruit the ordinary farm family can use. Why plant 100 or more and never take care of them? Many of our farms have too many neglected fruit trees. Cut out some and take care of those that remain.

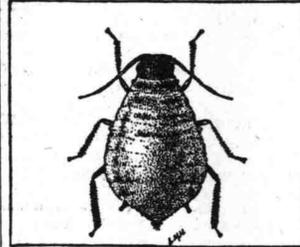
CULTURAL PRACTICES AND REPELLENTS THAT WILL CONTROL CORN ROOT-APHIS



The Corn Root-Aphis—Winged, Viviparous Female—Greatly Enlarged.

(Prepared by the United States Department of Agriculture.)

The corn root-aphis attacks the roots of corn throughout the states east of the Rocky mountains, especially in those states within the main corn belt of the country, but also in the South Atlantic states. Since it passes almost its entire life underground, its presence frequently is not suspected. It is a small, stout, soft-bodied, whitish-looking insect and may be discovered in infested fields by pulling up the unhealthy corn plant and closely examining the roots and surrounding soil. This kind of aphid depends entirely upon the services of a small brown ant, sometimes called the corn-field ant, in order to secure its food and the means of surviving the winter, and the presence of an unusual number of brown ants in cornfields may indicate an infestation of the corn root-aphis. The eggs of the insect are laid by a wingless female aphid which develops only in the fall of the year. The ants carry the aphid eggs into their nests, caring for them all winter long, and in the spring when the eggs hatch the young aphids are carried out and placed in contact with the roots of certain wild plants such as smartweed. If corn is then planted in such infested places, the ants transfer the aphids to the roots of the



The Corn Root-Aphis—Egg-Laying Female.

corn plants, where they continue to live upon the sap, thereby robbing the corn of its nourishment and often causing a heavy loss to the crop.

Cultural Practices.

Stir the soil thoroughly previous to planting. The object of this procedure is to disturb the ant colonies and scatter and kill the aphids so as to enable the plants to make a substantial growth before the ant and aphid colonies can become re-established, and also to prevent the growth of weeds upon which the aphids live, making it necessary for the ants to carry the surviving aphids to new fields. If infested fields are to be replanted to corn, plow them to a depth

BETTER HOG CHOLERA SERUM

Under Federal Supervision Production Has Increased and Quality Has Been Improved.

(Prepared by the United States Department of Agriculture.)

Less than 1 per cent of hog cholera serum manufactured under federal supervision during the last year was found to be unfit for use and its sale prevented by federal officials. Of 271,402.530 cubic centimeters of serum made in licensed establishments, 2,488,661 was declared unfit. Corresponding figures for last year were 238,861,279 cubic centimeters of serum produced and 5,036,875, or more than 2 per cent, was unfit and likewise withheld from market.

This comparison shows that federal supervision has increased the production of serum for combating hog cholera in the United States and has improved the quality. Serum declared unfit is not, however, necessarily injurious; it is frequently condemned merely for lack of potency. Hog-cholera virus used simultaneously with serum is subject to similar control.

In its supervision of hog-cholera serum and virus manufacture the bureau of animal industry prevents either product of doubtful quality from leaving the establishment in which it is made. A knowledge of this policy by swine raisers of the United States, it is believed, will cause more herds to be vaccinated and result in greatly reduced losses from hog cholera.

PROPER SOIL FOR TOMATOES

Land Should Be Neither Too Rich Nor Very Poor—Cotton or Corn Land Favored.

(Prepared by the United States Department of Agriculture.)

Good tomato land is neither extremely rich nor very poor, but just such as would grow extra good corn or cotton. Land that was manured heavily the previous year will generally grow good tomatoes.

of 6 1/2 or 7 inches in the spring after March 15. Follow this with three or four diskings to a depth of 4 or 5 inches with a 16 or 20-inch disk, the number of diskings and the intervals between them varying according to the length of the period between plowing and planting. When it is necessary to replant early injured corn, plow the field deeply and thoroughly and then give three or four deep diskings at intervals of two or three days. These practices necessarily involve additional labor, but they prevent root-aphis injury and also put the field in much better physical condition. Plowing in the fall before the ant colonies go below the plow line is sometimes as useful as spring plowing, but if warm weather follows, the ants may reconstruct their nests and reassemble the aphids so that replowing in spring will be necessary; but whether the field be plowed in the fall or spring, the spring diskings are essential.

Early fall plowing, followed by frequent deep diskings in fields damaged by the root aphid that season, is a good practice from the standpoint of community control as well as for the personal benefit derived, because the plowing disturbs the ant colonies, kills many of the aphids, and destroys the weeds upon which they live, and disk-ing prevents the recolonization of ants and prevents the growth of weeds, resulting in a significant reduction in the number of aphid-eggs to carry the insect through the winter.

Repellents for Aphids.

Where it is impossible to practice one of the foregoing measures, repellents may be used to advantage. The object is to repel the ants by the use of an odorous substance offensive to them, thus preventing them from colonizing the aphids on the corn roots or driving them from the treated field. These materials destroy neither the ants nor the aphids but tend to drive away the ants, the presence of which is essential to the life of the aphids. Oil of tansy, tincture of asafetida, oil of sassafras, anise oil, kerosene, and oil of lemon are useful for this purpose, one of these materials being mixed with a chemical fertilizer, such as bone meal, and applied by means of a planter equipped with a fertilizer attachment. They should not be applied directly to the seed, as such treatment may injure it, especially if the season be wet. One-fourth of a pound of oil of tansy should be diluted with two quarts of alcohol and one quart of water, two pints of asafetida should be diluted with one and a half gallons of water, and either repellent thus diluted should be added to 100 pounds of bone meal, this amount being sufficient for an acre.

SMUDGE SAVES POTATO CROP

"Smoke Screen" Successfully Applied to Field of Tubers in Hardin County, Ohio.

(Prepared by the United States Department of Agriculture.)

A member of the farm bureau in Hardin county, Ohio, saved a 20-acre field of late potatoes from frost last fall by the use of a smudge. The potatoes had made practically no growth during July and August because of dry weather, but were maturing in good shape when, on the night of September 21, the temperature dropped below the freezing point. Preparations had been made for just such an emergency. Baled straw had been placed in readiness, and at 10:30 that night the fires were started. It was found that a heavy smoke could be made by using wet straw after the flame had been applied. Fires were kept burning in 102 places, and it is estimated that ten tons of straw were used. The entire field was kept covered with smoke and after the sun had been up a few hours the following day it was plain that the potatoes had been saved. The potatoes remained green until October 1. Other foliage, not completely covered with smoke, was killed by the frost.

TO PREVENT INSECT INJURY

Add Arsenate of Lead to Bordeaux Mixture—Use Care in Making and Applying Material.

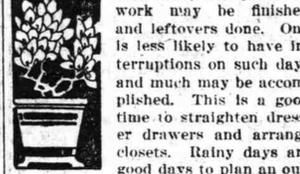
Simple Bordeaux mixture will not kill insects. In order to prevent insect injury add arsenate of lead at the rate of two pounds to each fifty gallons of Bordeaux (or ten pounds to the 250-gallon tank). Great care should be used when making and applying Bordeaux mixture. Do not spray trees with it during damp, foggy weather or during a rainy period; for it is likely to cause burning of the leaves and russeting of the fruit. A such a time lime-sulphur solution may be substituted for Bordeaux.

THE KITCHEN CABINET

The smallest bark on life's tumultuous ocean Will leave a track behind forever more; The slightest wave of influence set in motion Extends and widens to the eternal shore.

HOUSEHOLD HINTS.

A rainy day is often as beneficial to a household as to the soil, for on such days many odd pieces of work may be finished and leftovers done. One is less likely to have interruptions on such days and much may be accomplished. This is a good time to straighten dresser drawers and arrange closets. Rainy days are good days to plan an out-line of work, meals and other important work.



For children's parties a clever little cake that delights the small folks is made by using animal crackers dipped in heavy slrup and then fasten them in an upright position on salines or long narrow crackers. The eyes may be made with drops of chocolate and other additions will occur to the decorator.

Never shake rugs or hang them on lines to be beaten. One such treatment may ruin a rug. Place them on the ground and beat them, sweeping after each beating. The vacuum cleaner does away with all this drudgery as well as wearing by cleaning.

When out of cake put delicate crackers together with frosting. Chopped nuts and raisins may be added and the frosting may be varied in other ways. A pretty way of serving butter when entertaining is to make three small balls instead of one, and insert stems from parsley, using a stalk with three stems.

A good wall paper cleaner: Take a cupful of sifted flour, one tablespoonful of salt, one tablespoonful of kerosene, two tablespoonfuls of ammonia and a half cupful of water. Mix in a small saucepan and cook until the moisture is evaporated, stirring constantly. Remove from the fire and knead with the hands until smooth. Use a small piece, kneading and turning to keep the clean side out to rub the paper.

If slippers slip at the heel paste a small piece of velvet inside the heel. To remove the shine from garments, rub lightly with a piece of emery paper.

No, the heart that has truly loved never forgets. But as truly loves on to the close, As the sunflower turns to her god when he sets The same look which she turned when he rose.

FOR THE SWEET COURSE.

As a finish to the dinner a heavy dessert is often out of place. The light dessert satisfies and is much better for the average person.

A cream puff filled with ice cream is one that will not overburden the stomach, or other filling may be used, such as a cooked custard or a chocolate filling. These may be filled and heaped in a handsome dish, making a pretty, as well as toothsome dessert.

Chocolate Junket.—Bring to a lukewarm heat a pint of good, rich, sweet milk. Stir in half a cupful of sugar, a third of a cupful of boiling water, a quarter of a cupful of grated chocolate, with half of a crushed junket tablet dissolved in a teaspoonful of cold water. Flavor with vanilla and pour out in sherbet cups to set. Serve topped with whipped cream and a sprinkling of nuts.

Orange Cream.—Beat until stiff one pint of heavy cream. Soak half a package of gelatin in a cupful of cold water until dissolved. Beat the yolks of three eggs; add the strained juice of two large oranges and the rind of one. Add a cupful of boiling water, the eggs, and cook until thick, then add the softened gelatin and a cupful of powdered sugar. Pour into halves of oranges to mold. Kumquats make a good garnish for this dish to be used when it is served in sherbet cups.

Apple Trifle.—Take a pint of well-seasoned apple sauce, put through a sieve and reheat. Soften half a package of gelatin in cupful of cold water and stir it into the hot sauce. When well dissolved and the sauce is quite cold, fold in a pint of whipped cream flavored with nutmeg or grated lemon peel, or with any desired flavor. Turn into a mold that has been wet with cold water and let stand in a cold place for several hours. Serve unmolded on a platter, surrounded with a custard or with whipped cream.

Nellie Maxwell

Fats in the Body.
Fats in the body occur under the skin in the muscles and around certain organs. They act as a protection for the body against injury and serve as a stored supply of fuel, in case food can not be taken. Fats are liquid in the body and are stored in albuminous cells.

Transoms can be raised and lowered by a window shade with a device an Oregon inventor has patented.

IMPROVED UNIFORM INTERNATIONAL SUNDAY SCHOOL LESSON

(By REV. P. B. FITZWATER, D. D., Teacher of English Bible in the Holy Bible Institute of Chicago.)
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LESSON FOR MAY 4

MAN MADE IN THE IMAGE OF GOD.

LESSON TEXTS—Genesis 1:26-28; Ephesians 4:20-24; Genesis 2:7-9. GOLDEN TEXT—God created man in his own image.—Gen. 1:27. DEVOTIONAL READING—Psalms 8. PRIMARY TOPIC—God Our Creator and Father. JUNIOR TOPIC—What God Expects From His Children. INTERMEDIATE TOPIC—Loyalty to Our Heavenly Father. SENIOR AND ADULT TOPIC—The Dignity and Worth of Man.

I. The Creation of Man (Gen. 1:26-28).

1. Time—when the earth, his home, was ready for him. The order in creation shows design on the part of God. He anticipated man's need in storing the coal in the earth, piling up minerals in the rocks, storing electricity everywhere, causing the water to gush from the valleys and hillsides, preparing plants and herbs for the healing of man's injuries and food and raiment adapted to every climatic condition.

2. His nature (vv. 26, 27). He was created in the likeness and image of God. This act was preceded by a special counsel of the Godhead. It was said, "Let us make man." This precludes the foolish and wicked assumption that man ascended from or through the brute. He came into being by a special creative act of God. This creative act is confirmed by Christ (Matt. 19:4; Mark 10:6). With such testimony we can dismiss the evolution theory as to man's origin as a human vagary. This likeness and image is not physical and bodily, but intellectual. (Eph. 4:24), and moral. (Col. 3:10). Man is spirit, soul and body (1 Thess. 5:23). God's likeness is reflected in man's tripartite nature. As there is a trinity and unity in God, so there is a trinity and unity in man. Spirit is the highest part of man, that which makes it possible for him to know God. The soul is man's self-conscious life, the seat of his emotions and desires. The body is the seat of the senses, the agency by which he knows the world. God made man with a personality capable of having fellowship with himself, with whom he could share his glory.

3. His rank and power (vv. 26, 28). Man, the last in creation, was placed above all else, over all the rest of creation. Being in the likeness and image of God, he was fitted to rule. How far short man comes of living up to the position given him by the Creator! The first man was not a savage, neither a baby. Fresh from the Creator's hands he possessed such lofty powers of intellect as to enable him to name the beasts as they passed before him, (Gen. 2:19, 20).

II. Man Alone in Paradise (Gen. 2:7-9).

Adam had a most beautiful place in which to live. "Pleasant to the eyes, and good for food" describes his surroundings. His environment was in keeping with his nature. Eden was only fit for him in an unfallen state. As soon as his nature was wrecked, out he must go. Paradise with all its splendor could not satisfy man. His heart was desolate. Reciprocal love is the only thing that can satisfy the heart of man. Animals of all varieties surrounded him, but none were adapted to be his companions. To accentuate this need God caused the animals to pass before Adam. He was differentiated from all the animals in that he was a personality. He was endowed with the power of love, therefore only a being who could love in return could satisfy him. To meet this need woman was made for man. They had minds alike; they had spiritual natures alike; therefore they could commune together about the things that surrounded them and about God.

Man was made from the dust of the ground and woman was taken from his side. She is therefore one remove further from the earth than man. The fact that woman was made from man's rib points to unity, similarity and equality. God charged this first pair with the responsibility of replenishing the earth. (Gen. 1:28). Marriage is a divine institution and most sacred; for God made them male and female and performed the first marriage ceremony. In view of this, polygamy and divorce are grossly criminal. Marriage is the fountainhead of all life, religious, social and national, therefore corruption here is most fatal.

A Joy Forever.
An aspiration is a joy forever. To have many of these is to be spiritually rich.—Stevenson.

Motives.
Mr. Gladstone was once heard to remark that if all the wits of men were to be united in one brain, that man would be unable to appraise with perfect justice any single moral action. "The shades of the rainbow," he wrote, "are not so nice, the shades of the seasons are not such a multitude, as are the subtle, shifting, blending forms of thought and of circumstances that go to determine the character of one act. But there is one hat seeth plainly and judiciously righteously."