

FARM POULTRY

CRESOL GOOD DISINFECTANT

Added to Water It Makes Excellent Solution for Spraying Houses or Premises.

(Prepared by the United States Department of Agriculture.)

The kerosene emulsion which is frequently used to destroy mites may readily be converted into a disinfectant, according to the United States Department of Agriculture. The emulsion is made by shaving one-half pound hard laundry soap into one-half gallon soft water. Boil the mixture until soap is dissolved and then, after



Poultry House That Can Easily Be Disinfected.

removing it to a safe distance from the fire, stir into it while hot 2 gallons of kerosene. This makes the stock mixture. When it is to be used as louse killer, 1 quart of the emulsion is mixed with 10 quarts of water. When it is to be used as a disinfectant, stir well and add 2 pints of crude carbolic acid or crude cresol. The compound solution of cresol is one of the best disinfectants that can be purchased ready to use. It contains 50 per cent of cresol and a pint of it in 10 quarts of water makes the right solution to apply to houses or spray over the ground. A 5 per cent solution of carbolic acid (1 pint carbolic acid, 10 quarts water) is about equally efficacious.

ESSENTIALS OF INCUBATORS

Chief Point, Whether Small or Large Machine is Used, is to Have Air Fresh.

(Prepared by the United States Department of Agriculture.)

Incubators are operated successfully in a great variety of places. Small machines generally are set in a room or the cellar of the house. A special cellar or incubator house should be provided where the incubator equipment is extensive or where mammoth machines are used. The chief points are to have a room which is not subject to great variations in temperature and which is well ventilated, so that the air is fresh and pure, according to Farmers' Bulletin 1106, Incubation of Hens' Eggs, issued by the United States Department of Agriculture.

If built above ground the walls of the incubator house should be double and the entire building well insulated. Incubators may be operated in buildings with single walls, especially in mild climates, but a well-insulated room is preferable. Good results in hatching are secured in incubator cellars and in incubator rooms which are entirely above the ground level.

The incubator room or cellar should be large enough to allow the attendant to work around the machines conveniently. Many incubator cellars are provided with some system of ventilation in addition to the windows, while in others the ventilation is controlled entirely by the latter method. Muslin screens on the windows provide good ventilation without draft and at the same time keep the direct rays of the sun from the machines. Many incubator cellars have cement floors, which are easier than dirt floors to keep clean and neat.

EXPERIENCE MOST ESSENTIAL

No Great Difficulties Offered in Operation of Modern, Improved Incubators.

Modern, improved incubators offer no great difficulties in order to achieve success, yet like running almost any other machine, the better they are understood by the operators, the easier they can handle them. This ease and simplicity is only attained after a thorough knowledge of the principles involved and a familiarity formed from a frequent employment of them; in other words, experience.



DOULTRY NOTES

- Spade up the yard frequently.
- Build a cheap house or shelter.
- Grow some green crop in the yard.
- Neglected colds are the forerunners of roup.
- Keep hens free from lice and the house free from mites.
- There is this to say for the incubator: You need not wait for it to get to the hatching notion.

Spring is the Time to Make Final Preparations For Grafting

By Dr. M. C. Merrill, Horticulturist, Utah Agricultural College

Fruit growers all over the West, and particularly the owners of the small orchards, are becoming increasingly interested each year in the subject of top-working some of their fruit trees. Now is the time for the final stages of preparation for this important work this spring.

The top-working of trees is simply the grafting into the tops of fruit trees of another variety. Unless this variety is better in many respects than the variety already being produced by the tree it would of course not be worth while to go to the trouble of making the change. All over the older settled portions of the West there are countless old fruit trees, especially in the home orchards, which bear inferior fruit of very poor and almost worthless varieties. At best in many cases they are varieties that were deemed good at one time but which have now been superseded in public favor by newer and better varieties.

The tree to be grafted should have a sound, healthy trunk and the lower parts of the main branches should be vigorous and in good condition. It does not pay to graft onto a decaying or unsound or diseased tree, at least not if the trunk and lower parts of the branches are affected.

The tree or part which receives the graft is called the stock and the twig or part which is inserted is called a cion. Usually the cions are collected the fall before the grafting is to be done in the spring. As a matter of fact, the cions can be obtained any time after the wood has matured and the leaves have fallen in the fall and before the buds begin to swell the next spring, providing the cions on the trees do not become injured by the cold weather of winter.

In selecting and securing the cions get them from trees of known productiveness. If there are none of the desired varieties from which to select cions in the neighborhood go to an orchard where they may be obtained. Select only the young wood that was produced the past summer. It is usually more vigorous in the outer and upper portions of the tree and this should be used.

Cut these twigs into lengths of about one foot, bunch and tie them into convenient bundles, and bury them in moist sand in the cellar until grafting time, which may be done at convenience after vigorous growth of the trees has commenced. The most common and satisfactory method of grafting the older trees is by the cleft graft. This method is suitable for branches two inches and over in size. A simple method of grafting the small twigs about the same size as the cion wood is by the splice or tongue graft. Whichever method is used, the preparation of the cions is the same. That is, they are cut into lengths of about four inches (each cion stick stored in the cellar will therefore make three cions) with three or four buds each. In inserting

onto the stock care should be taken to see that the lower end of the cion is attached to the stock and not allow the cion to be placed upside down. This precaution may sound superfluous to some and yet my experience with a great many students has taught me to be sure and caution them on this point.

For the cleft graft a branch of the tree is carefully sawed off at the desired point for grafting. With a grafting chisel the limb is split open sufficiently wide to insert the cion sticks whose lower ends have been cut to a wedge shape, leaving the outer side of the wedged part somewhat wider than the inner part. Two cions are usually inserted on each limb over two inches in diameter. This is to double the chances of success for if both grow the weaker one is cut out the next year.

Now the most important part of the operation pertains to the necessity of having the cambium layer of the cion fit the cambium layer of the stock. The cambium layer is that tissue which lies just between the bark and the wood. It is the active region of growth of the stem. If the cambium layers of the stock and cion do not fit it is useless to hope for success. However, if this phase of the work is carefully watched, the grafter can perform his work with both hope and confidence. Years of experience with students doing cleft grafting for the first time have shown that they ordinarily have about 90 percent success.

The operation for the splice graft is simple. A long sloping cut is made on both the small stock twig and the cion and they are joined together so the cambium layers coincide. The tongue graft is a modified splice graft where a slight split is made on both the cion and stock cut surface so that on joining them together the union will be somewhat more secure.

The final stage of the operation is binding the union and applying grafting wax. Grafting wax is easily made by melting together 4 parts by weight of resin, 2 parts beeswax, and 1 part rendered beef or mutton tallow. After the mixture has been reached and after boiling for about one minute the hot liquid mass is poured into a bucket of cold water. As soon as it is cool enough to handle it is taken out and pulled in the same fashion as molasses candy. When it assumes a light color it is ready for use. To prevent it sticking to the hands it is desirable to rub tallow over the hands before handling the wax.

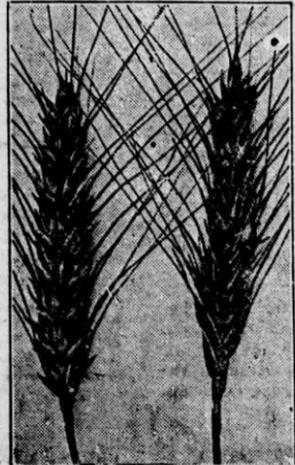
The wax is used to cover the cut surfaces and cracks of the grafted parts to prevent drying out and the entrance of disease or decay. In cleft grafting it is not necessary to bind or tie the parts for that is done when the gisel is withdrawn and the parts of the limb clamp together on the cion. But in splice or tongue grafting it is necessary to bind the parts by a waxed cord or by raffia.

KANRED HARD WHEAT IS HIGH IN YIELDS

Developed From Single Head of Crimean Wheat Selected at Kansas Experiment Station—Pure Seed is of Importance.

(Prepared by the United States Department of Agriculture.)

Kanred is a wheat which is resistant to prevalent forms of leaf and stem rust, is less liable to winter killing than the Turkey or Kharkof, and matures from one to four days sooner than those varieties, which sometimes means escape from bad weather conditions. It outyields the varieties named in the principal hard winter wheat section by from three to five bushels per acre. The variety was developed from a single head of



Turkeys and Kanred Wheat—The Latter Yields More Because of Rust Resistance, Earliness and Hardiness.

Crimean wheat selected at the Kansas agricultural experiment station ten years ago, from which source it is estimated that 2,000,000 acres were harvested in 1921.

"Kanred Wheat" is the title of Department Circular 104, just issued by the United States Department of Agriculture. Kanred is a hard red winter wheat very similar to Turkey. It is bearded and has hairless white chaff. The superior yields of the Kanred variety in northern and northwestern Kansas, eastern Colorado, southwestern Wyoming, and in Nebraska and South Dakota appear to have been due largely to its resistance to rust and to winter killing.

Kanred wheat may be grown with success wherever other hard-winter wheats are grown and should partly replace the Turkey and Kharkof varieties now widely grown. It shows no special advantage in the northern great plains and the Pacific northwest. It cannot compete with the soft winter wheat varieties grown on the lower lands and the richer soils of eastern Kansas or the eastern United States, and is not winter hardy enough to replace spring wheat in northern plains. Wherever Turkey or Kharkof hard-winter wheats are grown, however, the Kanred can be grown with equal chances of success.

In milling and baking experiments Kanred has compared favorably with other hard red winter wheats. For successful growing pure seed is necessary, and because of similarity of the seed to other varieties certification has been found essential. This certification is made by the Kansas Crop Improvement association with the co-operation of the Kansas agricultural experiment station.

Baggioppe's Music

The music of a baggioppe processions of three or four pipes. One of these the chanter, is a primitive oboe with eight holes; the others called drones sound each one low continuous tone

Stories of GREAT INDIANS

By ELMO SCOTT WATSON

TEDYUSKUNG'S DECLARATION OF INDEPENDENCE

BECAUSE his name has been perpetuated in a famous political organization, Tammany or Tammany, is the best-known Indian of the Delaware tribe. But there was another chief of the Lenni-Lenape who ranks as high, and a part of the honor due him has been paid in a monument erected in Fairmount park, Philadelphia, to Tedyuskung (Kekeuskung—"The Healer").

About 1720 the Iroquois conquered the Delawares, forced them to accept the title of "women" and began selling their lands on the Delaware and Susquehanna rivers to the colony of Pennsylvania. Finally the Lenni-Lenape settled on the Ohio. When the struggle between the French and English centered in the Ohio valley in 1754 the Delawares felt that they were about to be driven from their last refuge. They rose in rebellion against both the Pennsylvanians and the Iroquois and attacked.

A council was called at Easton, Pa. in July, 1758. Tedyuskung issued a Declaration of Independence. "The Delawares are no longer slaves of the Six Nations," he said. "I, Tedyuskung, have been appointed king over the Five Nations. What I do here will be approved by all. This is a good day. I wish that the same spirit that possessed that good old man, William Penn, the friend of the Indians, may inspire you white men today."

For 50 years the Delaware chief had borne the commonplace name of "Honest John," but now he was hailed as "King Tedyuskung," and was sent to give the "big peace halloo" to his tribe and invite them to a larger conference to be held later. He started on this important errand, arrived at Fort Allen and then he went on a drunken spree lasting for days.

The Iroquois derided his "declaration" and sought to discredit him. They failed, and from that time the power of the Iroquois over the Delawares waned. He demonstrated his ability in later councils. Although it is charged that the white councillors tried to get him drunk every night, he always appeared at council the next morning able to cope with them.

He succeeded in getting the Delawares' wrongs adjusted and his influence brought about a treaty of peace which prevented the French and Delaware alliance. He had saved the Ohio valley to the English. His death was scarcely heroic. In the spring of 1703 his house was set on fire during one of his drunken debauches—probably by some of his Iroquois enemies—and the old chief perished in the flames.

PONTIAC, THE OTTAWA, THE INDIAN NAPOLEON

IT WAS not a new dream—this plan of uniting all the tribes to drive out the white man. Opechancanough, the Pamunkey, and King Philip, the Wampanoag, had dreamed it and paid the penalty with their lives. Little Turtle, the Miami, and Tecumseh, the Shawnee, were destined to attempt it and to fail. Of them all, Pontiac, the Ottawa, came nearest success—and he failed when a woman talked!

Pontiac hated the English. But he loved the French and when they lost North America at Quebec in 1759, he wanted to keep on fighting. On May 7, 1763, one smashing blow by the allied Indians was to regain this territory for the French and their red friends.

The blow fell and the Indians were so successful in their surprise attacks that eight of the British forts were captured and nearly all the garrisons massacred. Pontiac was in personal command of the Indians around Detroit, the keystone to British rule in the West. He planned to capture it by treachery.

Near the fort lived an Ojibway girl called Catherine. She loved Major Gladwyn, the commandant, and betrayed Pontiac's plot in time to save the fort. Filled in his attempt to take Detroit, the Ottawa saw his grand conspiracy crumbling. It was dealt a final blow when he received a message from the French commandant at Fort Chartres, Ill., telling him that England and France were now at peace and bidding him end his war.

But Pontiac was not ready to give up yet. He visited the Illinois tribes and tried to rally them to his cause. They hesitated to join him. Glaring angrily at their chiefs, the Ottawa exclaimed: "If you refuse, I will consume your tribes as a fire consumes the dry grass of your prairies!"

By now he realized the hopelessness of his dream. After one more attempt to gain aid from the French, he gave up the struggle and returned to Detroit to sign a treaty of peace. In 1769 he came again to Illinois. At Cahokia an English trader named Williamson, who hated the great Ottawa, offered a Kaskaskia warrior a barrel of whisky to kill Pontiac. The Kaskaskia was easily persuaded. He remembered Pontiac's threat against his people years before. Late one night as Pontiac, unsuspecting, lingered, striding through the woods on his way to St. Louis the Kaskaskia hid up behind him. A tomahawk gleamed in the scabbard and descended the Indian Napoleon was dead.

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house in your automobile.

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cent for it. Just sent the bill to

county.

Without constancy there is nett

love, friendship, nor virtue in

world.—Addison.



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