TOBACCO CROPS.

Seed Selection and Improved Handling of Plants.

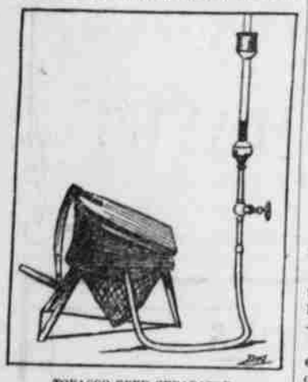
By W. M. SCHERFFIUS, tobacco expert, Kentucky experiment station.

The importance of good seed in every crop has been demonstrated so often that every farmer should know that it pays him well to plant only the best. Tobacco is no exception to this rule. Light, chaffy seeds that are low in vitality give us plants that are weaklings with slow growth. Various schemes for separating the light from the heavy tobacco seed have been suggested, but the most thoroughly practical method is by means of a piece of apparatus introduced by the bureau of plant industry and a current of air which is generated with the foot bellows, as shown in the cut. The air passes through the rubber tube, then through the valve, which can be regulated to admit of the passage of the desired amount of air to accomplish the best separation. The air passes up through a piece of half inch iron tube, thence through a larger glass tube and out at the top, carrying with it the light, chaffy seed. At the base of the glass tube, which is about an inch in diameter and five or six feet long, is a metallic joint which has a piece of fine wire gauze in it to prevent the seed from falling into the valve below. Using about an ounce of seed for each charge, only a few minutes are required to separate a considerable quantity.

This piece of apparatus can be made by most any mechanic, or it can be purchased from any chemical supply house. Every community should own one of these machines for the benefit of its farmers.

Improved methods of handling the crop is a topic of such magnitude that we deem it expedient at this writing not to go into detailed discussion of this phase of the subject.

Although the white burley and dark tobaccos are different types, the same



TOBACCO SEED SEPARATOR.

general methods employed in the state for handling the crops are similar. It is desirable and usually the custom to select a piece of virgin soil for a seed bed. During the winter or early spring it is heated to a depth of two or three inches by burning brushwood or similar material on it to kill any weed seeds that would germinate and hinder the growth of the young tobacco plants. After the plot of ground is cool it is then dug up, slightly raised into beds, raked and put in good condition for the seed.

Although the cultural methods and mechanical manipulations of seeding, canvassing the beds, transplanting, cultivation and housing are adjusted to suit each locality, they are all carried out on the same general plan. There is often from two or two and one-half times as much burley tobacco set on the ground as is put on the same area in the dark tobacco district.

FOLEY'S HONEY AND TAR
stops the cough and heals lungs

A SETTIN' HEN.

When a hen is bound to set,
Seems as though 'taint etiket
Dowsin' her in water till
She's connected with a chill.
Seems as though 'twas skursley right
Givin' her a dreadful fright,
Tyin' rags around her tail,
Poundin' on an old tin pail,
Chasin' her around the yard.
Seems as though 'twas kinder hard
Bein' kicked and slammed and shooed
'Cause she wants to raise a brood.
I sh'd say it's gettin' gay
Jest 'cause natur' wants its way.
While ago my neighbor Penn
Started bustin' up a hen;
Went to yank her off the nest,
Hen, though, made a peck and jest
Grabbed his thumb nail good and stout,
Liked to yank the darn thing out.
Penn, he twitched away and then
Tried again to grab the hen.
But, by ginger, she had spunk,
'Cause she took and nipped a chunk
Big's a bean right out his palm;
Swallowed it, and cool and calm
Histed up and yelled, "Cah-dah!"
Sounded like she said, "Hoo-rah!"
Waal, sir, when that hen done that,
Penn he bowed, took off his hat.
Spunk jest suits him, you can bet—
"Set," says he, "gol darn ye, set!"

THE BEST WATER VESSEL.

The poultryman has some trouble to get a drinking vessel to fill the bill.

Here is our favorite. You can see how handy it is. It is made of galvanized iron, and three gallons is about the proper size, though suit yourself on

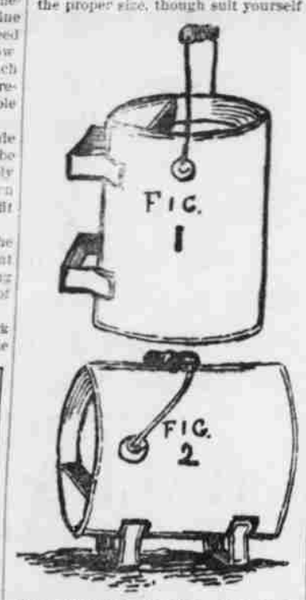


FIG. 1—TO CARRY AND FILL. FIG. II—IN POSITION FOR SERVICE.

that. Our first one cost $1.50. The home tinner made us one dozen for $6—$12 saved.

Advantages.—Need not fill every day; easily filled and carried; holds large quantity water; does not slop out; keeps clean and sweet; cannot burst from freezing; chickens cannot drown in it; water runs into trough only as used and does not freeze so quickly.

Caution.—Do not use Douglas mixture and other acid preparations in metal vessels. Serve them in earthenware. Clean and disinfect with one of the many coal tar preparations.

LOUSE KILLER.

Box off a corner 3 by 4 or according to the size of your flock. Fill it with the following mixture: Road dust, three parts; fine wood ashes, two parts; slaked lime, one part. Mix well. Coal ashes bleach yellow legs and take all the oil from the feathers.

Patent louse powder in a dust bath is as a drop of water to an elephant.

In looking for lice examine the roosters first. They are generally too lazy, too tony or too dudish to dust.

FOLEY'S HONEY AND TAR
for children; safe, sure. No opiates

FRIEND TO FRIEND.

The personal recommendations of people who have been cured of coughs and colds by Chamberlain's Cough Remedy have done more than all else to make it a staple article of trade and commerce over a large part of the civilized world.

AN INSTANCE.

Lacy Suddreth, of Lenoir, N. C., had been troubled with a very bad cough for over a year. She says: "A friend bought a bottle of CHAMBERLAIN'S COUGH REMEDY, brought it to me and insisted that I should take it. I did so and to my surprise it helped me. Four bottles of it cured me of my cough."

HOG HOUSE.

Portable and In Use In Various Ways the Year Round.

We send herewith a sketch of what we think the best, handiest and cheapest hog house we have ever used. Two doors in front make it convenient for ventilating, as we have them face south in the winter time. If there is a cold wind from the southwest the west doors are closed and the east ones opened. Should the wind be in the east or southeast they are reversed. The house is divided inside by a portable partition which should be nearly four feet high and made of good oak boards with very narrow cracks between them, especially near the bottom. With this partition in place it makes good, roomy beds 7 to 8 feet each for the sows, and when through with it the sows the partition is removed and placed by the back wall and held there by a large wooden button turning down over the top board. In this shape we use it for twenty to twenty-five pigs and find it better than any of a half dozen different patterns that we have used and are using, as it affords better ventilation and is easier to clean, as there is plenty of room.

We use these houses in spring and fall for the sows. In summer they are used for hens with little chickens, being pulled into the chicken lot or orchard, and they would make excellent colony houses for laying hens. In winter they furnish beds for fall pigs, thus making themselves useful the year around.

One good horse or ordinary team will move one of them anywhere on the level ground, and as they are only eight feet wide they will pass through any ordinary gate. The bracket arrangement seen at the ends of the house is for attaching portable fence which we use.

Size of house is 8 by 10 feet, four feet high at back and seven feet in front. The runners or foundation are 4 by 4 oak, beveled off at each end with an ax so as to run easily. The

PORTABLE HOG HOUSE.

two center runners are fourteen feet long, so that they may extend out two feet at each end of the house. Across these outer ends we spike 2 by 4 or 2 by 6 pieces to hitch to. The floor should be of good oak boards, but need not be very tight. The sides are matched lumber, and the roof should be as light as possible. We have used felt paper for roofing for five years, but the kind we used became leaky in about two years, and now we have four or five houses to reroof. We expect to try galvanized iron or tin. The uprights or studding are 2 by 2 placed two feet apart, except that there are 2 by 4's placed at each side of doors. Doors are fastened shut by means of strong wooden buttons, each held by a spike.—Olin H. Dobbins in National Stockman.

Lime Corrects Acidity.

Most cultivated soils possess a slightly acid reaction. This is generally due to decomposition of the remains of plants in the soil forming organic acids. On wet soils this condition is more noticeable than on dry soils. The sour humus and organic acids are not only unfavorable to the growth of nutrifying ferments and the root tubercles of leguminous plants, but also are likely to dissolve iron and other compounds which are poisonous to microbes and crops. Water culture experiments have shown that slightly acid solutions are favorable to the growth of plants, and, while most soils possess this character to a slight degree, yet any excess of soluble acid in the soil would be highly detrimental. While most of our cultivated crops seem to need a slight acidity, it is probable that they have the ability to create this condition to a sufficient degree through the medium of the solution sent out by their roots. This being the case, it would seem that the aim should be to keep soils in a neutral or slightly alkaline condition so as to favor the growth of root tubercles of the legumes and the desirable soil ferments.

Liming is excellent for correcting any excess of acidity and is probably the most effective and economical substance for bringing about these other desirable conditions.—H. J. Patterson.

Farm Scales.

"I consider that on a farm of 160 acres a good scales would be worth $50 to $75 a year, possibly much more. I use scales mostly for weighing stock, hay and grain. There are times when I use scales every day," says a writer in Farm and Home. "In feeding stock you may take a small bunch of cattle or hogs and by weighing each day both stock and feed you can tell just what the gain is per pound of feed. You may change the feed and see which gives the greatest gain if you keep a record of your feeding while making the test. The scales are the only sure way to determine profit or loss in feeding stock."

Progress of the Sugar Beet.

The beet sugar industry has grown very rapidly during the past fifteen years. In 1892 the beet sugar factories turned out 12,000 short tons of refined sugar; in 1897, five years later, 43,240 tons; in 1902, at the end of another five year period, 238,846 tons, and in 1907 the estimated product reached 940,000 tons.

OIL BY THE BARREL.

If you cannot run that incubator by gas or electricity, buy the best water white kerosene by the barrel. You will not get the settlings of the storekeeper's tank, the oil will be pure, and you will save money. Last summer we bought a fifty-three gallon barrel for $6.10 and received $1.50 from the company for the empty barrel; cost, $4.60; grocerymen's price for fifty-three gallons, $6.85; money saved, $2.25. Not so bad.

Fruit and Flowers

SAN JOSE SCALE.

Insects That Are at a Certain Stage Survive the Winter.

The full grown San Jose scale is about the size of a pin head, quite flat, round (circular) in outline and varying in color, but usually grayish brown. It lies closely against the bark, leaves or fruit, and the part seen is not really the insect itself, but the shell or scale which covers it. If this scale be lifted with a pin a very small orange yellow speck will be found beneath it, and this is the scale insect.

When winter sets in the insects are present in all stages of growth, from those just born to those which are full grown and are themselves producing young. The winter, however, kills all except those which are from about one-half to two-thirds grown, so that no living adults can usually be found in early spring.

So far as is known these insects undergo no changes during the winter,

SCALE AT DIFFERENT AGES.

but when the sap begins to flow freely in the spring the young scales which survive resume their feeding on the sap which was interrupted by the cold weather and complete their growth, becoming adult in June. Reproduction then begins, the young being born alive, and this continues for about six weeks, each female producing an average of about 400 young. The young insects are very small and after their birth crawl out from beneath the scale where they were born and move about, seeking a place on which to settle. This takes rather more than a day on an average, and during this time these tiny yellow crawling young may be seen wandering about. On finding a good location they become quiet, and each works its long beak through the bark or surface of the leaf or fruit, as the case may be, to where the sap of the tree can be obtained, and the insect sucks this sap for its food. Its legs now disappear, its body becomes hemispherical, and white waxy threads appear over its back. These mat together to form a white covering or scale, and such young, recently formed scales are often very noticeable. Later as the insect grows it molts or sheds its skin, and the molted skin is added to the scale, which because of this and by weathering becomes darker, grayish or even blackish, often showing rings of lighter and darker color. The center of the scale is the highest point, and around this is a circular depressed ring. If the insect beneath the scale is a female, the scale will remain nearly circular in outline; if a male, the scale is more oval or elongated in form. In a little more than a month from the time of its birth the insect becomes adult and in turn begins to produce young, the first ones appearing at about the same time as the last ones of the preceding generation. These young develop in the same way as did their parents, thus giving a constant succession of young from the middle or end of June in Massachusetts till winter stops the process.—H. T. Fernald, Maine.

Flowering Shrubs.

The only pruning that may be considered essential for ordinary shrubbery is that of thinning out the plants by removing old branches that are about destitute of young growths. The worst treatment they can receive is that of shortening the summer growths during the fall, especially that of shearing them into round, stubby forms with hedge shears, at once destroying the natural, graceful beauty of the plants and removing the best of their flowering shoots just as they are preparing for an abundance of blossoms. For example, the forsythia, usually a free growing, hardy plant, will make shoots several feet in length during summer, will be covered with flower buds toward fall and prepared to blossom profusely early in the following year. Any pruning which shortens the shoots simply removes the flowering wood and cannot in any degree benefit the plant. Deutzias, spiraeas, weigelas and similar flowering shrubs require the same kind of treatment. The bushes should be kept rather open, so that the branches may receive full benefit of light and air. This is effected by pruning out some of the oldest branches or thinning out some of the young shoots where they are too dense, and these should be cut close to the base of the plant, which will encourage the growth of vigorous flowering branches, thus keeping the plant floriferous from year to year.—L. C. Corbett.

When Plants Begin to Droop.

When plants begin to droop, they have probably been injured by overwatering, too much heat or too much cold or some neglect for which there is a simple remedy. It will pay to find out the cause.

Top Dressing of Lawns.

The top dressing of lawns upon soils which are not uniformly very rich and retentive is very desirable, as it not only furnishes a winter protection for the roots of the plants, but supplies them with a liberal quantity of immediately available plant food for starting growth in the spring.

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Train No. 70. Leave Independence, daily, 6:15 p. m.; lv. Monmouth, 6:30 p. m.; ar. Dallas, 6:55 p. m.

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FROM AIRLIE.

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GOOD WORK

Done Daily in Dallas.

Nearly every reader has heard of Doan's Kidney Pills. Their good work still continues, and our citizens are constantly adding endorsement by public testimony. No better proof of merit can be had than the experience of friends and neighbors. Read this case:

Mrs. N. Swaggert, of 819 Garden St., Pendleton, Ore., says: "Both my husband and myself have used Doan's Kidney Pills with most gratifying results. Mr. Swaggert was troubled quite severely with his back and kidneys for a long time, and nothing ever helped him as Doan's Kidney Pills have. I have known of the healing and curative power of this remedy for some time, and found that a few doses would quickly remove any lameness or pain in the back caused by kidney derangement. I am glad to help make Doan's Kidney Pills better known to all afflicted with backache or kidney trouble."

Price 50 cents. For sale by all dealers. Foster-Milburn Co., Buffalo, New York, sole agents for the United States.

Remember the name—Doan's—and take no other.

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We offer One Hundred Dollars Reward for any case of Catarrh that cannot be cured by Hall's Catarrh Cure.

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We the undersigned, have known F. J. Cheney for the last 15 years, and believe him perfectly honorable in all business transactions and financially able to carry out any obligations made by their firm.

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Hall's Catarrh Cure is taken internally, acting directly upon the blood and mucous surfaces of the system. Price, 75c. per bottle. Sold by all Druggists. Testimonials free.

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Chamberlain's Cough Remedy
Cures Colds, Croup and Whooping Cough.

KILL THE COUGH AND CURE THE LUNGS
WITH Dr. King's New Discovery
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AND ALL THROAT AND LUNG TROUBLES.
GUARANTEED SATISFACTORY OR MONEY REFUNDED.

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WINTER COLDS you need not fear them if you use BALLARD'S HOREHOUND SYRUP

A cough or cold is generally a forerunner of many serious sick spells. It should not be neglected, the human breathing system is a combination of tubes and cells, which must be kept in order to insure good health.

Ballard's Horehound Syrup
CURES COUGHS, COLDS, BRONCHITIS, WHOOPING COUGH, CROUP AND ALL PULMONARY DISEASES.

Cured of a Chronic Cough.

J. H. Ellis, Butte, Mont., writes: "I cheerfully recommend Ballard's Horehound Syrup to all people afflicted with chronic coughs. I suffered for years with a chronic cough which would last all winter. Ballard's Horehound Syrup effected an immediate and permanent cure."

25c, 50c and $1.00.

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NR Nature's Remedy
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Better Than Pills
For Liver Ills.

NATURE'S REMEDY is better than pills, because it acts in the right way. It strengthens the Stomach, aids Digestion, cures Dyspepsia, cleanses the Liver and Bowels, curing Constipation.

Usually one NR Tablet is all that is necessary to correct the average trouble. It starts in the Stomach and searches through the Liver, Kidney and Intestine, dissolving and soothing as it goes.

NR Tablets are always just right and neither sicken, gripe nor have any harmful after effect. GET A 25c BOX.

BELT & CHERRINGTON, Dallas, Oregon.

FOLEY'S KIDNEY CURE
Will cure any case of Kidney or Bladder Disease not beyond the reach of medicine. No medicine can do more.
Cures Backache
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Do not risk having Bright's Disease or Diabetes
For Sale by Druggists.

THE NEW IDEA KENNEDY'S LAXATIVE
Moves the Bowels Best for Children
THE ORIGINAL LAXATIVE HONEY AND TAR COUGH SYRUP
Red Clover Blossom on Every Bottle E. C. DEWITT & CO. CHICAGO
For Sale by STAFRIN DRUG CO. Dallas, and M. THOMPSON, Falls City.

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DR. KING'S NEW DISCOVERY
FOR COUGHS AND COLDS
AND ALL THROAT AND LUNG DISEASES . . . . . PREVENTS
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"Two years ago a severe cold settled on my lungs and so completely prostrated me that I was unable to work and scarcely able to stand. I then was advised to try Dr. King's New Discovery, and after using one bottle I went back to work, as well as I ever was."
W. J. ATKINS, Banner Springs, Tenn.

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