

THE CAMERON INDUSTRIALIST

VOL. I.

CAMERON STATE SCHOOL OF AGRICULTURE, LAWTON, OKLA.

NO. 4

CROPS FOR THE SILO.

Indian corn has long been recognized by the north and-eastern states as the one leading silage crop. However, under Oklahoma conditions, kafir must be recognized as the standard silage crop. It will produce as many, and generally more, tons of silage per acre on the uplands of Oklahoma, in a favorable year, and much more than corn during a dry year. The feeding value of a ton of silage made of well headed kafir is practically the same as that made of good Indian corn with the ears left on.

Sorghum makes a good silage but is not equal to kafir, as it does not have as much grain on it. Sorghum has a tendency to make a sour silage, on account of the large amount of sugar which it contains. Experiments have shown that the excessive sourness of sorghum silage can be largely overcome by letting the sorghum become well matured before it is put in the silo.

Nothing is gained by putting alfalfa in the silo, unless the weather is unfavorable for haying, at which time the crop may be saved by putting it into the silo.

Uow peas and peanuts make an excellent silage, but their greatest value as a silage crop is when they are mixed with such crops as kafir when the silo is being filled, in order to make a better balanced ration out of the silage.

Frozen feed stuffs make good silage, if they can be put in the silo before they are dried out by evaporation. If they become a little dry before they can be gotten into the silo, water should be added as the silo is being filled to make up for the moisture that has evaporated from the stalks.

P. G. SCRUGGS, Senior,
Geronimo, Okla.

FALL CALVES.

Where cattle are reared under natural conditions, the rule that the young be dropped in the spring will continue, but this practice is not necessarily the most successful, especially to, the dairyman. Fall dropped calves come at a time when the little attention they need can easily be given, and they occupy but little space in the barn or shed. Subsisting on skim milk with a little grain and hay, when spring comes the youngsters are large enough to make good use of the pasture, and in the fall they are large enough and strong enough in digestive power to make good use of the dry feed necessitated by winter conditions.

Fall dropped calves allow the dairyman to have his cows giving a good flow of milk during the time of year when milk and butter command the highest prices. Cows that freshen in the fall will give a good flow of milk

for a longer period than those that freshen in the spring. For fall freshened cows can be turned to fresh green pasture just at the period of lactation that she most needs it to keep up her flow of milk, while the spring freshened cow is in the period of lactation that she most needs green feed to keep up her milk flow, when the pastures begin to fail, and it is a hard proposition to keep her from drying up early in her period of lactation.

HUGH CORWIN, Senior,
Lawton, Okla.

SELECTING BROOM CORN SEED.

Many people know the importance of good broom corn seed, yet nearly all the seed that is planted is simply seed taken from the pile of seed that comes from the unselected corn. Corn in which there are both dwarf and

thoroughly cleaned, for planting. The brush from this seed will be worth but little as it will be coarse and red, but there will be so little of it that it will not amount to much. You will find that selecting your broom corn seed in this manner will be but little trouble and in the long run will give you big returns for your extra trouble.

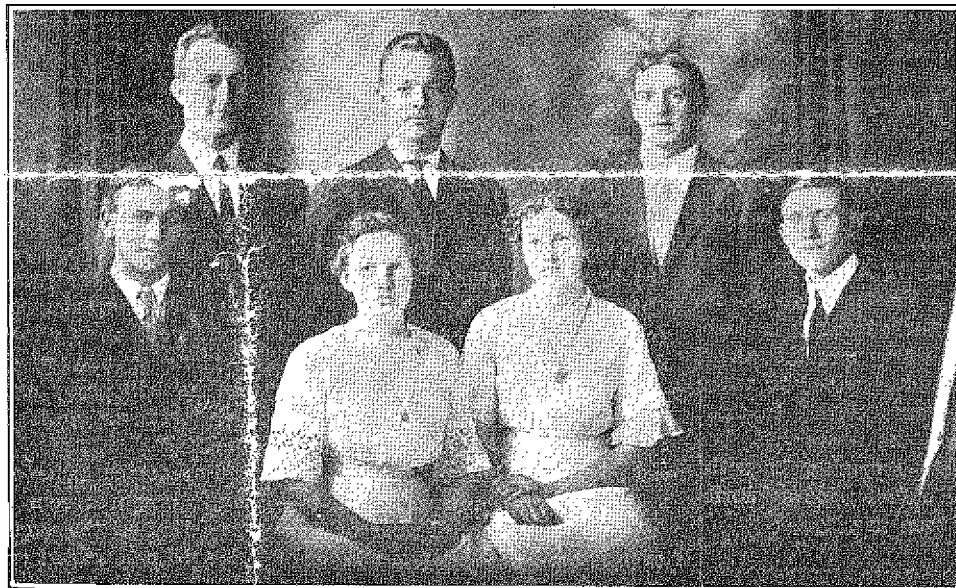
P. G. SCRUGGS, Senior,
Geronimo, Okla.

WORKING THE BROOD MARE.

It does not hurt a brood mare to be worked right up to the day of foaling, so, long as she is in good shape and getting plenty of feed, if the work is steady and not too heavy. In fact a mare that is worked just before foaling will be stronger and in better shape to work after foaling. The mare should always have ten days or two

BOOKKEEPING ON THE FARM.

Few farmers realize the real value of keeping accounts of their transactions. Business men keep accounts to enable them to tell from which they gain and from which they lose. Why then should not the farmer keep accounts for the same reason, for it is a certainty that the farmer has his profits and losses as well as the business man. It will take but a few moments each day for the farmer to keep accurate accounts of all his transactions, and will often prevent troublesome disputes that so often arise between neighbor farmers, where they are always making trades and swapping work. If the farmer will keep books as he should he will be enabled to, tell which of his farm animals are being kept at a profit and which at a loss. He will also be enabled to tell which of his crops are



CLASS OF 1913, CAMERON STATE SCHOOL OF AGRICULTURE

Who have contributed all articles of this issue.

Top row, reading left to right—Thos. Stringer, Merle Stringer, Palmer Scruggs.
Lower row—Nick Fennema, Virginia Scruggs, Lucile Aurell, Hugh Corwin.

standard heads, sprangly or mule tails as they are sometimes called, together with the smutty and various other undesirable heads. Yet the farmer thinks that because he made a fair yield of corn that he is selecting good seed to plant. One of the best ways to select as well as improve your broom corn seed, is to plant a small patch by itself to be reserved for seed. When the corn is about ready to head, go through the patch and cut down all the stalks that are not of the proper size.

After it commences heading, you should go through the patch every few days and pull all the sprangly or smutty or otherwise undesirable heads. The choice heads should remain on the stalks until the seeds are all mature. It should then be pulled and after drying, should be threshed. The seed should then be fanned and

weeks complete rest after foaling, after which time she will be able to commence work again. However it should be borne in mind that she will be in a weakened condition and should be worked very carefully. The driver should take particular notice, and keep the collar well fitted, for the mare's neck is likely to shrink and cause a sore shoulder if care is not taken to keep the collar snugly fitted.

When working the mare the colt should be kept in a box stall, and should never follow in the field. Walking so much takes much of the vitality from the colt, and the mare will do better when the colt is not allowed to follow. The colt should never be turned to the mare to suckle while she is very hot, as the colt is likely to colic from drinking the overly heated milk.

P. G. SCRUGGS, Senior.

bringing him the best returns. Many farmers can tell you about what they were worth at the beginning of a certain year, and how much they were worth ten or fifteen years later, but there are but few that can tell you from just what they gained, or lost as may be the case. Does it not look reasonable then that a farmer should keep account books, that he might look more accurately into his past dealings, that he might be better guided to success in the future,

P. G. SCRUGGS, Senior,
Geronimo, Okla.

Remember that in everything your lessons ought to be made more in actions than in speech, for people easily forget what they have said and what has been said to them, but not what they have done and what has been done to them.

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MAY 1, 1913.

Domestic Science Department

Lucile Aurell and Virginia Scruggs Seniors.

This page of the paper has been reserved for members of "A" Class. We will take the material from our note books. We hope it will prove helpful, to those who honor us by reading its contents.

DUST.

Dust is bacteria, mixed with finely ground soil, manure and sputum. The air always contains more or less dust, and as many of the bacteria are very harmful, great precaution should be taken to prevent its coming in contact with the food supplies.

The best way to guard against the dust coming in contact with the food, in the kitchen, is to keep dry supplies, such as oatmeal, flour and the like, in fruit jars or air tight cans. All meat if not kept in the refrigerator. should be covered with a clean cloth. It should also be wiped off with a damp cloth before it is cooked.

HOW TO DUST A ROOM.

After a room has been swept it should not be disturbed until the dust settles for about thirty minutes; then the furniture should be wiped off with an oiled or dampened cloth. In this way the dust will be absorbed. To dampen the cloth—sprinkle it with water and hang out of doors until nearly dry and then use.

RULES FOR MEASURING.

All measurements taken by teaspoons, tablespoons or cups, should be made level unless otherwise specified.

Articles such as salt, pulverized sugar, etc., which readily form into lumps should be rolled or sifted before measuring.

Flour should be sifted before measuring.

A spoonful of butter melted is measured before melting¹. A spoonful of melted butter is measured after melting.

EFFECTIVE WAYS OF REMOVING STAINS.

INK—When ink is spilled on a garment, carpet, floor, table or other articles that cannot be washed and soaked in milk or water, cover the stain at once with some absorbent, as starch, flour, meal, or shredded blotting paper. This will absorb the ink and prevent its spreading over a larger surface, After the first application cover the spot with fresh material Continue this until the substance applied is no longer soiled by the ink. Then cut the

end off a lemon and rub it gently over the stain. Cut the lemon off as it becomes soiled, Continue this until the stain is removed, then rinse in cold or tepid water,

FRUIT—Alcohol softens and dissolves many stains. If alcohol is heated it is more efficient. Later use hot water from a height.

GRASS—Alcohol may be used if the material cannot be washed. If washable, use molasses, not syrup.

IRON RUST—Apply lemon juice with salt, then hang in sun.

MEDICINE—Alcohol usually dissolves medicine. For iodine use chloroform.

MILDEW—Use bleaching agent, or if only light use buttermilk.

TAR AND PAINT—First soften it by using lard, and then apply gasoline.

SOME FEATURES OF POOR BREAD.

- I. Heaviness. Due to—
 - 1. (a) Poor flour.
 - (b) Damp flour.

- (c) Weak yeast.
- 2. Dough may be kept too cold while rising,
- 3. Put in oven before had time to rise sufficiently.
- 4. Souring of yeast or dough.

- II. Unpleasant odor or flavor. Due to—
 - 1. Yeast or bread sponge has been kept too warm.
 - 2. Some of the utensils that have been used were not clean.
 - 3- Tbs dough has been allowed to stand too long before putting in oven.

- III. Crust.
 - 1. Hard and tough, Due to—
 - (a) Too slow baking.
 - (b) Too poor flour.
 - (c) Lack of lightness.
 - 2. Crust so soft as to crumb. Due to—
 - (a) Insufficient baking.
 - (b) Bread has been wrapped in towel as soon as baked.
 - 3. Not evenly browned. Due to—
 - (a) Fault of oven, damper or soot.

- If oven is too hot on bottom a layer of asbestos should be used.
- 4. Showing spots or streaks of flour. Due to—
 - (a) Neglecting to sift flour.
 - (b) Not enough kneading,
 - (c) Allowing the dough to become hard on top while rising.
 - (d) Too much flour on bread board.
- 5. Crack open on top. Due to—
 - (a) Too much flour being worked into dough.
 - (b) Too hot an oven at first.
- IV. Crumb.
 - 1. Coarse grained. Due to—
 - (a) Dough being too light.
 - (b) Insufficient kneading.
 - (c) Poor quality of flour or yeast.
 - 2. Very large gas bubbles at top of loaf. Due to—
 - (a) Great heat in upper part of oven.
 - 3. Crumb is too moistened in center. Due to—
 - (a) Insufficient baking.
 - (b) Too short a time given for rising.
 - (c) Poor yeast.
 - 4. Very dry crumb. Due to
 - (a) Too long rising.

- (b) Too long baking,
- (c) Dough has been too stiff.
- 5. Dark streaks. Due to—
 - (a) Lower part of oven has not been hot enough.
 - (b) Unclean methods used in mixing.
- 6. Dark greyish color of the loaf. Due to—
 - (a) Poor flour (not enough gluten).
- V. Shape of loaf.
 - 1. -Unevenly raised. Due to—
 - (a) Too slow an oven.
 - (b) Heat is uneven in different parts of oven.
 - (c) The dough becoming too light.
 - (d) Flour does not stiffen properly.

A GOOD RECIPE FOR BREAD.

1 pt. lukewarm water or milk.
3 pts. flour.
1 cake yeast.
1 teaspoon salt.
Soak the yeast in 1/2 c. lukewarm water until dissolved. Add this to the remainder of water, then add salt and enough flour to make a stiff batter. Set the sponge in a warm place, after it has been beaten for five minutes, and let rise. When light add remainder of flour and work the dough until it is spongy and elastic. Set in warm place again until it is twice its size, then mould into loaves and let rise to twice its size again. Put in moderate hot oven and bake.

PREPARATION OF 1 TRAY FOR THE SICK.

When preparing a tray for the sick, one should take the utmost care to make it as attractive as possible. One should always place on the tray the prettiest, daintiest dishes in the neatest and most attractive manner. Although the patient may not be allowed to take a great amount of nourishment, what he is allowed to take can be made so attractive and tempting that he will enjoy and appreciate it for, "Attractiveness stimulates the appetite."

In preparing, dishes for the sick, one should prepare them in a variety of ways, that is, the same foods may be prepared one way at one time and another way the next. This prevents the patient from becoming tired of the same thing over and over and still he gets the nourishment desired.

A FEW GOOD RECIPES FOR THE SICK.

OATMEAL GRUEL.

Mix two tablespoons of oatmeal, one-half teaspoon of sugar and one saltspoon of salt. Pour this slowly into two cupfuls of boiling water. Cook in a sauce pan for thirty minutes or in a double boiler for two hours. Strain, add one cupful of milk and bring to the boiling point.

MILK LEMONADE.

1 T. sugar.
1 c. boiling water.
14 c. lemon juice.
114 c. cold milk.
Pour the boiling water over the sugar and add the lemon juice, and if you have it, add one-fourth cup of Fried sherry. Stir until the sugar is dissolved, then add the cold milk and stir until the milk curdles. Strain through a piece of muslin.

JUNKET.

1/2 junket tablet.
1 pt. new milk.
14 t vanilla.
4 T. sugar.
Slight grating of nutmeg.
Dissolve the junket, tablet in one tablespoon of lukewarm water. Put the milk and sugar in a sauce pan. Stir over the fire until about one hundred degrees F. Remove from the fire, add the vanilla and the dissolved tablet. Pour into junket cups that have been slightly heated, and add a little nutmeg. Let stand in a warm place for fifteen minutes; then put in a cool place for one hour.

MAY DAY MENUS.

BREAKFAST.

Strawberries
Oatmeal
Ham and Eggs - Buttered Toast
Coffee

DINNER.

Onion Soup
Radishes and Lettuce
Beef Roast Mashed Potatoes
Asparagus on Toast
Rice Pudding-
Coffee

SUPPER.

Cold Sliced Beef Potato Salad
Creamed Tomatoes
Pop-overs
Strawberries and Cream and Cake
Iced or Hot Tea
II.
BREAKFAST.
Grapefruit
Cream of Wheat
Egg Omelet Toast
Cocoa or Coffee

DINNER.

Tomato Soup
Radishes and Lettuce
Fricassee of Chicken
Creamed Potatoes Green Peas-
Rhubarb Pie
Coffee

SUPPER.

Salmon Salad
Baked Potatoes
Light Rolls and Butter
Strawberries and. Cream
Cocoa

III.

BREAKFAST.

Shredded Wheat with Strawberries and Cream
* Broiled Bacon
Toast
Waffles with Maple Syrup
Tea or Coffee

DINNER.

Corn Soup
Radishes and Lettuce
Salmon Loaf with Cream Sauce
Spinach Cold Slaw
Apple Pie with Cheese
Coffee

SUPPER.

Chicken Mashed Potatoes
Stuffed Peppers
Sliced Tomatoes
Light Custard
Tea

MANUAL TRAINING IN SCHOOL EDUCATION.

Many people' talk and write as if school time should be utilized for teaching things that the child does care for, and will not study in after life, but while they are young they can be forced into it, whereas, the real aim of school education should be to prepare for their work in after life.' A good time to begun this is while they are young and are in the public schools.

There are many things which cannot be learned in school life but if the student is taught to make his impressions in word he will not be as likely to forget it as if he only read it or heard it in some lecture from his teacher. It should be the endeavor and aim of all educators to establish such a relation between school instruction and the occupations of actual life, as to prevent any break in passing from one to the other. The methods by which we gain information, and experience in the world should be adopted identically in the schools so that the boy will be able to take care of himself when he goes out into the world.

In both our elementary and secondary schools, the demand for technical instruction is a protest against the contrast which has so long existed between the subjects and methods of school teaching and the practical work of every day life.

People are always justly complaining that in this country children leave school at too young an age, before they can have had time to properly assimilate the knowledge they have acquired, with a result that they soon forget a great part of the little they have learned.

But what is the cause of all this? Because at the age of fifteen or sixteen they begin to feel the want of a technical instruction, they begin to feel the need of something else besides book knowledge, they begin to see that they must acquire some kind of a vocation, if they ever make anything of themselves in this world. Then there can be little doubt if elementary education were made more practical that parents would be more willing, even at a great sacrifice, to let their children benefit by it and keep them in school. It is true that many parents take their children out of school, for the small earnings which they may acquire, and because the children do not seem to be getting very much good out of the school work, for they become tired of studying all the time about things in which they are not very much interested and it is impossible for them to reap the benefits of their study. Therefore the parents cannot afford to make a very great sacrifice to see their children idling away their time and not getting the good out of their schooling that they should. It is no wonder that the children are taken out of school and put to work either on the farm or at something by which they will be able to make their own way. But if the school teaching had more direct reference to the work in which the children are likely to be subsequently occupied, the parent would feel the responsibility of keeping,

their children in school more than they do at present.

Nearly all educators have pointed out the many advantages of enabling children, at an early age, the connection between knowing and doing.

The cost of establishing a small shop is not great and many are the benefits which may be derived from it.

In conclusion I will say that a manual training course in our schools may be made a part of a liberal education; that as an educational discipline it serves to train the faculties of observation, to exercise the hand and eye in the estimation of form and size, and the physical properties of common things; that the skill acquired is useful in every occupation of life, and is especially serviceable to those who are likely to become artisans, by inducing taste and aptitude for manual work, by tending to shorten the period of apprenticeship, by enabling the learner to apply to the practice of his trade the correct methods of inquiry which he has learned at school and by affording the necessary basis for higher technical education.

'MERLE STRINGER, Senior.

THE BENEFITS OF MANUAL TRAINING.

First, let us consider the meaning of the term manual training. In a literal sense it means the training of the hands to act in harmony with the mind. But in its restricted sense it means only the training in woodwork and iron.

If I could only take all of my readers through a manual training school, I am sure there would be no doubts in their mind about the benefits derived from it. But as this is impossible I must endeavor to do my best to explain it to you.

Many people mistake the manual training school for an industrial school. An industrial school is one in which a single trade is learned, such as watchmaking, hatmaking, etc., but manual training is far too wide and free for that. The aim of the manual training school is not the narrow one of "learning a trade," but the learning of how to handle tools and make useful things, both for the farm and house.

Then why is not a manual training-education just the thing for a boy on the farm? Why cannot he learn to sharpen his own plow shares, mend the breaks and repair his own machinery, and make some of his own tools; instead of paying out his hard-earned money to have it done.

Mr. Farmer, why send your boy to high school when it tends to educate them away from their natural environment and leads them into business and professional channels? What does the world need more than any thing else? It needs boys and girls, men and women, who know how to do things on the farm.

Let us next look at it from an educational standpoint.

It keeps boys longer at school. The boys like the work, therefore they will stay with their studies longer than otherwise. It awakens a lively interest in school, and invests dull subjects with new life. The habit of applying what one reads or hears to what one does, impresses it upon their

minds and makes them interesting.

It stimulates a love for truth, simplicity and intellectual honesty. When one is working with wood or iron they must do their work well, for as it has been said, "A boy cannot tell a lie in wood or iron." He may make his instructor think that he knows how to make a certain exercise, even if he does not understand the details of it, but when it comes to putting it to a test in wood or iron, it may make a different story.

Science and mathematics profit from a better understanding of forms, materials, and processes, and from the readiness with which their principles may be illustrated. Definitions are quickly grasped by shop-workers, and geometrical constructions are easily seen. Apparatus in physics may be made by them, giving them practice in the shop and explaining to them how it is made.

Passing beyond the school we come to its fields outside.

It aids one who must choose his occupation. In a great majority of cases one's occupation is the result of chance or environment. Boys living near wharves usually become sailors, those living in manufacturing towns, mechanics, etc., and if they break away from this they run the risk of being out of employment. Hitherto men who have cultivated their minds have neglected their hands, and "vice versa." But the crying demand of today is for intellectual combined with manual training, and the manual training school supplies that want as their motto is "The Cultured Mind, the Skillful Hand." It enables an employer of labor to better estimate the value of skilled and unskilled labor and to exercise a higher consideration for the laboring man. Too often there is a great gulf between employer and employee, and this tends to make them understand each other better.

It stimulates invention. The educated man so called rarely makes a practical invention, because he is so deficient in a knowledge of essential conditions. The mechanic rarely invents because he cannot calculate, he cannot draw. Add to their education the missing elements and you have an education that to no great extent has ever been occupied.

The last which I shall consider is that of Intelligent citizenship. Franklin said he had always noticed that "among workmen, good apprentices made good citizens." They are more likely to discuss questions of public improvements with judgment than the ordinary citizen. They are less visionary, more matter of fact, and consequently better prepared to deal with actual people under actual conditions.

"The highest culture and self-conscious directive power may stand in the way of a needed reform. As a matter of fact, it always has fallen into this error, and is always doing it again."

MERLE STRINGER, Senior.

SPRAYING AN ORCHARD.

Spraying is only one of the requisites of successful fruit growing. It has only recently come into use. A great deal of attention has been given

to spraying, causing many people to think that it is the means of salvation for the orchards, but spraying must not overshadow cultivation. The order of the four fundamentals of fruit-growing is as follows: Tillage, fertilizing¹, pruning and spraying².

Spraying is an insurance against insects. For many years insects may not bother, but every four or five years we may expect a serious attack. An orchard that is sprayed every year is fairly safe from insects and orchards that are sprayed generally carry a better foliage than those that are not.

An orchard should be sprayed thoroughly or they should not be sprayed at all. Fully half the spraying that is done is a waste of time and material. Squirting a few quarts of water at a tree as one hurries by it, is not spraying at all. A tree is thoroughly and honestly sprayed when it is wet all over, on all the branches and on both sides of the leaves. An insect or a fungus is not killed until the poison is placed where the pest is. A bug will not search for the poison in order to please the orchardist by committing suicide. The farmer that sprays thoroughly will get best results.

Spraying may be done in small orchards with a spraying pump and barrel on a sled, which is moved along from tree to tree. In an orchard with large trees, the barrel may be placed on a wagon, and where spraying is extensively done a large tank on trucks is usually used.

The style of pump and nozzle to be used depends wholly on the kind of work to be done. The pump must be strong enough to force the poison to the tree and the nozzle should cause the poison to be a fine spray when it reaches the insect, or fungus.

The farmer should first know what he wants to kill before he begins to spray. There are two classes of insects, biting and sucking. Poisons, that will kill the biting insects may or may not kill the sucking insects. For sucking¹ insects an insecticide is needed that kills by contact, e, g., kerosene emulsion, Bordeaux mixture, etc. Biting insects may be killed by any of the arsenites, such as Paris green or London purple.

The time of spraying must be determined by the farmer. A tree should be sprayed when the insect or fungus is most easily killed, which is for the insect, most generally, the larva stage. Spraying may also be done to prevent a disease or an insect attack. In this case the spraying must be done before the insect or fungus appears.

NICK FENNEMA, Senior.

RAPE AS A SWINE FEED.

The rape is valuable for pigs of all ages and conditions. The seed is inexpensive, the crop is easily grown under a great variety of conditions, and the pigs do the harvesting. Rape sown any time from early spring until the middle of August will make an excellent pasture for swine. It should be ready for pasture about eight weeks after sowing; at this time it should be from eight to twelve inches in height. A good field of rape will a little more than sup-

port a drove of swine thereon, so that all concentrates given will go to the production of gain. The wise stock man who has pigs to feed will make large use of the rape plant, in combination with the legumes, in order to reduce feed bills and increase profits. White haired pigs running in rape when the dew is on sometimes suffer from a skin eruption. The trouble is avoided by keeping them out of the field until the dew rises.

P. G. SCRUGGS, Senior,
Geronimo, Okla.

CONDIMENTAL STOCK FOOD.

The condimental stock foods and all preparations of similar composition sold under a variety of names, are mixtures of some well known feed material, like mill feeds, corn meal, oil meal, etc., and a number of simple herbs, roots and barks that possess or are supposed to possess, medicinal properties; common salt, epsom salt, sulphur, charcoal or coloring matters are also added in most cases, to increase the palatability or supposed medicinal effect of the food, or to disguise its composition.

Experiment stations have found the principal condimental stock foods here named to contain the following ingredients:

Dr. Hess' Poultry Panacea.

(Ingredients)—Wheat offal, red pepper, asafoetida, common salt, epsom salt, iron sulphate, Venetian red, sand, lime carbonate, saltpeter and charcoal.

International Stock Food.

(Ingredients)—Wheat offal, oil meal, red pepper, gentian, common salt, numerous seeds, and plant tissue.

Gold Coin Cattle Fattener.

(Ingredients)—Wheat offal, pepper, common salt, sulphur.

Pratt's Food for Horses and Cattle.

(Ingredients)—Corn and wheat offal, bean meal, fenugreek or fennel, gentian, common salt, epsom salt, charcoal.

Wilbur's Stock Food.

(Ingredients)—Wheat feed, cereal hulls, oil meal, corn, fenugreek, gentian, common salt, charcoal.

This is what the food is claimed to do for cows: "It keeps the appetite, good and fattens quickly, prevents abortion, garget, milk fever, and dairy diseases, also prevents cows from going off feed."—all by feeding one or three measures full a day or about an ounce.

This is what the food is claimed to do for horses: "It keeps the bowels loose, water clear, blood cool and in healthy condition, prevents colic or kidney diseases, relieves heaves, coughs and colds, expels worms and hots, keeps them in a good appetite and is a great flesh former."

Each one of these foods are claimed to be the only known remedy for diseases of all animals, and still one gets five feeds for one cent.

It is a wonder under these conditions, that veterinarians have been able to make a living, with this and similar preparations on the market, as the list of diseases that may be cured by feeding the food includes, nearly all of those to which the farm animals are subject.

It is difficult to treat seriously this question of Claims made for stock foods, as it does not seem possible that anyone could believe in them. Diseases of entirely different natures and caused by different conditions in the system of animals, are claimed to be cured by the feeding of the same remedy, which as we shall see, by no means has the powerful medicinal effect that the manufacturers would have their customers believe.

Different experiment stations have tried feeding just plain feed and also the same feed with some of the condimental stock food added, animals given the same treatment and care have shown very little difference in regard to health or fattening qualities, this difference has not, up to, this time proven profitable enough to advise any one to purchase this extra feed, because it is very expensive, and does very little good.

A farmer may commence to use a stock food. Along with it comes directions for feeding and suggestions as to care of farm stock, and, being anxious to do better, he uses the food according to the directions and the stock begins to improve.

The stock food gets the credit, but it is evident that the improvement may as well be credited to the better care and attention given to stock after the feeding of the stock food had commenced.

Of course the manufacturer is entitled to credit for the change wrought, no matter whether it belongs to the stock food or the method of feeding and care of stock.

By following the advice given as to the feeding of farm animals given in experiment station bulletins, at farmers' institutes, and in the agricultural press, the chances are however, that equally good, if not better, results would have been secured and at no additional cost to the farmer.

If the farmer considers it necessary to feed stock foods, I would suggest that he purchase the necessary ingredients at a drug store and mix them in proportions like those given below. He will save a great deal of money by doing so, since the components of stock foods on the average cost only a fraction of the price charged for the cheapest of them, and he will have the additional satisfaction of knowing just what he is feeding his stock and of feeding it in a much more concentrated form than in the case of the commercial preparations. This is a good business policy, and must appeal to all farmers who give a moment's intelligent consideration to the subject.

The following three mixtures of drugs have been suggested by two of our experiment stations:

FORMULA.

Ground Gentian 1 lb.
Ground Ginger 1-4 lb.
Powdered Saltpeter 1-4 lb.
Powdered Iron Sulphate . . 1-4 lb.

Mix, and give one table spoonful in feed once daily for 10 days, omit for three days, and feed as above for 10 more days.

This mixture can be obtained for 20c per pound and has four times the value of most condimental stock

foods, on our market as a tonic, for the reason that it contains no "filler," It is concentrated instead of diluted.

FORMULA.

Fenugreek 8 lbs.
Ginger 8 lbs.
Powdered Gentian 8 lbs.
Powdered Sulphur 8 lbs.
Potassium Nitrate 8 lbs.
Resin 8 lbs.
Cayenne Pepper 4 lbs.
Flax Seed Meal 44 lbs.
Powdered Charcoal 20 lbs.
Common Salt 20 lbs.
Wheat Bran..... 100lbs.

This mixture is so near the average stock food that neither the farmer nor his stock can tell the difference. This will cost about \$4.42 per hundred lbs.

FORMULA.

Powdered Gentian 1 lb.
Powdered Ginger 1 lb.
Fenugreek 5 lbs.
Common Salt 10 lbs.
Bran 50 lbs.
Oil Meal _____ 50 lbs.

Cotton seed meal can be substituted in the place of oil meal, using 40 lbs. instead of 50.-

This can be made for about 1.50 per cwt.

Feed a table spoon full twice a day.
THOS. O STRINGER, Senior.

PEANUTS.

The peanut belongs to the legume family, therefore it is not only a valuable stock feed but is valuable as a nitrogen adder to the soil.

While peanuts will grow in almost any good southern soil, it seems to thrive best in a good loose sandy loam. The peanut is one of the surest hog feeds that can be grown in this country. My experience with them is that they do their best when they get plenty of rain, but will yield a fair crop during a dry season if they are cultivated well. During the dry hot weather in the summer of 1911 when the corn dried up and made nothing, our peanuts kept right on growing and made a good crop, without which we could never have fattened the large bunch of hogs that we had on hand.

The cultivation of peanuts should be about the same as that of cotton. I prefer the little Spanish peanuts for hogs as they yield well and can be planted with the hulls on to, a good advantage, while the large varieties give trouble in planting unless they are hulled. The small varieties should be planted in rows about three feet apart using about one and one-half bushels of seed per acre. For large varieties the rows should be farther apart.

The nuts may be gathered by turning hogs into the patch or they may be gathered by hand and the vines cured into hay. Horses and cows relish the green vines when turned into the field with the hogs, so that they can get the vines before the leaves fall off. When gathering the nuts with hogs, it should be borne in mind that the nutritive ratio of peanuts is very narrow and that if some wide ration such as corn is fed along with them, prime requisites in milk production. more profitable gain than where the

hog gets only peanuts for its feed.

When it is desirable to gather the nuts, the vines should be pulled during the sunny weather. The vines should be turned upside down so that the nuts will dry as much as possible. As soon as the vines become dry they should be stacked about a long pole driven into the ground. The stacks should not be made more than four or five feet wide so that the peanuts can dry well. There is no limit to the height of these stacks, so long as they are not made so tall that they will be blown over. Peanuts, if carefully stacked, will keep all winter, but it is best to put them in the barn when they become dry enough, as they sometimes mold in the stack during very rainy weather, and rabbits and the like are very fond of the nuts and will bother the stacks if left in the field. The vines from peanuts cured in this way is equal to alfalfa hay for horses or cattle.

P. G. SCRUGGS, Senior,
Geronimo, Okla.

ALFALFA HAY MAKING AND FEEDING.

Experience teaches that alfalfa should be cut when about one-tenth of the plants reach the blossom stage, since after that time there is little increase of nutrients, and early cutting materially aids the next crop.

Different experiment stations have found four cuttings of alfalfa yield more nutrients than two cuttings. There is practically no difficulty in curing any but the first crop. When the conditions are unfavorable for curing the first crop, the most practical method is to cut the alfalfa in the morning after the dew is off, allow it to barely wilt in the swath, then rake, and before night put in narrow, tall cocks. After the dew is off the next morning and the surface of the ground has become dry, open these cocks carefully, so as not to shatter off the leaves. If the weather is favorable the hay may be stacked in the afternoon, if not, recock carefully, and repeat treatment until the hay is properly cured.

Experiment stations have found that from 40 to 60 per cent of the weight of the alfalfa plant is in the leaves, which carry four-fifths of the crude protein and over half of the nitrogen free extract and fat. Three fourths of the fiber, or woody portion, is in the alfalfa stems.

Alfalfa should always be stored under cover if the best results are obtained from the hay, because much of its feeding value is wasted if stacked without any protection.

Alfalfa is about the best if not the best of any roughage that is grown on the farm. It is not so valuable for road horses, being too laxative, and causing the animal to sweat freely. However it can be used to a limited extent for all classes of horses, and largely with those doing slow, steady work.

For the dairy cow there is no better feed, for alfalfa hay is rich not only in crude protein, but in mineral matter, prime requisites in milk production.

THOS. O. STRINGER, Senior.