

## VALUE OF ROTATION

### Single Crop Idea Not Successful on Irrigated Farm.

Much Emphasis Is Laid on Value of Quantity of Humus in Soil, Which Eastern Farmer Calls "Very Life of Soil."

The basis of farm success is organization, system on the farm; the basis of organization on the farm is crop management; on the successful management of the crop largely rest the following five fundamentals:

1. Economy of business.
2. Maintenance of soil fertility.
3. Productivity of the soil.
4. Subsistence for live stock.
5. Farm profits at end of season.

The term "rotation of crops" is used to designate a system of crops which give a recurring succession of field plants with different plant food requisites. This covers a period of years and are maintained in different or alternating fields of the same farm. The primary purposes of a crop rotation are: First, prevention of "crop sick" soils, the result of continuous cultivation of the same crop for a period of years; second, the elimination of weeds, insect pests and crop diseases; third, increase in the productivity of the field crops by conserving the soil fertility.

The first crop to be grown to any appreciable degree "under the ditch" was wheat. Wheat followed wheat, year after year, until its yield fell below 50 per cent of what it first gave the farmer. This was especially true in northern Colorado, the Arkansas valley, the San Luis valley, and the river plain farms of Utah, where water was first used. It is like feeding the family a diet of bean soup three times a day for an indefinite period. Nature wants a change. The single crop idea is not successful on the irrigated farm, any more than it is in the South where cotton has so long proven the need of a rotation of crops.

The San Luis valley wheat grower, in his despair, sent to the chemist of the State Agricultural college. He told the farmer that his soil was "crop sick," too much wheat growing for the soil. He recommended field peas. They were tried, and were a successful crop from the start. These practical farmers brought in lambs from other parts, and thus they "drive the pea crop to market." It has proven the beginning of good husbandry in this large valley.

Our Rocky Mountain soils are of granitic origin, ground out of the solid rocks of our hills. Granite is decomposed, forming that superior ballast used for railroad and street surfacing. The next step is for it to separate, in the natural processes which follow, into the elements of which it is composed; quartz, feldspar and mica shist. From the quartz comes our sand, from the feldspar our clay. By the process of erosion and through the decaying of animal and vegetable matter, some organic matter gets in, and thus we obtain humus, or vegetable mold, which holds nitrates in the soil, and a good percentage of moisture.

The different elements contain different foods upon which the plants feed. Since all plants take their food in solution, the food must be soluble in water—we can see there must be a fineness of soil just right, and we must have the proper amount of moisture in that soil for the plant to obtain food. We have many different plant foods in all soils, but the fertility of a soil is determined by the amount of potash, phosphoric acid, and nitrogen in the form in which the plant can use it, which that soil contains. These are considered the barometer of a soil since the lessened amount of any one of these three most seriously affects general crop culture. Right here we need to emphasize the value to the irrigated farmer, of the quantity of humus in his soil, which the down-East farmer calls the "very life of his soil."

It is this important element that helps a farmer, after he irrigates, to store the water in the capillaries that abound in humus and enables it to hold water like a sponge, and acts therefore as an underground storage reservoir from which the tiny rootlets can draw at will, and which enables those soils to liberate quantities of plant food in the form the plant can use it.

Our western soils are rich in potash, but deficient in humus and nitrates. Hence we need early in our cropping to take such steps as shall enrich our soils in humus. It is the easiest plant food to supply, but it is considered the most costly to buy. Therefore, the one thing the irrigated farmer needs to impress on himself is this: Get humus into the soil. Feed the soil constantly that it may in turn feed your crops!

### Overworked Farms.

Unfortunately, a large number of our irrigated farmers overwork the land and lack the systematic organization which the head always gives when brought to co-operative work. Too many of our hard-working farmers do not know "where they are at," or what the year's results net them at its close.

Then, too, we must conserve our vital forces in the soil and build up—not impoverish—our soil resources. Attention to those matters, a study of the work cited above, will act like leaven and incite a desire in others to "go thou and do likewise."

## KEEPING SWINE ON ALFALFA

Fields Should Be Divided So as to Change From One to Other to Insure Success.

In answer to the question, "How many hogs may be successfully kept on one acre of alfalfa?" That would depend on the character of the land, the advantages of irrigation, etc. To raise hogs on alfalfa with no other feed would not be profitable, writes Elias Gallup in the California Cultivator. Small pigs require grain, milk or some other feed. Hogs at six months old in good thrifty condition, will continue to grow on alfalfa alone, but to be thrifty and profitable, they should have grain or some other food. Brood sows and sucking pigs fed on slop and skim milk and middlings with alfalfa pasture make rapid growth for their pigs. To raise hogs successfully on alfalfa we should have our fields divided so as to change from one field to another.

To secure the best results with alfalfa, we should not allow the hogs to root, nor feed too close. To insure good health to hogs, fresh pasture is very essential. Never allow hogs to have mud holes, stagnant water or filthy quarters. A good wallow in clean water is good for the hog, but they should not be allowed to wallow in old filthy places. I have been raising and selling pure bred hogs for breeding purposes for 28 years, and would not know how to get along without the alfalfa pasture.

To raise hogs requires study, care and education, but to answer the question, how many could be raised on one acre, would depend on the education of the owner and the care he gave them.

## HARD EXPERIENCE OF MANY

Amateurs Expect Too Much of Their Flocks and Fanciers Misrepresent Their Stock.

(By G. H. ROSEBURG.)

A man who has gone into the poultry business in the right way recently received a jolt that surprised him. He paid a good price for eggs guaranteed to be from hens that had scored 100 points and when his first flock of birds were about a year old he had them scored by a local judge. He was delighted when several of his best pullets and cockerels scored 100 and the rest ran up above 95. He was sure he sent champion prize winners until he sent about a dozen of his best ones to the Chicago Poultry show. Then came the jolt.

His birds were judged by men who know their business and play no favorites and the result showed none of his stock to be better than 92, while more than half of the flock ran down below 85. Of course his birds are pretty good at that but not good enough to bring fancy prices, while the eggs will bring little if anything above store prices.

This man's experience is too often repeated. The whole trouble lies in amateurs expecting too much of their flock, unscrupulous fanciers misrepresenting their stock and local judges being incompetent or too anxious to please.

### Truck Crop in Orchard.

The growing of cantaloupes, potatoes or some truck gardening crop between rows of trees, while waiting for fruit to come into bearing is to be commended as good husbandry.

### Ducks Are Hearty Eaters.

Ducks are pigs for food, and gobble down pretty nearly everything that comes in the way. Ducks must have plenty of green food, or they will not thrive.

## POULTRY NOTES.

Sweet skim milk is excellent in finishing off broilers. Plan to save the butchering refuse and feed it to the hens.

Stale bread crumbs make a very good addition to the morning mash. Expensive poultry buildings are unnecessary.

Rock salt is dangerous in the poultry yard.

Nice warm bran wash is a good thing to serve on the bill of fare for the old hen.

Game fowls command higher prices than any of the old breeds, but eggs, though small, are well flavored.

For laying hens it is better to have the corn cracked rather than to feed it whole.

Some poultry authorities put the average production of the farm hen at 64 eggs a year.

Let the eggs from your valuable, reliable breeders be surely fresh and fertile.

If you wish to force egg production try feeding fresh cut bones and newly sprouted grains.

It has taken the successful duck growers many years to master the art of growing ducks by the wholesale.

A frequent cause of male birds getting their wattles frozen comes from first getting them wet in the drinking water.

The guinea, if thoroughly known, should bring a good price on the market, especially during the game season.

Not all fertile eggs will hatch, but we could certainly increase the percentage by greater care in the selection and maintenance of the stock birds.

The food that is proper for the manufacture of eggs will be equally suitable for the growth of feathers, so that an egg food will make the ideal molting food.

## THE KITCHEN CABINET



HE mind may feed on fancy, but the matter-of-fact stomach imperiously demands something more substantial.

### The Kitchen.

Much has been said and written about the modern up-to-date kitchen. The ideal kitchen is not within the means of the everyday housekeeper; but it is possible to have one that is both convenient and attractive with small cost. Have the kitchen on the ground floor, if possible. The north and east exposure is considered the best, with plenty of air and light. If the window light is not sufficient, paint the walls and woodwork in light tints. The walls should be of hard finish, which can be cleaned.

Most housekeepers like a pine floor covered with linoleum, the soft wood being easier for the feet than a hard wood floor.

To preserve linoleum, varnish it each fall and spring. After it is hopelessly worn off it may be painted in a solid color with a border of some contrasting hue, if desired.

Kitchen tables are best covered with zinc, which saves the constant scrubbing. When it is necessary to set a hot dish down the table need not be injured.

The sink and drain pipes should be carefully flushed every day with boiling water. Washing soda should be used frequently in the hot water to dissolve the grease gathered in the pipes.

A cupful of hot copperas water is a good disinfectant, as is chloride of lime.

All kitchen refuse should be burned when possible.

If the zinc table becomes stained, scour it with bath brick and kerosene. Rinse the tea towels in cold water then in hot soap suds and again in cold water. Hang in the sun and air to dry.

To clean linoleum or oil cloth, wipe with a cloth wrung out of warm water, to which a little milk has been added.

Much of the flavor, delicacy and wholesomeness of food depends upon the care of the utensils used. Good coffee cannot be made in a pot that is simply rinsed out and put back on the stove. A coffee pot must be washed, scalded and cared for just as carefully as the milk dishes. Sun the pot every day. The sun is a good germicide.



ILL we are built like the angels. With hammer and chisel and pen. We will work for ourselves and a woman, for ever and ever Amen. —Rudyard Kipling.

### National Salads.

The following salads may be properly termed national, as they are the favorite salads of the people in the several countries the name of which is given the salad.

**German Salad With Sausage.**—Boil four frankfort sausages twenty minutes, cut in half-inch pieces. Boil half a pound of sauer kraut ten minutes, drain and cool and mix with the sausage. Cut up two winter radishes and arrange around the salad. Sprinkle with minced onion or shallot, pickles and capers, chill and serve with French salad dressing.

**Russian Tomato Salad.**—Arrange a bed of torn lettuce leaves in a salad bowl. Peel four tomatoes of medium size, cut fine and mix with six sardines chopped, after skin and bones are removed. Place on lettuce and serve with either mayonnaise or French dressing.

**Cuban Salad.**—Break up four dry soda crackers, shred two sweet Spanish peppers, removing core and seeds. Slice very thin one Spanish onion, skin, bone and mince six anchovies and mix all together. Serve on lettuce with French dressing.

**Nontese Salad.**—Bake four mild flavored onions until tender, remove the tops and put a lump of butter on each. Season with salt and when cold cut in quarters. Add four quartered eggs and six sardines, chopped. Add parsley and mix a teaspoonful of curry with mayonnaise or boiled dressing, and serve.

**American Salad.**—Mix equal parts of finely cut celery and apple, half the amount of broken nut meats and serve with a boiled or mayonnaise dressing.



ABOUT the time a man goes into politics, his wife starts to keep boarders.

### Fish Salads for Lent.

Any kind of fish can be acceptably served as a salad, that which is boiled being generally preferred. In boiling, add a small quantity of vinegar, it will make the flesh more firm and tender. Fish salads require the addition of acids, lemon juice being the most acceptable addition.

Cucumber salad is a good accompaniment to salmon, with a plain dressing.

A combination unusual but pleasant is salmon and coconut, with a little chopped pickle.

**Herring Salad With Potatoes.**—Wash four salt herring and soak in milk several hours, then drain; remove the fillets and sides and cut in pieces. Cut four small potatoes which have been boiled, half the quantity of apples, a beet and a pickled cucumber. Mix all together, sprinkle with chopped chives and parsley; add salt, pepper and vinegar, decorate with hard-cooked eggs.

### Household Hints.

Baked apples cored before baking and filled with orange marmalade are a well-liked dessert.

For an afternoon tea, macaroons with thinly-sliced sage cheese between is a delicious dainty.

Every kitchen should be supplied with plenty of soft soap. It can be made in the home.

Steel forks and knives should be cleaned with scouring brick after each meal.

Never dry moiding boards or chopping bowls by the fire after washing, as they are so apt to warp and crack if exposed to dry heat while wet.

To remove the odor of onion from wooden or other dishes, fill with cold water, adding a tablespoonful of washing soda to a quart of water. Soak for a while, then heat the water boiling hot and use it to flush the sink pipes. In this way the soda answers two purposes.

Cool bread and cake on racks made for the purpose, or one may be improvised. Covering bread with a cloth allows it to sweat, and this often spoils the flavor.



IS thirst he stakes at some pure neighboring brook. Nor seeks for sauce where appetite stands cook. —Churchill.

### A Balanced Ration for the Family.

A few ideas on menu making with recipes are usually welcomed by the housewife. In preparing a meal, if a heavy soup, like cream soup is used, the main dish of meat should be less hearty, as the cream soup is very nutritious. When fish is served a heartier dessert is allowable, to give a well-balanced ration.

For a day's ration for the ordinary individual, twelve to sixteen ounces of meat is sufficient; the same amount of flour and grains, eight to ten ounces of potatoes, six to eight ounces of fresh vegetables and fruits, legumes and dry fruits each one ounce, sugar two to three ounces, milk four to sixteen ounces, butter one to two ounces and egg two ounces.

Multiply this by thirty, and we have an allowance for a person a month. This is a ration worked out by Miss Barrows, of which she writes: "If the larger quantity of potatoes is used the smaller quantity of flour and grains would be ample; while if eggs were cheap and several were consumed, there would be a corresponding reduction in the amount of meat and fish."

People who try to live very economically and so buy the cheaper foods, are likely to have too little protein food, while those who have an abundance are apt to take too much and overload the system, causing various diseases.

It is not necessary or practical for a housekeeper to estimate the food principles in each dish she serves, but by balancing accounts once in a few weeks by the daily ration, she may know whether she is meeting the needs of her family. Of course, one must consider that the growing boy needs food to supply heat and energy and at the same time build up bone and muscle. The growing boy needs as much food as the grown man. The man in the office does not need the amount of food that the farmer working in the open air finds necessary, so that our rations should conform to the age, occupation, climate and condition of health.

If we are to be a nation of people who do things, we must have clear brains and healthy bodies, and food is the most important factor.

### Nellie Maxwell.

Many Women in Banks.

Ten years ago there were only two women bankers in Kansas, now there are more than 550, if one counts as bankers the presidents and so on, including the cashiers and directors. There are four women presidents, 15 vice-presidents, 50 cashiers, 250 assistant cashiers and 250 directors. Miss Anna Speck, who is of the bank commissioner's office, says that if there were more women bankers there would be no need of bank supervision and no "bankers' colonies" in the state prisons. She has found them absolutely honest in their accounts. She knows all about the banks of her state.

### Fame.

"It is a great honor for a statesman to have his portrait circulated before the gaze of posterity on our national currency," remarked the treasury official. "Yes," replied Senator Sorghum, "and yet did you ever know anybody to hold on to a dollar bill long enough to know whose picture is on it?"

## BLOOD HUMORS

It is important that you should now rid your blood of those impure, poisonous, effete matters that have accumulated in it during the winter.

The secret of the unequalled and really wonderful success of

## Hood's Sarsaparilla

as a remedy for Blood Humors is the fact that it combines, not simply sarsaparilla, but the utmost remedial values of more than twenty ingredients—Roots, Barks and Herbs—known to have extraordinary efficacy in purifying the blood and building up the whole system.

There is no real substitute for Hood's Sarsaparilla, no "just as good" medicine. Get Hood's today, in liquid form or tablets called Sarsatabs.



## FOR PINK EYE

Cures the skin and acts as a preventive for others. Liquid given on the tongue. Safe for brood mares and all others. Best remedy remedy 50 cents and \$1.00 a bottle; \$5.00 and \$10.00 the dozen. Sold by all druggists and horse goods houses, or sent express paid, by the manufacturer.

SPOHN MEDICAL CO., Chemists, GOSHEN, INDIANA

One might fight a lie and still not follow the truth.

To correct disorders of the liver, take Garfield Tea, the Herb Laxative.

He who cannot do kindness without a brass band is not so scrupulous about his other dealings.

Preaching produces so little practice because people look on it as a performance.

Garfield Tea cannot but commend itself to those desiring a laxative, simple, pure, mild, potent and health-giving.

Didn't Care. Hewitt—I guess you don't know who I am.

Jewett—No, and I haven't any woman's curiosity about it.

Domestic Amenities. Father—I think the baby looks like you.

Mother—Yes, it shuts its eyes to an awful lot.

A Quick Sidestep. Merchant (to widow)—I am willing to buy your husband's working business and good-will for \$5,000.

Widow—Well, but I happen to be part of the working business.

Merchant—Then I'll take only the good-will.—Filegneus Blaetter.

No Purchase Recorded. There was a dealer who tried to sell a horse to the late Senator Daniel of Virginia. He exhibited the merits of the horse, and said, "This horse is a reproduction of the horse that General Washington rode at the battle of Trenton. It has the pedigree that will show he descended from that horse and looks like him in every particular."

"Yes, so much so," said Senator Daniel, "that I am inclined to believe it is the same horse."

Crutches or Biers. Richard Croker, at a dinner in New York, expressed a distrust for aeroplanes.

"There's nothing underneath them," he said. "If the least thing goes wrong, down they drop."

"I said to a Londoner the other day: 'How is your son getting on since he bought a flying machine?'"

"On crutches, like the rest of them," the Londoner replied.

## The Human Heart

The heart is a wonderful double pump, through the action of which the blood stream is kept sweeping round and round through the body at the rate of seven miles an hour. Remember this, that our bodies will not stand the strain of over-work without good, pure blood any more than the engine can run smoothly without oil. After many years of study in the active practice of medicine, Dr. R. V. Pierce found that when the stomach was out of order, the blood impure and there were symptoms of general breakdown, a tonic made of the glyceric extract of certain roots was the best corrective. This he called

## Dr. Pierce's Golden Medical Discovery

Being made without alcohol, this "Medical Discovery" helps the stomach to assimilate the food, thereby curing dyspepsia. It is especially adapted to diseases attended with excessive tissue waste, notably in convalescence from various fevers, for thin-blooded people and those who are always "catching cold."

Dr. Pierce's Common Sense Medical Adviser is sent on receipt of 31 one-cent stamps for the French cloth-bound book of 1098 pages. Address Dr. R. V. Pierce, No. 663 Main Street, Buffalo, N. Y.

## W. L. DOUGLAS

ESTAB. 1873 \$2.50 \$3.50 & \$4.50 SHOES FOR MEN

BEWARE OF SUBSTITUTES. REFUSE all substitutes claimed to be "just as good," the true values of which are unknown. You are entitled to the best. Insist upon having the genuine W. L. Douglas shoes with his name and price on the bottom.

W. L. Douglas shoes cost more to make than ordinary shoes, because higher grade leathers are used and selected with greater care; every detail in the making is watched over by the most skilled organization of expert shoemakers in this country. These are the reasons why W. L. Douglas shoes are guaranteed to hold their shape, look and fit better and wear longer than any other shoes you can buy.

If your dealer cannot supply you with the genuine W. L. Douglas shoes, write for Mail Order Catalog. Shoes sent direct from factory. Wholesale prices. Capital Card Co., Dept. 79, Topeka, Kan.



BOYS' SHOES

## RHEUMATISM



Munyon's Rheumatism Remedy relieves pain in the legs, arms, back, stiff or swollen joints. Contains no morphine, opium, cocaine or drugs to deaden the pain. It neutralizes the acid and drives out all rheumatic poisons from the system. Write Prof. Munyon, 612 and Jefferson Sts., Phila., Pa., for medical advice, absolutely free.

## The Army of Constipation

Is Growing Smaller Every Day! CARTER'S LITTLE LIVER PILLS are responsible—they not only give relief—they permanently cure Constipation. Millions use them for Biliousness, Indigestion, Sick Headache, Sallow Skin. SMALL PILL, SMALL DOSE, SMALL PRICE. Genuine with Signature.

## A Country School for Girls

5 Fine POST CARDS FREE

Send only 5c stamp and receive 5 very finest Gold Embossed Cards and Post Cards. Introduce post card offer. Capital Card Co., Dept. 79, Topeka, Kan.