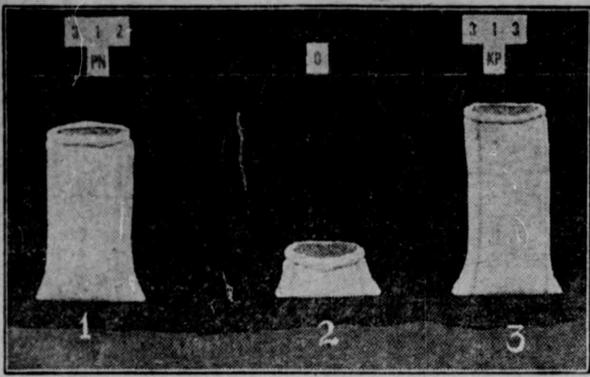


PROPER METHOD OF FERTILIZING FOR WHEAT

By J. C. BEAVERS, Soils and Crops Department, Purdue Experiment Station, Purdue University Agricultural Extension.



1.—21 Bushels Per Acre. 2.—4 Bushels Per Acre. 3.—28 Bushels Per Acre. Wheat—Clay Soil—Scott County.

Judging from the amount of space given to discussing the old hen in agricultural and other papers, one would think that she is holding up the staff of life, but it still requires about six bushels of wheat and only a peck of eggs to satisfy the gastronomic proclivities of the average person.

Wheat is and always will be the standard bread cereal. It requires about nine to ten months to seed, grow, harvest and thresh a crop of wheat. It costs the farmer on the average between \$12 and \$13 an acre to produce and market wheat. From 1900 to 1903 Indiana produced on an average of 14.2 bushels of wheat to the acre, which sold for an average of 84 cents per bushel. In other words the average acre of wheat produced during this ten-year period was worth \$11.93 or less than enough to cover the cost of production. This doesn't look like the wheat growers are responsible for much of the present high cost of living.

The problem of growing more wheat, like the problems in every line of business, depends upon doing the right things and doing them a little better than the average.

By far the largest part of the wheat acreage of Indiana is seeded either in standing corn or just after the corn has been cut. Another large portion is seeded on fallowed oats stubble. The wheat seeded under these conditions constitutes about 90 per cent. of the total acreage of the state and are, therefore, the methods of seeding which need most attention.

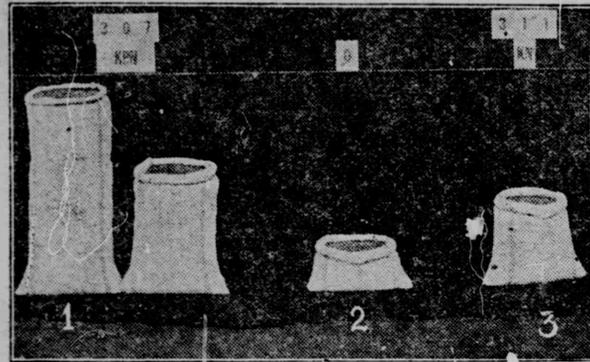
When seeding wheat, most farmers have two purposes in view. They want a good wheat crop and at the same time they want to get a good catch of clover in the wheat that will

on a man to do two days work in succession without a meal between. That corn crop is going to take nourishment from the soil right up to the time wheat is seeded. Shortly after wheat is seeded the weather will get cool and nitrates will not be formed, neither will other plant foods be so readily available, so it would be wise to feed the crop.

The soils and crops department has been fertilizing wheat for a number of years with good results. When we spend one dollar for the right kind of fertilizer we expect to get that dollar back and two dollars extra. Then it not only helps the wheat but also greatly improves the yield of clover. Clover needs more phosphorus when grown on the clay and clay loam soils, and when grown on the sandy and sandy loam soils it also needs potash. If the wheat receives a liberal application of fertilizer there will be some left for clover. Our best results have been obtained by using 300 pounds of fertilizer containing about two per cent. nitrogen, eight to ten per cent. phosphoric acid and from three to five per cent. potash. The higher per cent. of potash is used on the lighter sandy loam soils.

Where clover has been turned under or the preceding corn crop has received an application of ten or more tons of manure, the nitrogen may be left out, as it will do little good where there is a fair supply of organic nitrogen in the soil.

In case a farmer wishes, he can usually save several dollars a ton by buying the fertilizing materials and mixing his own fertilizer. A good wheat fertilizer may be made by mixing 900 pounds bone meal, 900 pounds acid phosphate, and 200 pounds of



1.—31 Bushels Per Acre. 2.—4 Bushels Per Acre. 3.—9 Bushels Per Acre. Wheat—Clay Soil—Scott County.

make a good crop of hay the following year. This is just what should be desired, but a greater effort must be put forth if this desire is to be fully accomplished.

This station has repeatedly warned the farmers against practicing systems of farming and adopting rotations which do not maintain the organic matter supply of the soil. One of the greatest needs of Indiana soils is more decaying vegetable matter. This soil constituent has more to do with the yield per acre than any other. The physical, bacterial and moisture conditions are very largely controlled by the supply of organic matter and the aim of every successful farmer should fully be to provide some means of keeping up the supply of this constituent. There is no substitute for it. There is none needed. The supply depends upon the farmer's ability to keep stock and return manure to the soil or his ability to plan a rotation that will furnish sufficient crop residues to turn under or to grow crops and turn under that will maintain the supply. And there is no wisdom in waiting until the life has been farmed out of the soil before beginning such a practice. No farm should ever be allowed to get badly in need of it. It is needed for every crop, everywhere, at all times. And there are no exceptions to the rule. There is no way of adding a supply for future generations, so provide a system of manuring or turning under clover that will be permanent by keeping everlastingly at it. It will increase the wheat crop, the corn crop, the clover crop and provide more money for the farm family.

Wheat after corn and after oats; we must not forget that. That wheat which will be seeded after corn and oats is likely to need some nourishment, like the man who has worked hard all day. It would be very hard

muriate of potash. This fertilizer should analyze about two per cent. nitrogen, 16 per cent. phosphoric acid and five per cent. potash. This mixture is suitable for clay and clay loam soils.

If the soil is much deficient in organic matter and nitrogen it would be well to replace 100 to 150 pounds of bone meal with the same amount of high-grade slaughterhouse tankage. For sandy loam soil more potash should be used in the above mixture—about 50 pounds more.

Those who have not been getting good crops of wheat and clover will do well to try an application of 250 or 300 pounds to the acre of fertilizer, such as given above. On any but the very best soil it will pay well.

Pump Engine.
When we consider how the pump engine furnishes the stock with water, whether the wind is blowing or not, costs less for repairs, never blows down and ruins itself or kills valuable animals, always supplies water at the proper temperature, summer or winter—and a dozen other advantages over the windmill—we wonder why any intelligent farmer will be without one of those money-making machines.

Separate the Cockerels.
As soon as the breeding season is over it will be best to separate the male birds from the rest of the flock. The eggs will keep longer if they are not fertilized and in a great many markets they command a much better price.

Work for Low Heads.
Prune and trim the peach trees for low heads. If possible have the lower branches not over 15 to 20 inches from the ground. This gives protection to the trunk and makes picking easy.

HABITS OF THE ROBIN

Bird Prefers to Build Its Nest Near the House.

Young Songsters Should Not Be Handled Until They Leave Nest of Their Own Accord—Sparrows Rob Them of Worms.

(By CRAIG S. THOMAS.)
Of all the birds that build in trees the robin brings its nest nearest the house. It prefers to be at the front door, where the members of the family



Robin's Nest.

are constantly coming and going, and if it can find a suitable place it will build directly over the walk. This makes a number of interesting facts easy of observation.

Let the nozzle of the hydrant drip until the ground below it holds a little pool of water, or by some other means provide a pool somewhere in the yard. To this pool the robin will come for mud to build the walls of her nest. Into it she will souse billfuls of dried grass before mixing it with the mud. In it she will wet herself before flying to her nest to mould the mortar wall of mud and grass to fit her body.

When the young fill the nest every child in the family will want to climb up to see them, and the older children will be tempted to lift them out of the nest, hold them in the hand, and possibly take them into the house a moment to show mother what bird babies are like. But to do this is all but sure to result in the death of the young. A young bird once lifted from the nest has "found his legs," and will never be satisfied in the nest again. He will climb upon its edge and go bumping down on the lawn long before he is able to fly, and the neighbor's cat is sure to get him. Young birds should never be handled until they leave the nest of their own accord.

As the parent-robins search the lawn for worms to feed their young, hopping a little way and then stopping to look and listen, you will often see an English sparrow following close behind and a little to right or left. He is expecting the robin to pull a worm from the ground, when he will dive boldly for it, snatch it away, and make off with it. In this piratical enterprise the sparrow is not infrequently successful.

Note your robins carefully. Discover upon them if possible some distinguishing mark, and see whether they return to you another year. A male with left wing drooping almost to the ground as it hopped, returned three successive years to the same yard. It has doubtless been injured in a fight, which is not an infrequent occurrence. One may not be certain that plumage markings of exceptional character will recur year after year, as plumage may vary with moultings. But any malformation, resulting usually from injury, renders identification all but certain.

ALFALFA AS MILK PRODUCER

Hay, With Proper Kind of Grain and Little Succulence, Will Duplicate June Pasture.

(By L. R. WADRON Superintendent Dickinson, N. D., Sub-Station.)

Alfalfa is of great value as a milk producer, for it is a well known fact that an ample milk flow requires rich feeds. Good June pasture produces an abundance of milk. It has been demonstrated that alfalfa hay, when used with a proper kind of grain, and with a little succulence, such as ensilage, will practically duplicate a June pasture.

When cows are properly fed, before turning onto pasture, they show no increase of milk flow upon the pasture. If a dairy cow is properly fed, she must have a ration that contains a larger percentage of protein than is found in common hays or in most of the grains. Protein is supplied through bran, linseed meal or some other concentrate. To pay high prices for these to increase the milk flow means that the cost of milk production is increased, and in many cases to such an extent that milk is produced at a loss, or at a very nominal margin.

Cow and Soil Fertility.
The fertility of the soil can best be maintained by the liberal use of barnyard manure, and the dairy herd not only makes this possible, but dairying is also more remunerative than almost any other branch of farming when it is properly carried on.

Remove Old Cans.
Remove and burn the old raspberry canes immediately after fruiting. This is the best means to control anthracnose, which is the most destructive disease of the raspberry.

CHEAP HELP ON MANY FARMS

Besides Adding to Revenue of Farmer by Wool and Mutton, Sheep Devour Many Noxious Plants.

(By W. A. LINKLATER, Oklahoma Experiment Station.)

It would add to the revenue of many farms if a flock of sheep were kept. Besides being profitable they are great weed eaters. They will eat five out of six of our known weeds, where a cow or horse will eat only one out of every six.

Range-bred sheep are the right kind for the average farmer to buy. Such will be graded Merinos and if they carry a cross of Shropshire, Lincoln and other mutton blood, so much the better. It would not be advisable to buy Mexican sheep or low grade sheep of any other kind.

The ewes purchased for the foundation flock should be good, large animals from one to four years old, and weighing more than 100 pounds. Where possible it would seldom be practical to start with less than 50 ewes, and a larger number would be better still. A flock of a dozen would require almost as much care as 50 or 100. These range-bred grade Merinos should be bred to a Dorset ram if possible.

The reason we recommend buying range-bred grade Merino ewes is that thousands of these are available, while Dorsets are not to be had in large numbers.

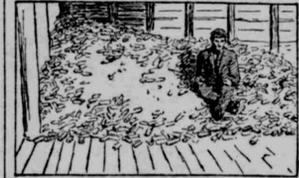
These fall or early winter lambs, by good feeding and care can be made to weigh 90 to 100 pounds by May 1, when they will find a ready market and will always be in demand. Such lambs should bring from \$5 upward.

SELECTING CORN FOR SEED

Technical Knowledge on Part of Farmer Not Necessary for Improvement of His Crop.

(By J. M. GRAY.)

The possibilities of improvement of corn by judicious selection, are very great. Ever since man has been tilling the soil, he has changed the character of plants by consciously or unconsciously making selections. The improvement of any plant is considered by most farmers a very difficult operation and one to be undertaken only by those who are qualified by natural ability and special training, to such



A North Carolina Boy and His 160 Bushels of Crib Dry Corn Grown on One Acre of Land.

work. Yet it does not require any technical knowledge on the part of the farmer to improve corn, for the methods of selection are very simple.

Every farmer who is growing corn should plant some standard variety which he knows has been tested and gives the most profitable yields in his locality, and from this he should select, each year, seed that comes nearest to his ideal. It is necessary to make this selection each year because if it is not done the corn will soon revert to the original type and lose those qualities which the farmer has been striving to get.

In your selections, instead of looking for an ideal ear only, look for an ideal stalk made up of an ideal stem, of ideal foliage and of an ideal root system bearing an ideal ear or ears covered with ideal husks, and supported by an ideal shank. Possibly this will be hard to find; but you can find something which approaches it and from this, with your ideal in view, you can select continuously until you have a plant very nearly approaching that ideal.

Inferior Lambs.
Lambs of low vitality and ewes deficient in milk flow at lambing time are usually the result of improper management during the pregnant period.

DAIRY NOTES

Not all cow keepers are dairy farmers.

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Warm and cold cream ought not to be mixed.

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Good dairy stock show their possibilities early.

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Many eastern farmers feed grain to milk cows on pasture.

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Quiet and comfort are what count in dairying, and more especially in hot-weather dairying.

• • •

Successful dairying depends entirely on right methods in breeding, feeding and management.

• • •

If there is no silo on your farm, do not let another winter catch you unprepared. Make your plans right now for one.

• • •

Often times the one who has dairy butter for sale must take his pay in trade, while those who sell cream get nothing but cash.

• • •

In selecting cows, all signs may fall, but the Babcock test is absolutely reliable. It will tell you whether the cows are good or not.

FROM THE PINEAPPLE

SUCCULENT FRUIT THE BASIS OF MANY DELICIOUS DISHES.

May Be Utilized in Preparations for Immediate Use or for Preserves That Will Be Welcome in the Winter.

The pineapple should be joyfully welcomed, for it is cheap, has good keeping qualities and a clean, delicious flavor. Here are some good pineapple dishes, as given by the Delineator:

Pineapple Omelet.—Beat three eggs thoroughly with a tablespoonful of sugar, adding at the last a pinch of salt and a teaspoonful each of lemon and pineapple juice. Have the omelet pan hot and well greased, sides and bottom, with a teaspoonful of melted butter or oil. Turn in the beaten eggs, and as they cook, break the omelet once in a while with a silver fork. When still moist, sprinkle on top half of the oatmeal, a cupful of chopped or grated pineapple, canned or fresh, fold over the other half, sprinkle with sugar and serve immediately.

Pineapple Sirup.—Slice, peel and dice enough pineapple to make about three pounds. Place in preserving kettle with a pound of sugar and a quart of water and cook until very soft. Mash and strain. Return to the kettle, and to each pint of juice allow a pound of sugar. Cook to a rich sirup and bottle while hot. Use patent stoppers or sealing wax to make airtight. This will be ready for use at any time for sauces or cooling drinks.

Pineapple Sauce for Ice Cream.—Put a cupful of fresh pineapple juice in a saucepan with a cupful of granulated sugar and cook ten minutes. Add the beaten yolks of two eggs, and whip with an egg-beater over boiling water until foamy. Take from the fire, add the whipped whites of eggs and serve hot with ice cream. If the pineapple sirup is used, omit the sugar.

Preserved Pineapple Uncooked.—If one has a good cold cellar or storeroom the fresh pineapple may be grated and preserved uncooked. Allow a pound of sugar to each pound of grated fruit and let stand in the refrigerator for twelve hours. Then pack into sterilized jars, screw tight, and as an additional precaution cover the top with sterilized cotton batting and tie down firmly. Keep in a cold, dark place.

Pineapple Jelly.—Pineapple jelly is worth while preparing for winter use. To make it, pare ripe pines and grate them and to each cupful of grated pulp measure out a cupful of sugar. Add half the sugar to the fruit and let it stand in a covered earthen dish for three hours. Then boil it, very slowly, in a granite or porcelain saucepan until the pulp is soft. Do not use tin, as the pineapple juice sometimes injures the surface of this metal. Let the pulp drip through a jelly bag over night. The next day heat the rest of the sugar on shallow platters in the oven, and in the meantime boil for 15 minutes the juice which has dripped through the jelly bag. Then add the hot sugar, let it melt in the liquid, but do not let it boil any longer, and pour it into glasses.

Before Mayonnaise.
In the days before the art of mayonnaise dressing was known to every good cook the English had a very fair substitute for it which they used with their salads. It was called "an artful mixture," and doubtless as much ingenuity was used in its mixing as the modern cook uses in making mayonnaise. It consisted of mustard, oil and vinegar, "artfully" mixed to a smooth dressing. At her discretion the cook might add the hard-boiled yolks of new-laid eggs, if before adding them she carefully rubbed them to a powder. The recipe, though somewhat vague, suggests a dressing with claims of attention to the lover of good salads.

Hard Sauce.
A good hard sauce for any pudding is made with half a cupful of butter, beaten to a cream and thickened with a cupful of powdered sugar. Whip an egg white, light and stiff, season it with a grain or two of salt, and a good deal of nutmeg and fold it lightly into the butter and sugar.

Remedy for Lumpy Salt.
There is nothing better than rice for keeping salt from packing in the shakers and refusing to come out. Heat a teaspoonful of the rice and put it into the shaker. It will absorb the moisture, and the salt will come out dry as the sands of the desert, and the rice will keep it moving when shaken.

To Whiten Clothes.
White clothes that have become yellow may be whitened in the following simple manner: After washing them in the usual way, lay them to soak over night in clear water into which a teaspoonful of cream of tartar to a quart of water has been put. When ironed they are as white as snow.

Potato Soup.
Heat one pint or more of milk. Put through vegetable squeezer any potato left from dinner. Stir into milk until of proper thickness. Bring to a boil and season with pepper, salt and onion juice. Nice for supper on a cool evening.

Dressing for Cold Slaw.
Two tablespoons whipped cream, two tablespoons vinegar and one tablespoon of sugar. Delicious on lettuce as well as cold slaw.

HAPPENINGS IN INDIANA

Corunna.—Miss Princess Dilla has been elected president of the Dekalb County Woman's Suffrage society.

Linton.—A field day of state companies, Woodmen of the World, will be held here September 21.

Winchester.—The Moorman-Way-Diggs reunion will be held at Mills Lake, near here, September 4.

Milton.—Agriculture, sewing and domestic science will be added to the course of the local school this year.

Logansport.—Officials of the Fort Wayne & Northern will give their employes a picnic here September 5.

Greensburg.—Winfield Burney captured a half-grown monkey-faced owl near his home in the Milford district.

Roanoke.—Rev. C. R. Booth has resigned the pastorate of the Methodist church and will attend college at Evanston.

Shelbyville.—Marian Ruth Davis, six years old, daughter of Larue Davis of this city, is critically ill of infantile paralysis.

Evansville.—Henry Reinheimer, treasurer of the Journeymen Barbers' Local union, is under arrest, charged with embezzling \$225.50.

Evansville.—Chief of Police E. Covey has issued orders to proprietors of clubs organized to evade the Sunday closing law to close immediately.

Evansville.—Because of lack of water several coal mines between Evansville and Boonville have been forced to suspend or shorten working hours.

Farmland.—Residents of this place will probably file complaint with the state commission about the rate at which trains are run through the town.

Brazil.—After Christopher Yocum, seventy-five years old, had married Madeline Yocum, a widow, twenty-five years old, they went to a circus for a "honeymoon party."

Evansville.—James F. Fee Camp, United States-Spanish war veterans of this city, will endeavor to obtain a Maine memorial tablet for this city from the armor of the ship destroyed at Havana in 1898.

Shelbyville.—Edmund K. Adams, an attorney of this city, has been selected as one of the speakers for the annual reunion of the students of the old Hartsville college, to be held at Hartsville August 26.

Hammond.—Matthew Franzen, declared legally dead about two years ago, has appeared from Idaho, where he has been living and has laid claim to a portion of his father's estate. He left home in 1868.

Princeton.—While en route to his former home at Fort Branch, this county, with his wife and children, Clarence Barker was stricken with paralysis at Kansas City, Mo., and he was taken to a hospital there, where he died. The body was brought to Fort Branch.

Terre Haute.—Flora Licklite, age ten, fell from an improvised broom stick trapeze and the end of the stick penetrated her body. It is said at the hospital she may recover. She was playing at the home of her parents, Mr. and Mrs. William Lickliter, in South Eighth street.

Jefferson.—Edward Morton, an inmate of the state reformatory here, stabbed and killed Charles Bartle, another inmate. Morton said he bore Bartle no ill will and that he stabbed him so that he could be sent to the Indiana state prison at Michigan City, where the prisoners are given tobacco.

Lafayette.—John H. McGrath, age sixty-one, a veteran employee of the L. E. & W. railroad at St. Elizabeth hospital here, died of injuries suffered when he fell from the pilot of a yard engine and was rolled beneath the locomotive. McGrath had been employed as yardmaster for thirty-three years.

Evansville.—Four hundred farmers in Vanderburg, Warrick and Gibson counties will organize the Game Protective Association of Southern Indiana, the purpose of which will be to protect birds, which the farmers find of inestimable value to them through destroying of worms and bugs, by stopping hunting on their lands.

Linton.—Joseph Fisher, said to be one hundred and seven years old and claiming to have cast his first vote for Andrew Jackson for president, passed through here in a one-horse wagon on his way to Bedford, Ind., to make his future home. He was accompanied by his daughter, seventy-nine years old, and his son, sixty-four.

South Bend.—Two members of a carnival troupe appearing here are believed to be in serious danger of death in a local hospital, as a result of injuries received from animal bites. Fred Smith, age nineteen, was bitten on the arm by a rattlesnake while feeding them. Frank Cardona, an animal trainer, was attacked by a leopard.

Danville.—Work on Hendricks county's \$250,000 court house has reached the third story and the contractors, P. H. McCormack & Co. of Columbus, are rushing everything in an effort to have the building enclosed before bad weather sets in so as to work on the interior the coming winter.

Columbus.—After causing the arrest of Homer Sullivan and Clinton Bowers for stealing a goose from his farm and cooking it, Thomas Nolan lent and asked the judge to be released, saying that when young he had stolen many a goose himself.