

HOW TO DEAL WITH QUACK GRASS

THIS GRASS IS NOT SO VERY EASY TO DESTROY, BUT PERSEVERANCE AND THE RIGHT KIND OF CULTIVATION WILL DO IT.

By W. J. BEAL.

Every farmer knows how rapid is the increase of weeds on the farm. As a rule each farm is annually getting more sorts of weeds and as each farmer is cultivating weeds, these are becoming more freely distributed in every field and along every roadside.

The great mass of farmers and gardeners think to kill a weed by some royal easy process, such as mowing in a certain phase of the moon or a certain definite period in the year or by once or twice cultivating. After the cultivator he waits until the leaves are several inches high before making the next effort. Such persons will ways have the company of a weed after its first introduction into his field or garden.

To kill countless thousands of weeds coming from seeds, cultivate the

light, these white root-stocks are drawn on again to furnish food to start more leaves and thus, in time become exhausted. If convenient pasture closely for a whole growing season which prevents the production of new thrifty rootstocks, then, if the sod be well turned under deep, rolled and harrowed, much of the grass will be killed at once.

Ordinarily I plow late in the fall or very early in spring, rain or shine, wet or dry, or even in June, and cultivate with a shovel-toothed cultivator every three days till the middle of June, or later if starting the work later. Rarely, if the weather be wet and hot, cultivate every two to two and a half days. Keep all green leaves from showing themselves. Do not delay to see green leaves. A harrow that does not cut off the stems below the surface of the ground is not efficient.

The worst luck I ever had in this work was in summer-fallowing a piece of quack grass during a dry year. A good deal of it remained dormant and grew the following spring.

One year I tried the application of salt on one side of the bank of a brook where cultivation was very inconvenient. The strip of grass was about four rods long and the slope about five feet. Whenever seen a little at a time two barrels of salt were freely applied for the whole growing season, and the next spring the grass started up in several places ready to continue the fight, which was abandoned on that line.

For five years I tried (on the banks of a brook, or where there were only small patches) the following scheme, with great satisfaction:

During the wet and growing part of a summer I put on tarred building paper, taking care to have it overlap and completely exclude every ray of light. Six weeks to two months is enough, possibly four to five weeks, if the weather is hot and wet.

Very likely the reader will think this method costly and will hesitate and daily along, giving the grass a good chance to extend its domain. It is not worth while to plow deep or rake out the rootstocks. It is much better to be thorough in spring during a growing time than during a drouth. I mean that it can be subdued faster in wet weather than in dry. When very dry the underground stems remain dormant. Of course, small patches can be dug over with a hoe.

Where one is neat and thorough he may prefer to take two or three years in the extermination, growing two or three crops of corn in succession.

The climate of southern Alaska is more moderate than that of Chicago, owing to the Japan current. Zero weather is unknown, except when due to the active gales off the glaciers. The islands of Prince William sound seldom know a temperature lower than 10 degrees above zero.

The weak and vacillating man may be likened to "Thompson's colt" who stood between two stacks of hay and starved to death because he could not make up his mind on which one to begin.

When disposing of some of the old stock pick out the poor layers. They are "just as good" for roasting purposes, and you can not afford to part with the money-makers.

Stormy days should not be idle days on the farm. Look about and see if you cannot find some profitable work.



Quack grass.

ground weekly during the growing season and do not permit the weeds to go to seed, or, if this is too costly, let the weeds have their own way except during the early growth of cultivated crops. Frequent cultivation is necessary to a first class yield.

The following concerning quack grass, contains points that will apply to many other weeds.

I have long considered quack grass the worst weed that vexes the tiller of the soil. It is because it holds its own well and spreads whenever there is a chance, and chiefly because the farmer does not recognize it until it is scattered far and wide. It is carried by the plow, harrow, and cultivator from one end of the field to the other. To have a farm well seeded to this grass is a calamity to be avoided.

All that is needed to exterminate a field of quack grass is the right kind of a man who will carefully observe and study the plant, fighting with method and thoroughness.

I have killed 100 or more patches and can speak from practical results and success. Plants of this sort cannot gain any if the green leaves are not allowed to appear. The nourishment stored in the white root stocks underground will aid the plant to send up slender leaves and if these remain, the plants gain and recruit, but if the leaves start underground and are cut off before coming to the

CO-OPERATIVE FRUIT MARKETING.

Of all foods, fruit is the most natural, wholesome and refined. The appeal it makes is not alone to appetite, but to taste, smell, and the sense of beauty as well. One would imagine, then, that fruit should be of all things the easiest to market, and therefore the most profitable to cultivate.

That the real conditions should anywhere be the reverse of this, affords one of the most striking illustrations of the fact that present methods of collecting and distributing the products of the soil are—except in a few instances of recent improvement—altogether askew and out of harmony with common sense.

Every year, while in the centres of population fruit of all kinds commands enormous prices, millions of dollars' worth perish on the farms where grown.

But that, by co-operative endeavor, all difficulties may be overcome, and fruit brought within the reach of consumers at prices which the multitude can afford, and yet high enough to yield good returns to the grower, is being demonstrated by the successes attending the operations of fruit-growers' associations already organized.

Conspicuous among these is the California Fruit-Growers' Exchange (formed twenty-three years ago) which now represents 6,000 growers, and which handles 60 per cent of the citrus fruits grown in California, and handles it in such a way that both waste at home and over-stocked markets at the points of distribution are alike practically eliminated.

Smaller but similar associations handle about 25 per cent more of the California crop, leaving only 15 per cent to be marketed by individuals.

The establishment of organizations of similar character in the middle west would eliminate much of the waste and loss which occurs annually in that section.—C. R. Barns.

Incubators do not lessen the labor but they increase the profits.

Sheep will thrive on pasture in which other animals could not exist.

Cool your milk to 5- or 60 degrees as soon as it is drawn if you wish it to keep.

CANE IN THE PHILIPPINES

The growing of sugar-cane in the Philippines received a damaging setback during the progress of the late insurrection.

Prior to that time a great deal of good raw material was raised, and only in very late years has the industry awakened with both the natives and the government (not to mention U. S. interests) taking an active part, the natives furnishing the land for the government to show them how to do things on a grander and more up-to-date scale.

It may be said to the discredit of the Spaniards, lords for so long over the country, that not a single cane-



Philippine Sugar Mill.

grinding mill or refinery operated by steam could be found in the islands before our occupation.

Then cariboo or water-buffalo furnished the power for grinding up the juicy stalks. In many instances the mill itself could be loaded on a bulcart and transported anywhere.

The machinery was crude, and the product, as a consequence, not of the best. Now, big mills and modern refineries are going in throughout the rich cane-belts on Luzon and in Panay.

A colossal refinery was lately shipped in from Honolulu, the cost of the importation being the largest ever received on one manifest.

The plant was valued at \$220,000, and comprised some 1625 tons, the largest weighing eighteen tons.

With this huge establishment and many others in operation, the natives will have to raise cane in the fullest sense of the term to keep the wheels turning. In the interim, the sugar corporations of this country, and numerous American planters on the ground will help them out.—M. Wolley.

ORGANIZE COLT SHOWS.

Nearly every person, whether living in the city, village or country, takes more or less interest in the horse. It is easy to get an audience when it comes to studying horses, be it at a county fair, farmers' institute, or livestock meeting of any kind. We all have our favorites among the horses in a community, and are always ready to express our opinion as to the merits and demerits of the individuals.

Such interest should be encouraged in every community, and one of the best ways of doing it is to hold "Colt Shows" during the fall and winter months. In the State of Iowa, a number of these shows have been held during the past few years; and they have done much to improve the horses in the State.

In planning these shows, the first step is to solicit, among the farmers, stallion-owners and business men, for prizes that are to be awarded. These need not be in the form of money, but may be merchandise, machinery, or live stock of some kind. After the prizes have been assured it will be necessary to appoint a committee, who should make a personal canvass of the community, to encourage the owners of colts to bring them out for the contest. Proper classification should be made; so that all colts, such as draft and light colts, will not be shown in the same class. Also, have pure-bred and grades shown in separate classes. If possible, it is a good plan to have the colts from each township show in separate classes, and the first-prize winners come together as champions of the show.

The Colt-Shows may be held in connection with local market days, or livestock meetings of some kind. Outside uninterested parties should be secured to do the judging; and they should in each case give reasons for placing the colts. After the judging is done, practical talks on horse-breeding, by local men and those secured to do the judging, should be given.

Colt-Shows of this kind will also do much to advertise the stallions in a community. One of the best ways of judging the value of a stallion is by the crop of colts which he has sired.—W. H. Tomhave.

Milk sold in bottles is more likely to be clean than that which is otherwise sold. Nevertheless it is well to be sure it is clean.

PHEASANT RAISING A NEW INDUSTRY

INTEREST IN PHEASANT RAISING IS WIDESPREAD; THOUSANDS OF THE BIRDS ARE NOW SCATTERED THROUGHOUT THIS COUNTRY.

By W. L. McATEE.

Conservation of the fauna including the game birds of the United States requires the strict enforcement of laws intended to control the shooting and marketing of wild birds, and necessarily limits both the period during which they may be hunted and the number available to supply the increasing demands of those who desire those table luxuries.

This lack may be remedied by the product of aviaries, preserves, and private parks, devoted to rearing of domesticated game, the marketing of which under suitable safeguards is already permitted in several of the States, indicating that American markets will open more and more to these domesticated substitutes to the fast disappearing wild game.

At present there is no lack of demand for pheasants for various purposes. Owners of private preserves, and state game officials pay profitable prices for certain species for stocking their covers, zoological and city parks and owners of private aviaries are ready purchasers of the rarer and more beautiful species, and large numbers of dead pheasants are annually imported from Europe to be sold for several times the price they bring in European countries. The demand for pheasants is increasing.

Ringneck pheasants have long been established in Oregon, Washington, and British Columbia, and are less common in the wild state in Massachusetts, New York, Indiana and Kansas.

Efforts to acclimatize pheasants in the United States are of comparatively recent origin, though earlier than is popularly supposed. More than a hundred years ago, Richard Bache, an Englishman who married the only daughter of Benjamin Franklin, imported from England both pheasants and partridges, which he liberated on his estate in New Jersey, on the Delaware River near where the town of Beverly now stands. But although he provided both shelter and food for them, the birds had all disappeared by the following spring.

Other attempts were made later on in New Jersey, New York and Maryland, but while the birds seemed to thrive for a time, the attempt to raise pheasants in the United States proved more or less a failure until about thirty years ago, when a successful effort was made to introduce the ringneck pheasant into Oregon. Since then acclimatization experiments have followed broader lines and have assumed greater importance.

Severe criticism of pheasants and fulsome praise are about equal in volume. The birds are accused of digging newly planted and sprouting corn, oats, barley and beans, and seeds of melons, cucumbers, and squashes. It is claimed that because of their depredations it has been necessary to plant whole fields of corn. They are said to drive chickens away from their food and even to kill young poultry. Some landowners in Ontario County, N. Y., claim that the loss suffered on account of pheasants has been more than twice the amount of their taxes.

On the other hand the birds have not proved a nuisance in Oregon and Washington, where they have been numerous for years. Some farmers even value them so highly that they will not permit hunting on their property.

The few pheasant stomachs examined indicate that these birds are very fond of grain. Oats and wheat compose about 34 per cent of the food

of 12 ringneck pheasants collected in Oregon and Washington, and 32.5 per cent of the stomach contents of two English pheasants from British Columbia. But all of these birds were taken in September, October, and December; hence it is probable that all of this grain was waste. The next largest item of food in these stomachs was insects, consisting entirely of larvae of March flies. One stomach contained no fewer than 360 of these larvae and another 432. The remainder



Ringneck Pheasant.

of the food included acorns, pine seeds, browse, peas, rose hips, snowberries, and seeds of dandelion, lupine, bur clover, black mustard and chickweed.

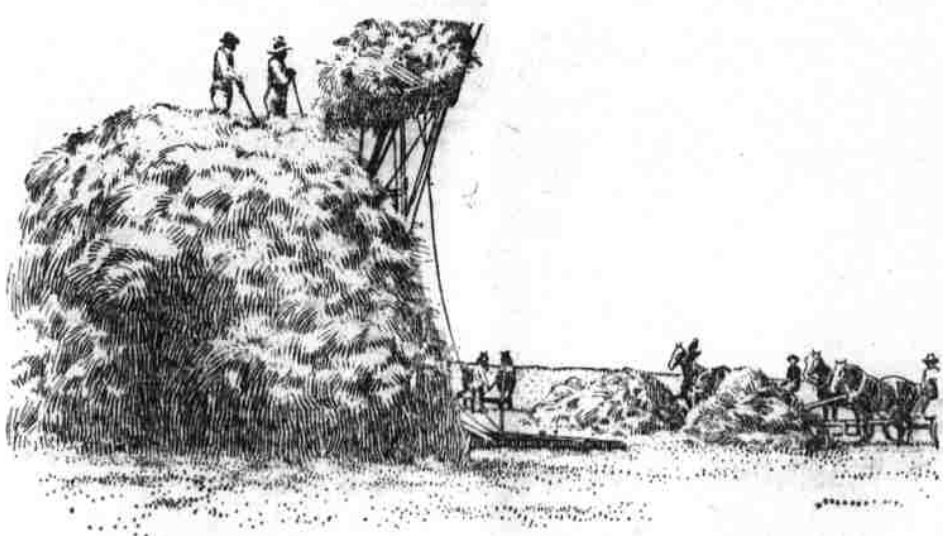
From 200 to 960 kernels of wheat and oats were taken by various birds; about 200 peas were found in one stomach, but it was evident that these were the old and partly decomposed refuse of the harvest. Twenty-three acorns and 200 pine seeds were taken by the birds which ate the largest amount of mast, and about 800 capsules of chickweed, containing more than 8,000 seeds, were in the stomach of the best weed-seed eater.

What is most evident is that pheasants are gross feeders; their capabilities for good or harm are great. If a number of them attack a crop they are likely to make short work of it, or if they devote themselves to weed seeds or insect pests they do a great deal of good. It seems therefore that the question of the economic value of pheasants is peculiarly a local one. Much depends on the proportion of land under cultivation, the kind of crops raised, and the quantity of wild food available. Apparently the chances are about even that imported pheasants will or will not become useful economic factors.

\$20,000,000 is the approximate sum spent for gum in the United States in one year.

A man who has made a decided success in swine husbandry in a large way said before a recent farmers' institute that the main who has plenty of skim-milk for his hogs will make a profit if any one can on 60-cent corn.

FARMERS LEARNING TO CONSERVE LABOR



With the latest machinery in hay and grain fields an ordinary force of men will accomplish three times as much as they could under old methods.

HELPING THE SOUTHERN DAIRYMAN.

One of the most encouraging lines of work which the U. S. Department of Agriculture is carrying on in the South is the institution of herd records on dairy farms. By this means the unprofitable cow is detected and can be disposed of for slaughter. The heifer calves from the profitable cows are raised to take the place of the unprofitable animals. In this way the quality of the herd is steadily improved. The daily weighing of milk and the testing for butterfat enable the dairyman to feed the individual animals according to the production and to select such feeds for the ration as are shown to give the best results.

The Department receives many letters from dairymen of the South bearing on the value of this work. Mr. J. K. Morrison, a dairyman of Grenada, Mississippi, writes as follows:

"I write to express my great appreciation of the work done for me by your department.

"From the records kept I found two cows that produced over \$200 profit. One, \$110.88 the other \$103.80. A two-year-old heifer made \$97.50, net profit. I began to test with six cows. I have sold two of them as they were unprofitable. I have four more that have not finished the year's test but I will probably sell three of them and replace with registered stock.

"I built a concrete floor in my dairy barn. Have laid the foundation for a silo; have ordered stanchions and a registered bull.

"The butter I sell is put up in paste-board cartons and brings 35 cents per pound. I get an average of 25 cents for milk.

"I wish to assure you as the head of the dairy department that I shall help to spread the gospel of better cows, better methods of handling, and more feeding of carbohydrate values.

"Excessive use of meal and hulls is doing much to keep us down in dairy work in the South. Cheap protein should be a help and not a hindrance. I thank you that you are trying to help the little dairymen.

"I shall not be satisfied until I have a dairy of 100 cows producing a net profit of \$150 each. I should do this at an early date with the aid of the

POLLEN CARRIED BY BEES

It has been a question in the minds of many experimenters for some time just how much the wind aids in carrying pollen from tree to tree. If the wind does aid in distributing pollen, is it distributed in sufficient quantities to insure the fertilization of the ovules?

Since so many of our varieties of apples are known to be self-sterile, and must depend upon foreign pollen for fertilizing the ovules, this question is



Apiaries should be kept in orchards, as the bee is the best agent for cross-pollination.

of serious consequences. Is it the wind or our common honey-bee that does the work?

From observations made the past few years it is evident that bees play a most important part in the fertilization of the blossoms. To arrive at some definite conclusions as to how

Babcock tester, the scales, a silo and more grain, which I have to raise this season. I am thoroughly imbued with the dairymen spirit and hope that I can repay the Department for the aid given me by helping others."

At the opening of the second semester of the College year 709 men and women enrolled in the Missouri College of Agriculture. This represents 37 per cent increase over last year. The enrollment for last year, the entire session, was 516.

SOUND, COMMON SENSE.

much pollen is transmitted through the air by the wind, experiments have been carried on in several states to determine this question. These experiments demonstrated beyond doubt that plum pollen as well as pollen of several species of apples experimented upon is not transmitted through the air in sufficient quantities to insure cross-pollination. Hence, the wind cannot be relied upon as an agency to transfer pollen from tree to tree throughout the orchard.

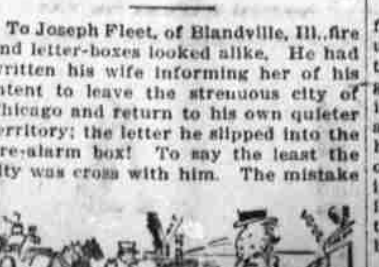
That the honey-bee is not attracted to the blossom by the inflorescence has also been shown. It is apparent that the showy petals of the blossoms aid materially in attracting the bees. The blossom is well supplied with nectar, and the open character of the nectary makes it accessible to almost all insects. The bees, in trying to reach the nectar, brush against the anthers and carry away with them on their hairy legs and abdomen large quantities of pollen. The insects in visiting other blossoms transfer some of the foreign pollen to these petals. Since the wind aids so little in cross-pollination it is evident that the various insects, especially the bees, are carriers of pollen.

As the assurance of a crop depends upon insects as distributors of the pollen, it is necessary that apiaries be established in the different fruit sections. With favorable climatic conditions and proper planting of varieties the bees would insure pollination.—C. I. Lewis—C. C. Vincent.

Have the cows come fresh in the fall. If this practice were followed generally, there is little question but that at least 50 per cent of butter-fat per year would be added to the average product per cow in the State. Having cows freshen at this time brings the heaviest milking during the winter, when one has the most time. It brings the care of the calves in the winter; it allows the feeding of the slim-milk to the calves in the winter, while they need it; and to the young pigs during the early summer, when

GOT HIS LETTER MAILED.

To Joseph Fleet, of Blandville, Ill., fire and letter-boxes looked alike. He had written his wife informing her of his intent to leave the strenuous city of Chicago and return to his own quieter territory; the letter he slipped into the fire-alarm box. To say the least the city was cross with him. The mistake



only caused a fire-boat to steam down the river; saving two lines of horse ashore; drew five fire-engines, two truck companies and Fire Chief Seyferlich to the scene; called out two fire insurance auto patrols; stopped work on the part of the office force in five big office buildings, and drew a crowd of 10,000 people. What did Joseph Fleet cost the city?

Washington—The result of a year's crusade against get-rich-quick schemers, who have been using the United States mails in the consumption of their schemes, has exposed to the inspectors of the postoffice department, and through them to the public, a distinct line of new criminals. An estimate made by Postmaster General Hitchcock shows that the American public has been, within the last year, swindled out of \$100,000,000 through the illegitimate business of this class of criminals.

DESTROYING THE CUTWORM

By F. L. WASHBURN.

Cutworms are the larval forms of moths belonging to the family known as Owlet Moths. The first name was given this family because they are particularly night-flyers, most of them remaining concealed during the day; and the second name, on account of the fact that their eyes shine at night, in the presence of a light, to which, by the way, many of the species are attracted.

Both the moths and their larvae are fond of sweets; and this fact is made use of by collectors in catching the moths and by the farmer and gardener in killing the "cut-worm" itself. The larvae, when full grown, averages in length about one and one-half inches, and is as a rule, dull colored, with or without obscure markings. This full-grown larva burrows into the soil a short distance, and turns into a brownish or reddish-brown or mahogany-colored pupa.

These pupae may winter over, when formed late in summer, or give rise to moths in August and September, which lay their eggs at that time on various plants, of on the ground near their food-plants. The larvae, which hatch in late summer or fall, winter over in some concealed situation, and are ready for business in the spring.

While many birds prey upon cutworms—and although they are eaten by some other insects, and are the victims of parasitic forms, to say nothing of disease bacterial or fungoid—nevertheless farmers are often obliged to take active means against them in order to save their crops.

A bait made of bran mash sweetened with cheap sugar or molasses, and made decidedly green with a liberal application of Paris green, is a very good remedy in a garden. A tablespoonful of this should be put at frequent intervals among the plants subject to attack; not, however, nearer

Nowhere should contentment be more conspicuous than in rural communities, where far from ignoble strife for riches the residents pursue the even tenor of their way.

FEEDING MOULTING HENS.

During moulting the hens require an extra amount of care and in fact all the attention which can be given them. In too many instances moulting is considered just a natural sequence of poultry keeping. The fowls at this time are just as bad as a child cutting his teeth. It is not the mere fact of losing feathers or pushing a tooth through as much as the constitutional disturbance that is set up. One symptom of moulting is lethargy. The birds, instead of being early risers, are about on their perch and will not venture out in search of food that is so essential to them at this trying period. Dainty food should be prepared. Warm meal with a dash of spice in it in the morning and continual change.

In regard to grain: Corn, wheat, barley, oats and mashed potatoes with meal—anything to tempt the appetite—two or three rusty nails or a bit of sulphur in the drinking water are great helps. In confined runs meat must be added and in fact, scraps of meat may well be given on any run.

Two things are essential: (1) That fairly early each morning the hen house should be cleared of belated risers; (2) the floor should be swept at the same time as a lot of vermin come off with the shed feathers. These sweepings should be taken right away and not put on the nearest manure heap. After moulting is over give morning mash of shorts and bran in a crumbly condition and feed plenty of oats.

The city forestry department of Kansas is preparing to fight the bag worms which are infesting the part of the west. In May, when the worms hatched, the city employes of the state went over all the trees with sprayers. The worms do not kill the trees but they eat the verdure and retard the growth.

Galloway cattle are being raised in Alaska, their hides being considered equal to beakskin for beauty and service.

Coots containing broods of chicks should not be moved frequently.