

FEW SEASONABLE POULTRY POINTS

Growing Chicks Must Have Shade and Fresh Clean Water During Hot Weather.

AVOID OVERCROWDING BIRDS

Cockerels That Are Sufficiently Large Should Be Sent to Market—Only Strong, Vigorous Specimens Should Be Retained.

(Prepared by the United States Department of Agriculture.)

POULTRY PRIMER

An illustrated publication, Farmers' Bulletin 1040, is now available, which deals with the fundamentals underlying the production of poultry. By the use of many appropriate pictures, the principles of poultry keeping are impressed on the reader.

Under "Selecting the Breed," for example, photographs are shown of the more popular breeds of each of the three main classes of poultry, giving the reader an immediate and complete idea of the appearance of these fowls, the classes to which they belong, and their economical usefulness. In like manner other essential phases of poultry keeping are illustrated and discussed.

Throughout the bulletin references are given to other publications issued by this department which give more detailed information on each of the subjects discussed and which may be obtained on request.

Do not overlook the fact that the chicks must have shade. If there is a natural shade for the chicks to lay under during the heated part of the day, be sure and provide sufficient for their needs.

One of the most important factors in keeping young chicks growing is

ADVANCE IN PRICES PAID BY FARMERS

Increase in Almost Everything Used by Agriculturists.

First Two Years of War Were the Worst, While in 1917 the Farmer Shared in the General Prosperity—Figures for 1918.

(Prepared by the United States Department of Agriculture.)

While farmers are getting higher prices for the products they sell than they received in 1914 or at the beginning of the war, they are also paying higher prices for the things they buy, and it is of special concern to them to know just how they have fared in the general price movement of things sold in relation to that of things bought.

In 1915 farmers received 3 per cent less than in 1914 for crops and live stock in their composite price, but they paid 9 per cent more in the composite price of the many articles that they bought. The list of articles bought used for this purpose contains 85 items of textiles and garments, lumber, wood products, agricultural implements and machinery, metal products, coal, petroleum products, foods, fertilizers, household furnishings, and other farm and family supplies. Relative loss in the second year of the war also was suffered by farmers. What they sold in crops and live stock advanced in joint price, it is true, but only by 12 per cent, while what they bought advanced 21 per cent.

In the next year, 1917, the relative character of these price movements was reversed, and the farmer faced prosperity instead of disaster, since the price that he received for crops and live stock gained 74 per cent upon 1914, while he paid 49 per cent more in the composite price of his purchases. War time is a period of rapid changes in prices and of sudden and often of painful maladjustments. Although the farmer lost ground in 1915 and 1916 in comparison with 1914, and regained the lost ground in 1917 and gained much more, he lost his relative lead in 1918 and found himself where he started in 1914 in the comparison of price of crops and live stock with that of things bought. The advance of price received in 1918 above 1914 was 97 per cent, and that of price paid was 96 per cent, or substantially the same.

HAY OF HIGH FEEDING VALUE

Soy Bean When Cut at Right Stage and Properly Cured Is Relished by Farm Animals.

(Prepared by the United States Department of Agriculture.)

The soy bean when cut at the right stage of growth and properly cured makes an excellent hay of high feeding value that is greatly relished by all farm animals. As compared with hay from other leguminous crops, soy-bean hay is equal or superior to any. The use of this hay as a source of protein, which can be produced on the farm to balance feeds for growing stock or for milk, should reduce the quantity of high-priced concentrated feeds which it is necessary to purchase.

The soy bean may be cut for hay at any time from the setting of the seed until the leaves begin to turn yellow. The crop is best fitted for hay, however, when the seeds are well formed, for at this stage of growth the largest yield and the best quality of hay will be obtained. If the harvesting is done earlier, the percentage of protein will be higher, but the total yield will not be so large and the difficulty of curing much greater. If the cutting is delayed, the stems rapidly become hard and



Baling Soy Bean Hay in Field From Hollow Racks.

woody and decline in feeding value, and if left too long there is much loss in leaves.

NEXT WINTER'S FUEL SUPPLY

Much Wood, Apparently Valueless at This Time of Year, Can Be Set Aside for Use.

(Prepared by the United States Department of Agriculture.)

Look forward to next winter's supply of wood. In many parts the old-time custom still prevails of burning valuable cordwood in log heaps following the clearing up of new land. Thousands of farmers must provide themselves with wood for next winter. If the farmer can not use the wood himself, some neighbor, schoolhouse, or church will likely be glad to get it when cold weather comes. Much wood, apparently useless at this time of the year, will be wasted unless forethought is exercised. Postpone burning your wood.

SEAPORT for POLAND



One of Danzig's Finest Streets.

DANZIG, which by the peace treaty becomes an internationalized city and the outlet for Poland to the Baltic, is thus described in a bulletin issued by the National Geographic Society:

Picture a far north Venice, cut through with streams and canals, equipped also with a sort of irrigation system to flood the country for miles about, not for cultivation but for defense; a city of typical Philadelphia streets, only with those long rows of stoops made of stone and highly decorated and jutting into the roadway instead of on the sidewalks, and you catch but a glimpse of the composite Danzig.

As a city of churches Danzig vies with Brooklyn; its crooked, winding streets suggest those Boston thoroughfares of cowpath derivation; and were its grain warehouses more modern the visitor might believe himself in Minneapolis—that is he might until he heard their names—such as Golden Pelican, Little Ship, Gray Goose and Milk Maid—then he might look about for some popular resorts of New York's Greenwich village.

In no other German city is medieval architecture to be found in such variety and preservation as in Danzig. Conspicuous both in Polish and German history, Danzig was one of the four principal centers of the Hanseatic league, while not far up the Vistula is Marienburg, capital of the Teutonic Order of Knights, which flourished in Danzig.

Ancient Art Works Intact. Physically, Danzig escaped many effects of the reformation. Even in her famous St. Mary's church, one of the largest Protestant edifices in the world, covering an area as great as the Cathedral of Notre Dame in Paris, are to be found reliquaries and manuscripts, embroideries of Roman, Byzantine and Gothic designs, treasures in precious metals, stones and ivories, and a noted collection of vestments. Among its art works is the famous "Last Judgment" of Hans Mealing. In appearance almost as much like a fortress as a church, bringing to mind Luther's militant hymn "A Mighty Fortress Is Our God," the church has been called "one of the most German things in Germany." In many ways it suggests the Prussian militarist spirit. From the vaulting, for example, projects one of Napoleon's cannon balls.

But the Danzig visitor needs no indirect intimation of militarism. The city was one of the most strongly fortified places in the now shattered German empire. To the east and south of the city older defenses were supplemented in recent years by a score of bastions. Along the Vistula, on which the city lies, to its mouth at Neufahrwasser, four miles away, stretches a line of forts. In addition three sides of the town could be inundated by the garrison.

Quaint House Architecture. Streets are lined with ornate old houses of the Hanseatic period, crowned with high gables, often profusely ornamented. Balconies overhang the streets and in spite of the impediment they offer to traffic, many of the elevated stone porches still remain. Gargoyles grin from ancient walls. Vistas abound. There are many old water gates. One of these, the Hobe Tor, is fashioned after a Roman arch. Another, the Kran Thor, with each successive story projecting farther than the one below, looks like the leaning tower of Pisa.

Danzig's beginnings are not known. Poland, Denmark, Pomerania and Brandenburg held it at various early times. In the fourteenth century it came under the sway of the Teutonic knights. Not long afterward it became one of the four centers of the Hanseatic league. With the decline of the league it allied itself with Poland, retaining most of its rights as a free city. It had a flag derived from the red and white emblem of the league, employing the red as a field upon which were three gold crowns, arranged vertically.

Separation From Poland. Russians and Saxons took the city and the score or more neighboring villages it governed in 1794. When Poland was partitioned, four years before the American colonists signed the Dec-

laration of Independence, Danzig was separated from Poland and 21 years later Prussia gained possession of it. Again made a free city by Napoleon, it passed once more to Poland; then back to Prussia in 1814.

Danzig became the capital of West Prussia. Government and private docks were located there. Shipbuilding and the making of munitions were introduced and amber, beer and liquors were other products. Its granaries, built on an island, were erected when it was the principal grain shipping port for Poland and Silesia.

Danzig is a little farther by rail northeast of Berlin than Boston is from New York. Its population in 1910 was about that of Columbus, O.

WELL EQUIPPED BY NATURE

Simple Explanation of Remarkable Sense of Hearing That Is Possessed by the Owl.

It is held by naturalists that in order to capture its prey the owl must depend even more upon its sense of hearing than upon its sense of sight. The tufts of feathers that distinguish the short-eared and the long-eared owls are, of course, no more ears than they are horns. The true ear of the owl is a most remarkable organ.

The facial disk of feathers that gives the owl its characteristic appearance serves as a kind of sound-imping-board or ear-trumpet to concentrate the slightest sounds and to transmit them to the orifice of the true ear, concealed in the small feathers behind the eye. Even in the barn owl, which possesses the least complicated arrangement of this kind, the orifice of the ear is covered by a remarkable flap of the skin, while in the other species there are striking differences in the size and shape of this orifice and its covering flap on the two sides of the head.

The exact way in which owls utilize this elaborately specialized apparatus has still to be discovered.

Water in Wood.

All wood contains more or less water; even the driest wood known contains two or three pounds of water to every 100 pounds of weight. Absolutely dry wood is unknown, for the heat needed to obtain it would dissolve the wood and convert it into gas and charcoal.

A Swiss authority on the characteristics of wood believes that a sufficiently powerful and perfect microscope would show that the ultimate wood cell is composed of crystals like grains of sugar or salt and that thin films of water hold the crystals apart, yet bind them into a mass.

A good microscope shows the wood cell and reveals its spiral bandages and its openings and cavities, but no instrument yet made reveals the ultimate crystals that, as many believe, do exist and that would explain why water cannot be expelled from wood without destroying the wood itself.—New York Sun.

Justice to Franklin.

Philadelphians love to set forth the fact that there were written two of the most notable literary achievements of the world, the Declaration of Independence and the Constitution of the United States, both of them remarkable for fine literary quality, for precision of statement, for lucid presentation of facts, for logical arrangement. But it is possible, so it has been unkindly suggested, that they do not always remember that neither of these important productions was written by a Philadelphian. But to anyone who may make a suggestion it may with justice be said that the "Autobiography" of Franklin, one of the few great autobiographies of the world, was written by a Philadelphian, and also his "Poor Richard," and other world-famous works.

Putting the Clock Ahead.

How times have changed. The old-fashioned girl who used never to sit up later than nine o'clock has a daughter now who just starts out at nine o'clock for the evening.—Boston Transcript.

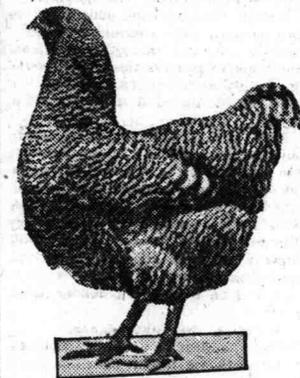
FARM POULTRY

PURPOSE OF A SMALL FLOCK

It is Primarily for Eggs and Therefore Fowls Should Be Fed With This End in View.

(Prepared by the United States Department of Agriculture.)

The actual purpose of keeping a small flock of fowls is primarily for egg production. Consequently they should be fed with this end in view. Practically every housewife has a quantity of table scraps, vegetable peelings and "leftovers" that can be utilized by feeding to hens. Supplementary to such feed, however, a grain and dry mash should be provided in order to produce the best results. By



Purebred Fowls of General-Purpose Type Are Best Adapted for Back-Yard Flocks.

supplying the fowls with all available table scraps it will usually cost from 50 to 75 cents a year per fowl for grain and other feeds. A good egg laying ration should consist of the following: Three parts corn meal and one part beef scrap mixed together and fed in a dry-mash hopper to which the fowls will have access at all times. In addition to this a scratch ration consisting of equal parts cracked corn and oats should be fed twice daily. When no table scraps are available it will take about one quart of scratch grain daily for twelve to fourteen fowls. However, this can be reduced when table scraps are fed and a certain amount of natural green feed, such as grass, is available.

In providing the fowls with a suitable house it should be remembered that the essentials of such a building are fresh air, dryness, sunlight and sufficient space so that the fowls will not be crowded. Usually each fowl should be allowed four square feet of floor space. If available, scrap lumber from dry-goods boxes, etc., can be utilized to construct such a house. The cost will be considerably less than when lumber is purchased. If sufficient lumber is not available for the entire house a rough framework well covered with ordinary roofing or tar paper will answer the immediate needs.

When the heavier fowls (Plymouth Rocks, Wyandottes, Rhode Island Reds, etc.) are kept all females should be disposed of at the end of their second year, inasmuch as in most cases they will cease to be profitable at the end of that time. The lighter breeds (Leghorns, etc.), however, can be profitably kept as long as three years. By disposing of the hens in this way a part of the flock must be renewed each year. Consequently, considering that the percentage of cockerels and pullets is usually about the same, and that a certain percentage will die before reaching maturity, it is customary to hatch more chicks each year than there are hens in the flock.



Overfeeding kills more chicks than underfeeding.

Little and often is a good feeding rule for newly hatched chicks.

Eggs for incubator hatching should be fresh, the fresher the better.

This is the time of year when poultry quarters need to be made safe from rats.

Ducklings should be ready for the green duck market at from ten to fourteen weeks of age.

A good, well-regulated incubator will hatch eggs with far more certainty and do it more cheaply than can be done with hens.

Much of the trouble often found in brooding chicks is due alone to feeding too early, or in excess during the first few days.

Scales on chicken's legs are caused by a mite. This mite can best be controlled and disposed of by the use of heavy black crude oil.

In the location of the poultry house, if it is impracticable to select a soil that is naturally dry it should be made dry by thorough underdrainage.

FARM STOCK

FEED CROPS TO LIVE STOCK

Investigations Show Profit From Feeding Steers on Surplus Corn and Roughage.

(Prepared by the United States Department of Agriculture.)

That the southern farmer who raises a surplus of corn and farm roughage can market them at a handsome price through steers of good quality, when properly purchased, and can retain fertilizing elements of the feeds on his farm, is clearly shown in recent investigations by the United States department of agriculture.

Three lots of native steers, grade animals two to three years old, of medium good quality, and averaging about 825 pounds at the beginning of the experiment, were fed for about five months on full feed. The animals in lot 1 received a daily allowance of 39.1 pounds of corn silage, 5.1 pounds of cottonseed meal, 4.9 pounds of oat straw; those of lot 2, 37.4 pounds of corn silage, 7.6 pounds of ear corn, 3 pounds of cottonseed meal, and 2.9 pounds of oat straw; and the steers of lot 3, 38.5 pounds of corn silage, 6 pounds of ear corn, 3 pounds of cottonseed meal, and 3.5 pounds of oat straw.

At marketing time these groups of animals averaged, respectively, 1,044, 1,059, and 1,066 pounds an animal, the steers of lot 1 having accomplished a daily gain of 1.56 pounds, those of lot 2, 1.66 pounds, and the animals of group 3, 1.7 pounds during the feeding period.

When the pork made is credited to the steers of lots 2 and 3, they paid for corn at 70 cents a bushel, and then made over \$14 a head profit, or almost as much income as resulted from the cottonseed meal-fed steers. Without hogs following the steers the feeding of corn would have been considerably less profitable than feeding cottonseed meal alone. It cost \$2.53 to make 100 pounds of gain in the case of lot 1, \$10.82 for lot 2, and \$10.75 for lot 3, where no pork credit is given the steers. Each steer in lots 1, 2 and 3 made a net profit of \$15.19, \$11.87, and \$11.48, respectively, when no credit is given the steers of lots 2 and 3 for the pork produced. This pork credit probably amounted to about \$3 a steer.

It is particularly noteworthy that the shrinkage in transit to market of these cattle during a 34-hour run



A Bunch of Southern Cattle.

ranged from 54 to 64 pounds a head, which indicates that silage, where properly fed in conjunction with supplementary grains, results in less shrinkage in transit than where cattle are fattened on grass and marketed directly from pastures. The steers under consideration in this experiment made good killing records, the carcasses being well covered with fat and generally satisfactory. The animals of lot 1 made a dressing record of 58.2 per cent, those of lot 2, 57.8 per cent, and those of lot 3, 57.4 per cent of marketable meat.

PROVIDE SWINE WITH SHADE

Many Hogs Die During Summer Months If Not Given Protection of Some Kind.

Many hogs die from the effects of heat during the summer months. If there is no natural shade in the pasture, places should be provided where the hogs may get relief from the heat. A cheap and practical plan is to build sheds with roofs of poles and straw, supported by posts. This will allow the free circulation of air, and if the water supply is near, will enable the hogs to pass the hot weather safely.

LIVE STOCK NOTES

Orphan lambs can be raised on cow's milk.

When a few sheep are cared for properly one may expect a flock in a short time.

When legume hay is used as a horse feed, the quality should be good and the quantity fed limited.

There should be a pasture for the flocks, so that it will not be necessary for them to follow the team into the field.



Growing Chickens Feeding Themselves at Self-Feeder.

clean, fresh water in vessels. The days get warmer care should be taken to change the water as often as required to keep it clean and fresh. Avoid overcrowding in growing chicks. A coop, brooder, or colony house that was large enough to hold baby chicks is not large enough after two or more months, depending on the breed and growth. It is absolutely necessary that growing chicks have plenty of room to grow. Cockerels that are sufficiently large should be disposed of. Chicks that have not shown proper growth should also be separated and leg or wing banded. Many of these chicks, even the pullets, should be marketed. Only the good, strong, vigorous specimens should be retained as breeders and layers, as these are the only ones that can return a profit.

Won't Eat Too Much.

Growing chicks will not eat too much if they have plenty of range so they can get the desired exercise. A good growing mash should be accessible at all times to growing chicks. Such a mash should contain plenty of fine meal ground very fine and fine-ground oats and barley. Be sure to give the mash ground very fine.

Growing chicks that are kept confined need much greater attention along all lines than those that have range. See that they have plenty of green feeds that have not wilted down to almost the decaying point and that the yards are kept sweet. Feeding also is more essential when chicks are closely confined.

Look for Vermin.

Do not forget to look over the young chicks from time to time for lice and mites. Hot weather is the paradise for lice and mites. So be careful, be sure, don't be sorry. Look out for

in many sections of the country where the hatching season started about the first of the year cockerels should be separated from the pullets, especially so where Leghorns are kept.