

FOR FARMERS

Seasonable and Profitable Hints for the Busy Tillers of the Soil.

DORSET SHEEP.

The common sheep of the country need grading up by the use of blooded sires, writes Mr. S. R. Quick. I have done more or less experimenting along this line and have found that the cross of the Dorset-Shropshire has been exceedingly satisfactory, resulting in early development, fat, blocky lambs, ranging in color of face and legs from the Dorset to the smoky gray of the Southdown. I have not tried crossing the Shropshire rams on Dorset ewes, but have always mated Dorset rams to Shropshire ewes. Perhaps the most satisfactory cross has been that of a Dorset ram on 75 per cent. Rambouillet ewes of Spanish extraction. They were typical wrinkled Merinos with dense, greasy fleece. About 220 were bred to Dorset rams and the same number for comparative purposes were bred to Shropshire rams. About the same number of lambs resulted in each case—250.

It was very noticeable from the first that the lambs from the Dorset cross were stronger than from the Shropshire cross. This was more marked just after weaning time, which in my experience is the most trying period for lambs. The difference was very apparent early. The ewes were the same, but the lambs from the Dorset cross seemed much stronger and showed a determination to seek a livelihood at the earliest possible moment. There was less trouble in getting them started, the difference being due undoubtedly to the additional strength. When they were allowed to go into the feed lot, the advantage was very much in favor of the Dorset. I would like to say for breeders I think a great deal of the Dorset Rambouillet grade.

I have done a great deal of grading with Cotswolds, Shropshires, Dorsets and Tunis, using the common or native ewes. In every instance I have been better satisfied with the use of the Dorset buck than any other. Grading or cross breeding, of course, can only be recommended where the offspring is intended ultimately for the butcher. However, there are many advantages to be gained from a careful observation of the scientific laws of breeding. I rather think ewe lambs from the first cross may be kept for the purpose of producing still higher grades. It should require but a few years to remove all indications of scrubs from the farms and ranges. This can be done by the judicious use of pure-bred rams produced and disseminated from the pure flocks already existing.

THE DUST BATH.

We read a good deal about the dust bath for poultry, but did you ever notice how your fowls delight in rolling in the moist, cool earth after a shower? They avoid the dirt that is real wet or muddy, but select a sunny exposure where the soil is loose from recent scratching and prepare a place for a bath, by mixing the wet upper crusts of dirt with the dust or dryer earth below, until it is all in a moist crumbly mass, then they roll from side to side and work it through their feathers. Fowls prefer the slightly moist earth to that which is very dry or dusty. Those who have a doubt about this can convince themselves by taking a box of the same size as that containing the dry dust bath, place it by the side of the other, fill with moist, soft, crumbly earth, fresh dug and see which your hens work in. A box of this crumbly dirt kept in the room where the setting hens are, is an excellent thing, and it should be sprinkled with water occasionally, not so as to make it wet or muddy, but just moist as it would be if freely dug up.

Throw in a large piece of sod or dirt to the brooder chicks and see how the little things will pick and dig it apart, then wallow in the moist dirt. Give the hens with their broods all the liberty possible where they can have access to side hills and other places where the soil is crumbly and moist.

Don't allow the little chicks to go without examination for lice, even if they were hatched in an incubator. If you do not keep the upper hand of the lice they will very soon get the upper hand of you. There is no sure and final cure for them.

LABEL SPRAYING POISONS.

The adage, "familiarity breeds contempt," is perhaps not better illustrated than in the carelessness exhibited in the handling of poisons by the general farmer. With all poisons, the following rules should be rigidly enforced in both household and the work-room of the farm: Always keep poisons under lock and key. Never keep poisons in paper packages, but always store in wooden, glass or metal receptacles. Always use the same form of receptacle for poisons. In this way the mere sight and touch of the can or jar will mean poison. Never allow poisons in the same part of the house where materials for kitchen or table use are kept.

In addition to the name of the substance kept in a receptacle, paste on a label, printed in large red letters, poison. A dozen of these may be obtained at the drug store for a

few cents, perhaps for the asking. When buying poison always find out what the antidotes are, so as to be prepared to treat a case of poisoning should one occur. Upon each receptacle paste the word antidote in large black letters and underneath it give the simplest remedies in the simplest and fewest words consistent with clearness.

HORSE TALK.

Increase the grain ration of the working team and feed old bright hay.

All horses in work should be in the bloom of health. This is indicated by the coat, action and countenance.

With proper care they should never be otherwise, and when they are it is a loss to the owner.

Do not overlook the feeding value of bright clover hay. It should be cured properly and not allowed to get overripe. Properly fed it is preferable to timothy.

Plan to fill your barns with it next year, and give it an intelligent trial. Flaxseed jelly, made by pouring boiling water on whole flaxseed and letting it jell, is a most valuable addition to the ration. A half-pint once or twice a day will work wonders in a horse's condition.

Horses that are kept in a stable continually should be supplied about once a week with sod—roots, dirt and all.

See that the mangers are sweet and clean and the water is pure.

No horse will eat well that does not drink well, and the water and drinking vessels must be of the purest and cleanest.

It costs no more to keep a horse fat and healthy than to keep him lean and heart-broken, and it makes your credit better.

Don't turn the colts to pasture until you have looked them over carefully. If from any cause they have become lousy dust Persian insect powder in the hair thoroughly. This should be repeated two or three times. It is perfectly safe and sure.

DAIRY AND STOCK.

The sheep is the great weed killer. Keep the harness in good repair. It is a good plan to have on hand a number of snaps, buckles, cockeyes and other odd pieces for use in case of accident. This may save a trip to town when you cannot afford the time to go.

Clean all foul litter out of the sheds, and brush the sides and ceilings clean of all cobwebs and dust. Leave the windows and doors open and let the pure breath of summer in, bringing wholesomeness and freshness on its wing.

Stock is now out to pasture, but it does not follow that we do not need to do anything more than let the bars down and drive the cattle out. If ever cows needed extra care it is when they first go from the barn. We ought to keep up the grain ration for some time, and be sure there is a good supply of pure water.

TEND THE GRASS.

The foundation of farming is grass, and in order to be successful the farmer should never omit grass from his rotation. A good sod to turn under, at least every four years, will make the farm more profitable, and will be really worth to the farmer in the benefits imparted to the soil more than the value of the grass for hay or pasturage. When putting in a grass crop in the spring the careful preparation of the soil should be the main object. An application of fertilizer, to be harrowed in, will be worth more to the grass than at any later stage. Get a good start and the grass will take care of itself.

SIZE OF THE BEEF TRUST

ENORMOUS EXTENT OF THE INDUSTRY IN CHICAGO.

Ownership of Refrigerator Cars Gives It Great Power Over Railways.

The strength of the Beef Trust in dealing with the railroads lies in the refrigerator car. Refrigerator cars are expensive. There are many trunk lines of railroad running east from Chicago, and no one of them could afford to build and own enough refrigerators to carry the output of the big packing houses. The leading packers built the cars for themselves, and having the cars were able to ship by what line they liked, and charge the railroads a stiff price for the rent of the cars. Competition was found to be a useful means of keeping down freight rates, and the packers used it freely.

To-day more than 20,000 refrigerators are in use carrying meat products from Chicago, and nearly all of these belong to the pioneers in the field—the Big Six. Armour and Company own more than 10,000 of them. Lipton, the Anglo-American, Hammond, Libby—each concern has its own. There are others owned by the railroads and by the smaller houses, and by special companies, which accommodate those who have not cars of their own. There are more than 100 firms engaged in the business of packing meat about the Union Stock Yards, though the six big ones have the bulk of the business.

CHICAGO'S GREAT INDUSTRY

Thus it is that of all the beef slaughtered in the United States, more than 40 per cent.—nearly half, in fact—is killed in the packing

houses about the Chicago stock yards. In 1901 more than 3,000,000 cattle were shipped thither from every State in the Union, and of these nearly two-thirds—a little less than 2,000,000—were slaughtered and dressed in the yards. Eight million hogs of 22,000,000 killed in the whole country and 4,000,000 sheep shared their fate, as did nearly 200,000 calves. A single railroad brought 67,000 car loads and others nearly as many each.

These millions were not the lean, long-horned Texas cattle that formerly met their death in Chicago, but blooded stock, mostly hornless, though numbering many fancy Short-horns, and they reached the yards fat and sleek from the feeding farms of Iowa, Illinois, Missouri, and, in fact, from nearly every part of the country.

PART CORN STATES PLAY.

Iowa, Nebraska, and Kansas raise corn by millions of bushels. The greater part of that corn they feed to the cattle from the grazing country. And in the dressing and shipping of beef at Chicago centers the labor of not only the herders of Texas and the short-grass country—all of Western Kansas and Nebraska—but the corn raisers as well, who form middlemen between the plainmen and the packers.

The farmers are swiftly learning that corn in the shape of good beef is worth more than corn on the cob. So, not only from the West, but from the South and even from the East, fancy cattle go to Chicago. It is not uncommon for a blooded cow or bull to bring \$2,000 at the stock yards. Farmers who ten years ago had not a beef animal on their ground now number their herds by hundreds, and have found that a small herd of fancy stock can be raised and marketed profitably where the longhorn of happy memory would have been an utter failure.

\$6,000,000,000 WORTH

This meat trade of the country centers not only in Chicago, but in a restricted area in that city in the old town of Lake. In that area, where last year 40 per cent. of the cattle and a third of the hogs of the country were marketed, there has been a stockyard for thirty-seven years. In that period the value of the stock that has been marketed there has aggregated the stupendous sum of more than six billion dollars (\$6,000,000,000), and that is merely the raw material that has come there to be manufactured into meat. The value of the manufactured product is incalculable.

EXPRESS SCHEDULE.

To-day the cattle, sheep, and hogs travel Chicagoward at express schedule in "palace stock cars," and it is no remarkable achievement for a man to land a herd of 2,000 animals in the yards in a single day, so that they may be disposed of at once at "the top of the market." The old way of sending in cattle and taking the best price obtainable has passed. To-day the farmer watches the price of beef, and when it goes up rushes his cattle at limited train speed to the yards and sells out before the drop comes.

For the handling of these cattle the original 300 acres have increased to 500, 450 of which is paved, most of it with brick. In these clean, brick-paved pens (which number 13,000) there are 25 miles of water trough. There are 250 miles of railroad track in the yards, four miles of unloading platform with chutes, 25 miles of streets, 90 miles of water, and fifty of sewer pipe, 10,000 hydrants, and a waterworks having six artesian wells running down 2-250 feet into the earth, and supplying 6,000,000 gallons of water a day.

LAST YEAR'S OUTPUT.

The aggregate packing houses of the stockyards district shipped away from Chicago last year more than a billion pounds of dressed beef and a half-million pounds of lard, 200,000 barrels of mess pork, 800,000 pounds of other pork meats. They packed 1,724,776 cattle and nearly 8,000,000 hogs.

It is customary to indicate the magnitude of Chicago's meat industries by saying that the "Big Six," against which the Government is proceeding, and the one other hundred firms doing business in Chicago stockyards, employ there 40,000 men, to whom they pay an annual wage of \$30,000,000; that the stockyards company employs more than a thousand other men, and that 1,500 clerks are engaged in the business of the exchange, in the buying and selling of cattle, and similar operations. But when you consider those who are engaged in raising cattle, hogs, and sheep, in growing the corn on which they are fattened, in transporting them from the range to the farm and from farm to market, and feeding and caring for them there, in buying and selling them, handling the almost infinite by-products and managing the intricate business of placing the dressed beef and the cured meat in the hands of the consumers, the 40,000 men seem only a handful and the \$30,000,000 a bagatelle.

Sister—"Oh, Bob, that Dr. Scrimp is a mean little fellow." Brother—"What's up with him?" Sister—"You know he attended me when I was ill. Well, he began to call regularly after that for another reason—till at last he proposed and I rejected him. And now he has charged all those love-sick calls as professional visits!"

BRITAIN'S NEW ELDORADO

WONDERFUL WEALTH AND REMARKABLE RESOURCES.

Africa Occupies Fourth Place in Relation to International Commerce.

The declaration of peace in South Africa, which is to be followed by the reopening of the greatest gold-producing mines in the world, and presumably by a general revival of business in that greatest consuming section of Africa, lends especial interest to a monograph, entitled "Commercial Africa in 1901," just issued by the treasury bureau of statistics of the United States.

The commerce of Africa, according to this publication of the bureau of statistics, amounts to over \$700,000,000, of which \$429,000,000 represented the value of the imports. Necessarily in so large an area, with so many tribes and peoples who keep no records of their transactions a considerable amount of commerce must pass without being recorded in any way. The total imports at the ports where records are kept amounted in the latest available year to \$263,907,000. Of the exports, a large share, especially those from the south, is gold and diamonds; in the tropical region, ivory, rubber, palm nuts and gums, and in the north a fair share of the products of agriculture, cotton, coffee, cacao, spices, dates, etc. The export figures of recent years are less than those of former years, owing to the hostilities in South Africa, which have both reduced production and increased local consumption.

ABOUT THREE-FOURTHS

of the imports of Africa are through the ports of the extreme north and south of the continent, those at the north being for the consumption of the more densely populated regions bordering on the Mediterranean, and considerable quantities going to the interior by caravans—a large part across the Sahara to the densely populated regions of the Sudan. At the south a large share of the imports is, under normal conditions, for use at the gold and diamond mines of the Cape, and are reached by railway lines from Cape Colony and Natal at the south and from ports of Portuguese East Africa on the southeast. The class of imports in the south differs materially from that at the north, the demand of the mining region being for machinery, mining tools, dynamite, powder, flour, meats and clothing; while at the north cotton goods, tobacco, spirits, clocks and trinkets form a larger share of the imports, as is also the case on the coast of the tropical regions.

A very large proportion of the trade of Africa is with England. There are numerous reasons for this, the most important, however, being that her colonies—Cape Colony and Natal—on the south, are the avenues through which pass most of the goods for that section, and that a very large share of the growing trade is also carried by British vessels, while the bulk of the mining, as well as the stock raising and general development of that region, is in the hands of British colonists or capitalists. In the north a large share of the trade of Egypt is given to Great Britain, whose influence in the management of Egyptian affairs is well recognized, while in Algeria, which has a large trade, a very large proportion is with France.

THE GOVERNING COUNTRY.

The total recorded imports into Africa, aggregating in the latest available year \$429,461,000, were distributed as follows:—Into British territory, \$157,575,000; French territory, \$92,004,000; Turkish territory, \$77,787,000; Portuguese territory, \$20,795,000; German territory, \$8,336,000, and into the Congo Free State, \$4,722,000. Of this importation of \$429,461,000, about 5 per cent. was furnished by the United States, the total for 1901 being \$25,542,618. Their total exports to Africa have grown from \$6,377,842 in 1895 to \$18,594,424 in 1899, and \$25,542,618 in 1901. This rapid increase is largely due to the fact that orders sent to the United States for mining machinery and other supplies so much in demand in South Africa are promptly filled with goods of the latest pattern and most acceptable character.

Africa occupies fourth place in the list of grand divisions of the world in its consuming power in relation to international commerce, the imports of the grand divisions, according to the latest available figures, being as follows:—Europe, \$8,300,000,000; North America, \$1,300,000,000; Asia, \$900,000,000; Africa, \$430,000,000; South America, \$375,000,000, and Oceania, \$325,000,000. Of this total of \$11,630,000,000, the United States supplies 5 per cent. in the case of Africa, 10 per cent. in the imports of South America, 10 per cent. of those of Asia, and Oceania, 14 per cent. of the imports of Europe, and 40 per cent. of the imports of North America, exclusive of the United States.

RAILROAD DEVELOPMENT.

In Africa has been rapid in the last few years and seems but the beginning of a great system, which must contribute to rapid development, civilization and enlightenment of the Dark Continent. Already railroads run northwardly from Cape Colony about 1500 miles, and southwardly from Cairo about 1200 miles, thus completing 2700 miles of the pro-

posed Cape to Cairo railroad, while the intermediate distance is about 300 miles. At the north numerous lines skirt the Mediterranean coast, especially in the French territory of Algeria and in Tunis; aggregating about 2500 miles; while the Egyptian railroads are, including those under construction, about 1500 miles in length. Those of Cape Colony are over 300 miles in length, and those of Portuguese East Africa and the Transvaal are another thousand miles in length. Including all of the railroads now constructed or under actual construction, the total length of African railroads is nearly 12,500 miles, or half the distance around the earth. A large proportion of the railroads thus far constructed are owned by the several colonies or states which they traverse, about 2000 miles of the Cape Colony system, and nearly all that of Egypt, belonging to the State.

That the gold and diamond mines of South Africa have been and still are wonderfully profitable is beyond question. The Kimberley diamond mines, about 600 miles from Cape Town, now supply 98 per cent. of the diamonds of commerce, although their existence was unknown prior to 1867, and the mines have thus been in operation but about 30 years. It is estimated that

\$350,000,000 WORTH

of rough diamonds, worth double that sum after cutting, have been produced from the Kimberley mines since their opening in 1868-69, and this enormous production would have been greatly increased but for the fact that the owners of the various mines since their opening in 1868-69, limit the output, so as not to materially exceed the world's annual consumption.

Equally wonderful and promising are the great "Witwatersrand" goldfields of South Africa, better known as the "Johannesburg" mines. Gold was discovered there in 1883, and in 1884 the value of the gold product was about \$50,000. It increased with startling rapidity, the product of 1888 being about \$5,000,000; that of 1890, \$10,000,000; 1892, over \$20,000,000; 1895, over \$40,000,000, and 1897, and 1898, about \$55,000,000. Work in these mines has been practically suspended during the war in progress in that section within the past two years.

The gold production of the "Rand" since 1884 has been over \$300,000,000, and careful surveys of the field by experts show beyond question that the "gold in sight" probably amounts to \$3,500,000,000, while the large number of mines in adjacent territory, particularly those of Rhodesia, whose output was valued at over \$4,500,000 last year, give promise of additional supplies, so that it seems probable that South Africa will for many years continue to be, as it is now, the largest gold-producing section of the world.

POPE LEO.

His Personal Traits.—Writes With a Gold Pen.

The Pope is a keen judge of many things and has a pretty wit. He is reported to have said that Mr. Hall Caine's "Italians," in spite of their names, are all Anglo-Saxons.

The daily menu of the Pontiff consists of a cup of coffee with milk, a roll and no butter for breakfast. At dinner there is soup, plain meat, fried vegetables and chicken croquettes fried in butter as only Romans know how, pastry and one glass of Burgundy. At 6 o'clock a cup of bouillon, and at supper a little cold meat. Fruit is always on the table, especially pears; a small cup of coffee with a little sugar is taken during the day now and then. The dish best liked by His Holiness is pasta, made especially for the Vatican table by the nuns of Santa Maria. This is made from new-laid eggs and flour of the finest quality.

The Pope has a preconceived idea of how he desires to have his portrait appear, says an artist who has twice painted His Holiness. Squaring himself in his seat, his hand upraised, with two fingers extended as in the act of benediction, a conventional smile drawing back his colorless lips, he would sit motionless for a moment, stiffening every muscle as we all do in photographic expectancy; then abandoning it. "Voilà, mon enfant!" he would exclaim, with an air of triumph. He is always much interested in his portrait and the artist, and renders every assistance necessary except that of remaining still, which seems to be out of his power.

Leo XIII. speaks quite as often in French as Italian and always with extreme rapidity. He only commenced to study French when appointed Nuncio to Belgium, "and I could speak as fluently as I do by the time I reached Brussels," he is reported to have said. King Leopold used to exclaim "I forgot Pecti is an Italian."

He does his private writing with a gold pen, but his pontifical signature is always with a white flattened quill, which is believed to have come from the wing of a dove, although persons who have seen it say it must have come from a larger bird. The same quill has been in use more than forty years. It only serves for important signatures, and is kept in an ivory case. The pen with which the Pope signed and dated the first document of the twentieth century was a present from the citizens of Naples. It is of gold, mounted with precious stones