

Pain In Back & Sides

"FOR A LONG TIME," says Mrs. Dora Payne, of Huntington, Tenn., "I felt listless, tired and worn-out. I did not feel like doing my work, visiting or anything. I suffered much pain in my back and sides. My limbs hurt, my knees would tremble without apparent cause and I would have to sit down. I was very nervous. . . I would have a tired, dull headache. I had read so much about Cardui I asked my husband

to get it for me. The very first bottle seemed to help me. After the second . . . I was better than I had been in months. I certainly can praise Cardui. "I have taken three bottles. Now I hardly wait, when the sun shines, to go to the garden. I am feeling fine." Similar results to those described above have been reported by thousands of other women. Cardui's 40 years of success should encourage you to give it a thorough trial for the relief of any common female ailments. For sale everywhere.

CARDUI

The Woman's Tonic

The DAIRY

DAIRY COW MUST HAVE PLENTY SALT

Dairy cows must have plenty of salt in order to thrive. Allow them to have free access to salt or feed it to them in their feed. Many dairymen mix 0.5 to 1 pound of salt with each 100 pounds of concentrated mixture or grain mixture, and then supply salt in addition so the cows can take what they wish.

If trouble has been experienced from goiter or "big neck" in calves, this may be prevented in the future by giving potassium or sodium iodide to the cows during their gestation period. Where there is no trouble from goiter this treatment is not needed.

Milk is very rich in both calcium (lime) and phosphorus. Therefore, dairy cows must receive liberal supplies of both these minerals to secure continued high production and to have a thrifty offspring. In the usual dairy rations there is more danger of a lack of calcium than there is of phosphorus. This is because the protein-rich feeds are also rich in phosphorus. This includes wheat bran in particular and also wheat middlings, cottonseed meal and linseed meal. Gluten feed, germ oil meal (corn germ meal) or brewers' grains and distillers' grains are not especially high in phosphorus.

When 20 per cent or more of the concentrate mixture or grain mixture consists of wheat bran, wheat middlings, linseed meal or cottonseed meal, the cows will get plenty of phosphorus. If less of these high-phosphorus feeds are fed, it is best to supply additional phosphorus by adding bone meal, ground rock phosphate or acid phosphate.

A large production of milk and thrifty calves are an impossibility if there is a lack of calcium in the ration. The best way of furnishing plenty of lime is to grow and feed an abundance of alfalfa, clover or soy bean hay whenever it is possible. All legume hays are rich in lime. Furthermore, well-cured, green-colored legume hay contains a vitamin which animals need to enable them to assimilate and use the calcium in their feed.

If poor roughage must be used, such as hay from the grasses (not legumes), corn stover grown on acid soil, or straw, add 3 to 4 pounds of ground limestone, wood ashes or dried marl to each 100 pounds of concentrate or grain mixture.

If there is not 20 per cent of high-phosphorus feeds in the concentrate mixture (wheat bran, wheat middlings, linseed meal and cottonseed meal), it is best to use 3 to 4 pounds of steamed bone meal, ground rock phosphate or acid phosphate with each 100 pounds of the concentrate mixture, instead of using the limestone, wood ashes or marl. Bone meal and the phosphates supply both calcium and phosphorus, while limestone, wood ashes and marl furnish lime but practically no phosphorus.

Community Associations

Improve Stock Breeding

(Prepared by the United States Department of Agriculture.)
The influence of community organizations in promoting the breeding of better live stock is shown in frequent reports received by the United States Department of Agriculture in connection with its work in encouraging the use of pure-bred sires. The president of the Middlesex County (Conn.) Farm Bureau reports the introduction of 30 registered dairy bulls within six months for use in improving local herds and adds that "none of our farmers is inclined to revert to grade or scrub sires."

Stockmen of Hidalgo county, Texas, have formed a pure-bred live-stock association, the purpose of which conforms closely with activities which the bureau of animal industry, United States Department of Agriculture, is

encouraging. For the guidance of progressive live-stock owners interested in forming similar organizations, following is an extract from the constitution and by-laws of the Hidalgo County Purebred Livestock association, as furnished by its secretary.

"The object of this organization shall be to promote interest in the breeding and improvement of high-class pure-bred live stock; to instruct its members in the prevention and eradication of diseases peculiar to such animals; to provide and establish an adequate market for the same; and to create in the members of the association an affection for farm animals which will result in a fuller appreciation of farm life and pure-bred live stock." Another clause provides for a high standard of business dealings and for the expulsion of members who are found to have misrepresented animals or to indulge in questionable practices.

Care of Dairy Bull

The amount of grain to feed to dairy bull varies from four to ten pounds, depending on the size and condition of the animal and the kind of roughage. A grain mixture recommended as having been used with success consists of three parts ground corn (by weight), two parts ground oats, two parts wheat bran, and one part linseed meal. Another mixture suggested consists of three parts ground oats, two parts wheat bran, one part ground corn or barley, and one part linseed meal.

Breed Dairy Cows for Late Fall Freshening

Dairymen who can successfully practice a system whereby their cows will freshen during the early winter months almost invariably make a greater net return and find that the cow's production holds up longer, as when spring grass comes the milk flow is stimulated after three or four months of winter production.

In addition the price of butterfat is increased during these months, which is an added inducement for early winter freshening.

The fact that most farmers have more time at their disposal during the winter than during the growing season constitutes the third important reason for having the cows freshen during the late fall and early winter months. H. R. Lascelles, Colorado State Dairy Commissioner.

Calf Needs Colostrum

All calves should have an opportunity to suck their dams at least two or three times because, as dairymen well know, the first milk, or colostrum, is necessary for the new-born calf in order to clean out its bowels. This milk seems to be laxative; nature has made it so for a specific purpose and that is why a calf should suck its dam for at least a day or two. After that it is best to resort to hand feeding. As a general rule, start by feeding the calf one pound of milk for each ten pounds of its weight.

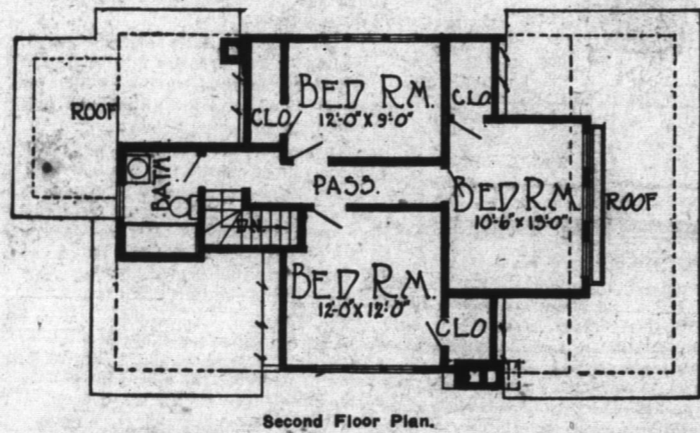
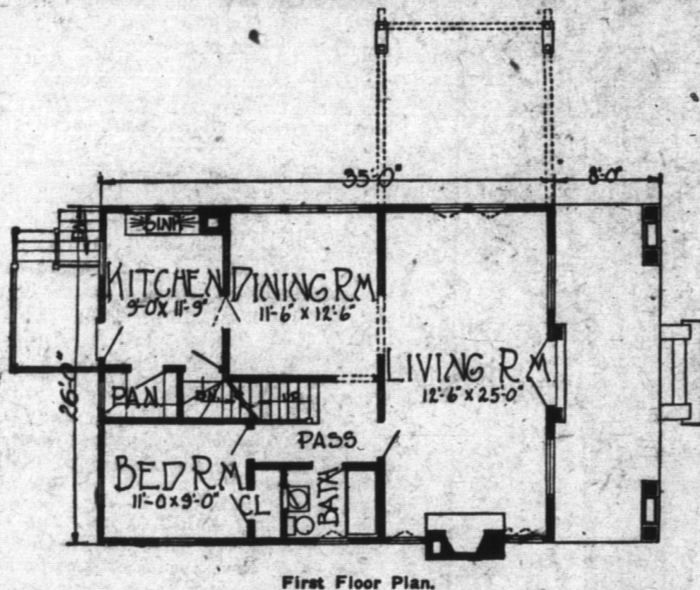
Good Garden Rotation

It is quite likely that, when once the garden plot has been located, it will not be changed for a number of years. In order to provide for proper rotation, a certain portion should be seeded to clover each year. It is not advisable from the standpoint of maintaining soil fertility, and controlling insects and plant diseases that any one crop be planted twice in succession in the same place. By referring each year to the plan of the preceding year, these changes may be provided for.

How Auto Parts Are Made

Presses, not unlike those used for many years to stamp out coins, are employed in large automobile factories to reduce costs and enable rapid production of small parts. They save a large number of hand and machine operations and turn out work of uniform quality. Some of them are said to have a capacity 900 per cent greater than is possible by ordinary methods.—Popular Mechanics Magazine.

Story-and-a-Half Design Provides Roomy House at Minimum of Cost



By WILLIAM A. RADFORD

Mr. William A. Radford will answer questions and give advice FREE OF COST on all problems pertaining to the subject of building, for the readers of this paper. On account of his wide experience as editor, author and manufacturer, he is, without doubt, the highest authority on the subject. Address all inquiries to William A. Radford, No. 1827 Prairie avenue, Chicago, Ill., and only inclose two-cent stamp for reply.

There are many people who must give careful attention to economy of construction in selecting the plan for the new home while at the same time they require considerable space because of the size of the family to be accommodated. For these there is nothing better than the story-and-a-half house. Economy of construction is a conspicuous characteristic of this type of dwelling because of the large space it affords in proportion to the amount of wall construction required. Along with this economy a large amount of comfort, convenience and attractiveness can be achieved in the story-and-a-half house if due regard is given to the design and method of construction. All these have received attention in the house which is illustrated here with a most pleasing result.

This house is also a fine example of what proper attention to the surrounding grounds may mean to a residence. Each feature has been considered and added to make a complete and pleasing whole. The curved walk carries an air of charming informality. On one side is a decorative pergola which adds little to building cost but much to the appearance of the home. The painted wooden fence is an artistic touch, which is greatly enhanced by the planting of flowering shrubbery beside it. At the windows boxes with bright flowers add color and shrubbery is again used around the porch.

The low foundation and roof, with large porch pillars, carry an air of solid permanence while wide arched porches and fireplace chimney create a most inviting, homelike atmosphere. The front door opens directly from the porch into the big living room with its fireplace and with windows on three sides. At one side the living room opens into a passage leading to a bedroom and an extra bathroom. This arrangement is one which would be especially appreciated in families where there are elderly people.

At the other side an ample-sized dining room opens off the living room, and behind it is the kitchen. The latter is not large but is most efficiently arranged and is provided with a good pantry space. The stairs to both the basement and second floor are found in the passage already mentioned.

On the second floor there are three good-sized bedrooms and another bathroom. Each bedroom is provided with a large closet and these rooms are all grouped compactly about a central passage at the head of the

stairs. Two of these rooms are lighted by dormer windows. The whole building occupies a space 28 feet wide and 35 feet deep and yet the house is amply large for a good-sized family to occupy it in complete comfort.

Water Supply Pipe Should Be of Sufficient Size

Too little attention is given to obtaining an adequate size of pipe from the city water main. In most single residences one-half-inch diameter is supposed to be sufficient, and so it was in the old days when a single spigot in the kitchen answered all purposes of a water supply.

In these days, however, people want a little more in the way of adequate water supply, and a one-half-inch supply pipe is hardly large enough even in the moderate-sized house.

The usual arrangement of the small house is to have a laundry in the basement, kitchen on the first floor, and bathroom on the second. On wash days it is a hard job to get water to run in the bathroom when it is being used in the laundry.

Shower baths are coming more and more into use, and a one and one-half inch supply pipe is not large enough for the volume of water really needed. A sickly sprinkler is not what is wanted.

The extra cost of installing a larger service pipe is so very small that it really cuts no figure whatsoever—it has just been a case of not knowing what to do.

In localities where hard water is supplied, the use of water softeners in even small residences is coming into everyday use for the simple reason that it is an economical apparatus for the owner to be supplied with.

Another little point in connection with the water pipe system that does not seem to have been given much attention is to have a shut-off valve at the nearest point where the supply pipe enters the cellar. This is to be used for emergency. Instead of using so many couplings for connections, use instead, here and there, T's with outlet plugged and if any connection is to be made for any future purpose it can be easily done without taking the system apart.

For many reasons brass piping is the most economical to use for water systems, even though the cost of installation is higher.—Building Age and National Builder.

Double Hung Window

Speaking of the different kinds of windows that may be used in a home, perhaps the most common type is the one which slides up and down like the Frenchman's gullotine. We call this a double hung window. It works by counterbalancing weights which are attached to it by means of substantial cords.

FARM STOCK

RAISING SHEEP ON DIVERSIFIED FARM

There are three systems of sheep management in the United States.

1. Running sheep in large bands on the range.
2. Keeping small flocks on the farms.
3. Fattening of range sheep.

The second and third are farm enterprises. The third is often more or less a speculative business, but the second—keeping a flock on the farm—may well be considered a permanent part of diversified farm business.

Sheep fit well into a system of farming because of the small investment required, the quick returns, their habits of feeding, their benefit to the land and their "two-way" cash crop.

It is usually considered that sheep can be purchased cheaply in comparison with other live stock. At present prices, however, an animal unit of sheep (seven ewes), is not so much lower in price than in other classes of live stock. The investment for shelter need not be large, as expensive barns are not necessary. The fleece of the sheep will prevent it from suffering from cold if it is kept dry and given a windbreak. Proper fencing will be the greatest investment necessary.

It should never be but a few months after sheep are purchased until a cash crop may be sold, either wool or lambs, either one of which will return a considerable part of the purchase price.

A very large part of the feed for sheep should be roughage. This makes it possible to utilize large quantities of grain that would otherwise have very little value. They can also graze profitably on waste lands, fields, meadows, lanes and roadways.

Sheep benefit the land upon which they range in two ways, by keeping down weeds and by increasing the fertility. Their value to soil fertility has been so generally recognized that they have been called the Golden Hoof. They have an advantage over other common classes of farm live stock because their lighter weight does not pack the soil and also because their droppings are distributed to much better advantage.

There Are Two Types of Runty Pigs, Says Peters

W. H. Peters, head of the division of animal husbandry at the Minnesota experiment station, University Farm, St. Paul, says there are two types of runty pigs—one the pig that is born small and weak, of which there are from one to three in a litter, and the other the pig that has become runty after getting a good start from its mother.

The problem as to what to do with the runt of the first kind is not difficult. If the litter is small, such a runt will probably do fairly well and make nearly as good a pig as the rest. If the litter is large, it will probably be starved out, or it may be destroyed on the ground that it will not pay to attempt to raise it "by hand."

Runts of the other type, however, are more serious. Their presence indicates that the owner has made some mistake in caring for his pigs, and instead of one pig's becoming runty, all are likely to be runty. The real cause for the presence of such pigs is likely to be either lack of proper care and feed or else lack of attention to sanitation and health.

Mr. Peters believes that if the farmer is not able to determine the cause of lack of thrift among pigs, he should appeal to his county agricultural agent, and, if the county agent thinks it advisable, should call in a veterinarian. He says that the farmer cannot afford to ignore unthriftiness among his pigs, as it removes any chance of profit. A normal healthy pig should weigh about 200 pounds when 200 days old.

Live Stock Hints

Get the pastures ready for the mower.

Dock lambs when they are about two weeks of age.

A good 1,000-pound steer will dress out 500 pounds of carcass, while a common steer of the same weight will usually dress out about 320 pounds. The well-bred critter also brings more on account of quality.

Potatoes make very fair fattening feed for hogs, particularly when cooked. From 4 to 4½ pounds of potatoes cooked are equal to a pound of corn. It is desirable to feed some other feed, such as oats or shorts, with the potatoes.

Plenty of good pastures mean the best and cheapest feed for live stock. Have pastures all the year.

Sanitation in the hog lot sounds impractical but this method of preventing small pig ailments has kept a number of Kansas hog men in the business.

In fattening stock for market don't over-stuff them. They will make faster gains if you keep 'em a little hungry. It's the last mouthful of grain that puts 'em out of condition.



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POULTRY FACTS

PRODUCE MORE EGGS IN WINTER SEASON

"The Badger state's winter egg production can be increased very noticeably per hen by carrying out certain easily followed plans," says O. M. Johnson, superintendent of the Wisconsin College of Agriculture poultry flocks.

"We have discovered," avers Johnson, "that pullets must be separated from the old hens to get the best possible egg production. If this policy is not carried out, the older hens will keep the pullets from their feed and boss them around so that they do not have a chance to get full development."

By letting the pullets run with the older fowls, there is also a great danger of spreading diseases. This, too, is fatal to egg production. An underdeveloped pullet or one that is backward in her development should be sold, continues the poultryman. These pullets, as well as cockerels that are not to be kept for spring's breeding, do not as a rule pay their board.

"Skim milk is one of the greatest aids in egg production, and it should be used to the limit," says Johnson, "and each pullet should never be without plenty of milk, either sour or sweet." Washing the dish thoroughly each time before feeding is a precaution so as to guard from diseases. When hens have all the milk they can drink, very little water is needed. In fact it is best, advises the poultryman, that pullets do not have water if they have all the skim milk they can drink. The milk will furnish them with water and at the same time the proteins and minerals the pullets need.

Whole cabbages hung up in the scratching pens will furnish fine green feed, but other greenstuffs also serve their purpose. Many poultrymen make the mistake of throwing large amounts of green stuffs on the floor where it gets moldy and dirty.

For the mash, which the pullets should have access to at all times, equal parts of bran middlings, yellow cornmeal, oats and beef scraps or tankage has given the best results. If the chickens have all the milk they can drink, the meat scraps and tankage can be cut to one-half part.

"A dry, well ventilated hen house free from mites and lice is important. The litter in the scratch pens should not be too deep at first as the pullets do not know how to scratch deep, or else will not. Yellow cracked corn is as good a scratch feed as one needs, but one-third of any other wholesome grain can also be added."

Ration Recommended for Making of Winter Eggs

The following ration for winter egg production recommended by the Missouri College of Agriculture, satisfies the needs of the hens and is economical and practical. During the past year it has been fed on a number of farms with good results: Scratch grain—ten pounds of shelled corn and five pounds of dry threshed oats. Dry mash—three pounds of wheat bran, three pounds of wheat shorts and one and one-half pounds commercial meat scrap.

Where milk is plentiful three gallons of skim milk or buttermilk furnished each 100 hens daily will take the place of meat scrap. Either milk or some form of lean meat must be supplied in every ration for success.



full winter egg production. Commercial meat scrap can be obtained from most feed dealers in 100-pound sacks. One sack will supply protein needed by 100 hens for more than two months. Barley or feed wheat may be used instead of oats. Cornmeal or ground oats may be substituted for shorts in the mash. Alfalfa meal or clover leaves may take the place of the bran. A good grade of tankage may be used instead of the meat scrap. In feeding this ration all grain should be fed in deep straw to compel the birds to exercise. The mash should be fed in self-feeding hoppers or troughs and a supply kept before the birds. In addition to this ration, hens should have an abundance of water, a supply of green food and free access to sharp grit and crushed oyster shells or soft limestone grit. With early hatched pullets, housed comfortably, and fed this ration, winter eggs are assured.

Plan of Line Breeding

Line breeding can be done by using the same ancestry or blood lines with careful selection that avoids the bad effects of inbreeding. The shade of difference between line breeding and inbreeding is sometimes very faint. Breeding the pullets of a mating back to the sire, and one of the cockerels back to the hen, is a strict line breeding, which is often practiced to establish certain qualities in a strain.

Identifying the Twins

Sir Henry Wood, the famous musician, is responsible for a delightful little story concerning baby twins who were so much alike that even their mother had difficulty in telling them apart. Not so their father, a piano tuner, who had his own professional way of identifying his offspring. He explained to the friend who was admiring them he told the difference by pinching them.

"Good heavens! You must not do that. You'll make them cry." "Precisely," replied the father, "that's the whole secret. Listen. 'This one'—nip—'is evidently William. He cries on the high C. The other, James'—nip—'is half a tone lower.'"—San Francisco Argonaut.

Bachelor's Joy

"This may seem peculiar," said a bachelor, "but I haven't a single key among my possessions. I live in a hotel, I have no car, the lock on my suitcase is broken, the janitor opens the office where I work, and, in fact, I have no occasion, during an entire day, to use a key of any description. And when I see some married man who is in business struggling to pick out the right key to fit some of his many holdings, I feel lucky. I really believe my bachelority is compensated in the fact that I don't have to go about carrying several pounds of keys."