

# LIVE STOCK NEWS

FEEDERS MUST BE BOUGHT VERY LOW

How much can a man pay for feeders this fall? This is a question that is puzzling many farmers at this time.

The safest answer is to study past results and then make as intelligent a guess as possible. For example, during the feeding season just closed, it cost 21.58 cents to put one pound of gain on lambs on 14 farms co-operating with the Colorado Agricultural college and the United States Department of Agriculture. The previous year it cost 18.76 cents to make a pound of gain. In 1925-26 lambs weighing 70 pounds put on 22.5 pounds of gain at 21.58 cents per pound for all costs. These feeders cost \$13.75 per hundredweight in the feed lot. They should have sold for \$15.98 per hundredweight fat to enable these operators to come out even. This would mean \$2.23 per hundredweight higher than the purchase price. They actually sold for \$13.01 per hundredweight.

If one takes the \$2.23 as the necessary margin between the price per hundredweight of feeders and of fat lambs when they gain 22.5 pounds, then one needs to know how much fat lambs will bring in 1927 in order to find out how much the farmer can afford to pay for feeders this fall. Actually when feeder lambs weigh 60 to 65 pounds and are selling for 10 to 11 cents per pound, it will take nearer \$3 per hundredweight for a profitable feeding margin.

When all things are considered it will require an optimist to believe that fat lambs will bring more than \$13 or \$14 per hundredweight as an average in the spring of 1927. They may sell higher at times. They certainly can sell for less if the big lamb crop comes through. If the farmer takes \$12 as a mark to aim at, then he can figure that his feeder lambs should come into the feed lots around \$9 per hundredweight to give a reasonable chance for paying out, provided the market has been estimated correctly.

Many things can happen to upset these estimates, yet one thing is certain: After a lamb is purchased, it costs money to feed him through, and as far as possible one should try to sell him so that these costs can be met. The farmer has little control over the final sale price. This throws the problem back to buying the feeder at a price low enough so that he can be fed at a profit.—R. T. Burdick, Associate Economist, Colorado Agricultural College.

## Live Stock Saves Labor in Harvesting of Crops

Thousands of corn-belt farmers have employed hogs as corn huskers, and cattle and sheep have also done some harvesting of crops at very low cost. The huge bulk of our crops, however, are still laboriously harvested, stored at great expense, and then fed to animals at the cost of still more labor. A short time ago we found a farmer who has developed the idea of having the live stock do the harvesting to the point at which he declares that he will never husk any corn, and that he will never haul out any manure, says the Indiana Farmer's Guide.

His plan involves the harvesting of every possible crop by the animals themselves, and the feeding of all stock in the fields. The stock runs out the year around. Alfalfa hay is stacked in small ricks and fed to cattle, sheep and hogs right on the field. Not only does this plan save labor, but it also results in the maximum amount of fertility being returned to the soil, and it maintains the live stock under conditions which are most conducive to health and vigor. Thus it bears rather heavily on three of the major problems of present-day farming.

## Twin Births of Calves Found to Be Seasonal

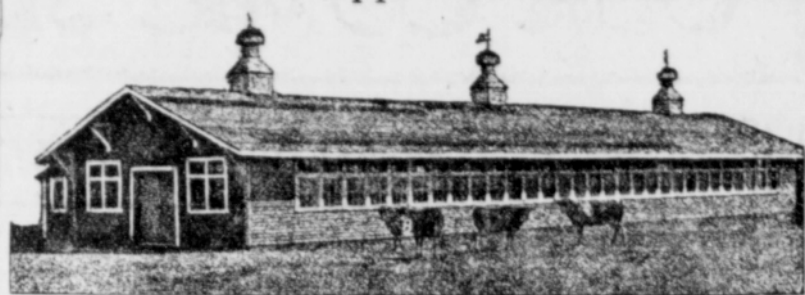
L. J. Cole and A. Rodolfo of the University of Wisconsin have been studying the American Hereford and Aberdeen Angus herd book records and have found that there is a tendency for more twin births to occur during the months of late summer and early fall than at any other season of the year.

The largest number of twin calves are born during the month of August. From that time there is a decline in frequency of plural births until the low point is reached in the month of March, after which the number again begins to increase. The average number of twin births is 4.65 per 1,000 cows. In March the number sinks down to 3.25. It rises to 6.25 for August and there is a gradual but distinct variation in the number per month from March to August and then back again.

## Add to Meat Supply

Short and dry range conditions in the late summer and fall bring to market some lambs and sheep that would be kept on the range when conditions were more favorable. This adds to the meat supply either directly or after fattening. Unprofitable cattle feeding the last year and generally profitable corn belt lamb feeding for four years has brought more than the usual number to consider fattening lambs this year. Feeder lamb prices are high.

## One-Story Dairy Stable Design Follows Approved Modern Ideas



By W. A. RADFORD

Mr. William A. Radford will answer questions and give advice FREE OF COST on all problems pertaining to the subject of building work on the farm, 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.

Owners of dairy herds of considerable size have changed their ideas somewhat of what a stable should be during recent years. Instead of the two-story barn, with the stable on the ground level and a mow floor above, a one-story stable, such as is shown in the accompanying illustration, is popular.

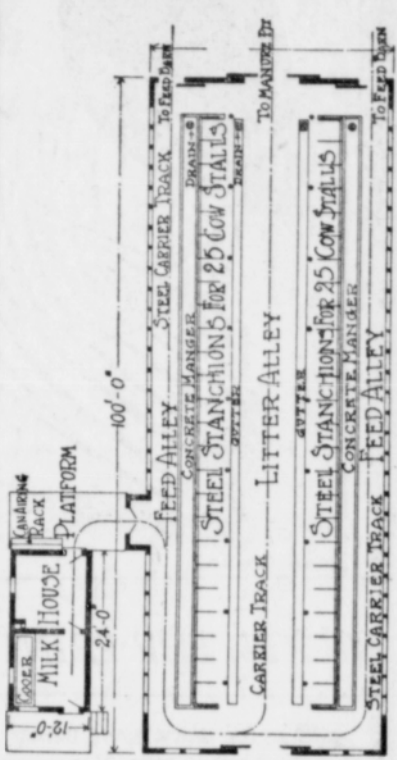
This type of dairy building design is recommended only to those who already have buildings for the storage of hay and other roughage. In that case a considerable part of the cost of a building may be saved. By the addition of silos of sufficient size to house the silage the herd will need, the animals may be housed at less cost than when the usual barn is built.

The design shown is 100 feet long and 36 feet wide, and has single stanchions for 50 cows, 25 on either side. It will be noted that the interior layout of the barn is for the cows to face out. This arrangement may be reversed, if desired. The little alley runs through the center of the stable, which is a convenient arrangement if it is desired to load the manure directly into the spreader. The design shows overhead tracks, however, for both manure removal and distribution of feed to the managers.

A system of suction ventilation to provide the animals with fresh air without drafts and for the removal of foul air, is included in the design. The floor is of concrete and the stall partitions of sanitary steel type. Drinking fountains are at the stall-heads to supply the animals with a continuous flow of fresh water. The building is of frame construction.

tion, of good materials so that it will be weathertight. Continuous windows flood the interior with sunshine and light, helping to keep the stable sanitary.

It will be noted by the floor plan of the building that there is a milkhouse adjoining. The carrier track runs from the stable to the milkhouse to make easy the transportation of cans to the cooler. A loading platform sim-



plifies the loading of the milk into trucks or wagons. The milkhouse is entirely separate from the stable, a health requirement in most communities.

While this building is larger than most farmers will need to house additions to their herds it may be shortened to meet their needs. The same proportions, however, should be maintained.

## Wood Will Rot Away Unless It Is Painted

It is a well-known fact that all wood surfaces that are exposed to the weather soon will deteriorate unless they receive some sort of protection. Paint is the accepted medium for this protection and when we consider that the film of paint that covers the framework of a house really is only about as thick as a piece of ordinary writing paper we can see that paint is a wonderful thing.

Because of the service that painting gives, and the decorative value it affords, one understands why the paint must be the best. To have a good job, it is necessary first of all to use only the best ingredients in the paint itself, secondly, the workmen chosen to apply the paint must be experienced and trained in their work, conscientious and painstaking in the bargain.

The life of all paint is linseed oil, but it needs protection from the sun's rays, consequently pigments—coloring matter—is added to protect the film and reflect the rays of the sun; white and light colors reflect the rays of the sun more perfectly than do the dark colors, consequently they wear longer.

## Color Has Big Influence on One's Feelings, Mood

Man has apparently become careless about one of the most important items in his environment—color. As soon as he realizes fully the inhibitive and repressive influence of drab, uninteresting color surroundings, the vistas about will be immediately transformed. Man has always conquered or changed conditions unfavorable to his best development. There is no reason to believe that he will not rise to the present situation and reinstate into his daily life the color which is so important to his well-being.

## Metal Lath in Various Weights and Mesh Shapes

Metal lath in two general classifications—expanded metal and wire fabric—both coming in various weights, is in use. There are several patterns of the former, including square and diamond mesh, others having trough or cup styles of indentations. Some metal lath is self-furring by means of solid ribs, or ribs formed by a bend in the lath, or by means of lateral edges or corrugations. Woven wire fabric comes in square and triangle mesh patterns, some plain and others stiffened by raised ribs.

## Electricity in Home

Fifty-five different domestic operations are accomplished by electricity in a home whose owner proudly claims that it is completely electrified. A few years ago ten or twelve operations would have been considered the maximum.

## Some Timely Hints for House Owners

The time is at hand when the man of the house can well afford to devote his evening to make minor repairs needed before the winter season sets in. If the home owner does not have the time, skill or inclination to perform the work himself, he should call in the necessary artisans to do the work for him. For example, he should:

Have the furnaces examined and cleaned and necessary repairs made.

Have all smoke flues swept clean and defective parts repaired.

Have chimney tops examined above roof and brick work repainted and metal caps repaired.

Have all roofs examined, repaired and repainted if necessary.

Have all exterior painting done now while the weather is good and the paint will have a chance to dry properly.

Have all interior painting and decorating undertaken at once.

Plumbing carefully checked for hidden flaws that may cause serious trouble when the weather becomes cold.

Have all general repairs and alterations undertaken at once.

By doing such work in the summer it can be carried out without resort to overtime and will be done by the mechanics regularly employed by your contractors whom they know to be competent.

## Cracked Plaster Ceiling Cured by Wall Board

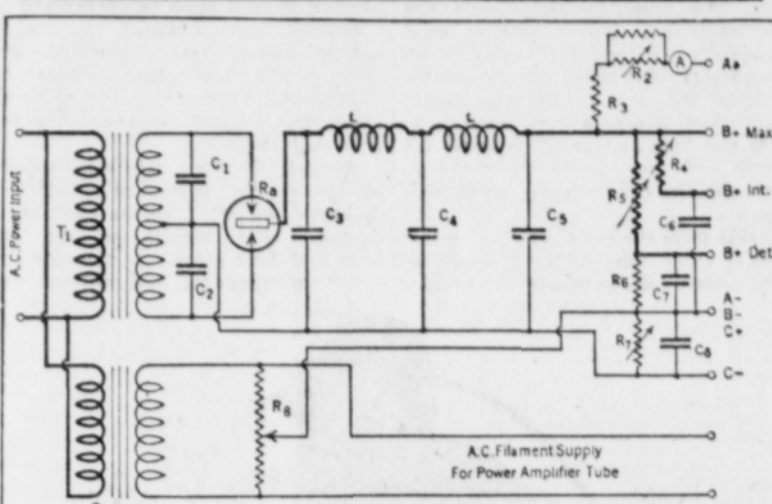
When renewing walls with wall board baseboards, picture moldings, etc., can often be removed and replaced to advantage over the wall board. Where this is not practical a small flat batten will be found necessary to cover nailing edges above the baseboard and around door casings and window frames.

In covering cracked plaster ceilings it is advisable to nail furring strips on the joists to provide a nailing surface for edges and centers of panels. First place the strips that cross the joists, making them run the full length of the room. When these are up fit the other strips in between them. This insures solid nailing at each joist for the long strips, while the short ones that miss the joists entirely may be fastened to the first solidly nailed strips.

## Molding in Bedrooms Makes Room Less Cold

When the bedroom ceiling is too high, making it a cold and uninvitable structure, it is a good plan to carry the ceiling corner down the walls all around as far as the tops of the window casings, forming a "canopy," which can be separated from the wall with a molding or a simple line of color.

# RADIO



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The Complete Circuit Diagram for the "A," "B," "C" Line Supply Device Described Herewith.

The biggest difficulty to be overcome in obtaining "A" current from the house a. c. lighting supply is in finding a rectifier that will pass sufficient current for the filaments and yet make battery elimination an economical proposition. In the course of a description of an efficient "A," "B," "C" line supply device in the Radio Broadcast Magazine, B. F. Roland writes as follows: "A logical solution to the difficulties of 'A' power filtering is to connect the filaments of the radio tubes in series, thus reducing the overall current consumption.

"The accompanying diagram shows a unit which has been found entirely satisfactory for use in conjunction with a receiver employing 199 type tubes in series. Due to the fact that the current consumed is small, the filter choke coils are of reasonable proportions. This device will supply voltages and currents as follows:

"A" battery—60 milliamperes, 6 to 30 volts.

"B" battery—Up to 25 milliamperes, at 200 volts, 90 (variable) volts, 45 (variable) volts.

"C" battery—From 0 to 50 volts.

"The use of the device is, of course, restricted to radio receivers employing tubes similar in characteristics to the UX-199 or DV-3 tubes with filaments wired in series, and under these conditions its performance as a universal power is ideal. The device illustrated is adaptable to any type of radio circuit and has been used with success on a three-circuit regenerative set, the Browning Drake, and tuned radio-frequency receivers, with variations of each type. Transformer resistance or impedance-coupled amplifiers have been employed indiscriminately with equally good results.

**The Power Transformer**

"In the diagram, T, is a General Radio power transformer designed for 50 watts, 110 volts, at full load. The high voltage secondary provides 350 volts each side of the tap at the center at no load. The third winding, T<sub>3</sub>, provides 5 volts at 5 amperes for the 'raw' a. c. filament supply of an UX-112 or UX-171 power-amplifier tube. This may be supplied by a separate filament lighting transformer. In this construction, a Brach unit serves the purpose nicely. Across each half of the secondary, T<sub>1</sub>, is connected a 0.1-microfarad buffer condenser, c, and c<sub>1</sub>, of 1,000-volt flash test type. The outer ends of this winding are connected to the filament terminals of a standard UX type socket, into which is plugged the new type BH Raytheon rectifier, Ra, which is capable of passing 85 milliamperes. The plate terminal of the socket, corresponding to the cathode of the Raytheon tube, is connected to the plus side of the filter circuit. The filter circuit of this power unit includes choke coils, L, capable of passing 85 milliamperes direct current without heating, and having a residual inductance of at least 25 henries per choke at this value of direct current. The General Radio type 396 standard 'B' substitute choke is admirably suited for this service. Others which fulfill the above requirements will probably be equally as satisfactory.

"The voltage-control unit shown at the right-hand end of the diagram has been tried under all conditions, and has given good service. There was some difficulty in obtaining proper values and current-carrying capacities of the various resistors and, after considerable testing, the units specified were adopted. All of the parts in the control unit may be obtained from regular stock of the various manufacturers or their dealers. For the plate voltage of the power-amplifier tube, the maximum 'B' plus is taken directly from the terminals of the filter circuit. This terminal provides approximately 200 volts at full load. A carostat, R<sub>1</sub>, is used to control the voltage output of the next lower tap ('B' plus int.) and will give from 90 to 135 volts approximately on the usual plate-current drain at this voltage. The 'B' plus detector tap is obtained through the use of another carostat or a Bradleyohm No. 10. R. One-microfarad condensers are connected in both of these cases from the 'B' plus variable to 'B' minus to bypass rheostat noises, and to prevent undesirable coupling between the various amplifier stages.

**"C" Battery Voltage.**

"The 'C' battery voltage is obtained from a wire-wound variable resistance of the proper value. As this resistance carries the full-load current of the device, it must be designed to carry 70 to 85 milliamperes without

change of resistance, and without excessive heating. If high 'C' voltages are desired, say up to 60 volts, the Federal No. 25 potentiometer is a good resistance to use here. It has a maximum resistance of 1,850 ohms, and will carry the full-load current fairly satisfactorily. A General Radio No. 214 potentiometer may be used in this position to supply 'C' voltage up to 34 volts, and does so with much less heating. An 11mf. condenser is connected from 'C' plus to 'C' minus to prevent undesirable coupling effects and distribution. If 60 volts 'C' bias are required and 85 milliamperes pass through the resistance supplying it, the power that must be taken care of is 5.1 watts.

"The a. c. filament winding, T<sub>2</sub>, may not be available to the average constructor who may, however, have access to a 50-watt transformer having other satisfactory windings. In this case a Thordarson doorbell ring transformer may be used to light the filament of the power amplifier tube. This transformer will be found to give the proper voltage without a filament rheostat for the UX-171 and UX-112 tubes, using the winding marked '6 volts.' A 400-ohm potentiometer, R 8, is connected across the 5-volt a. c. supply and the center tap is returned to the 'B' minus terminal of the supply unit. The adjustment of this potentiometer is very critical in order to eliminate all a. c. hum from this source. The 'A' plus terminal of the power supply is obtained by dropping the 'B' plus max. through a suitable rheostat to the required 'A' battery voltage. The resistance used in this position should have a range of from 3,000 to 5,000 ohms, and a current-carrying capacity of 60 milliamperes. As there was no rheostat of these requirements available, the writer used a combination of fixed and variable resistances to achieve the degree of control required. A fixed Ward Leonard 3,000-ohm unit was placed in series with a Ward-Leonard 5,000-ohm fixed resistor, around which was shunted a Federal No. 25 potentiometer."

## Flexible Wire Handy When Experimenting

If you like to try occasional changes in your receiver, or if you want to experiment with temporary circuit arrangements or new instruments, you will find it convenient to keep a number of lengths of flexible insulated wire hanging from the side of your experimental table. The wires should be from six inches to two feet in length, and their ends equipped with small spring clips of the kind that look like tie clasps.

Ordinary single lamp cord, which costs about a cent a foot, is ideal for the purpose, as it combines mechanical strength with electrical utility. It is a good idea to buy a number of six-foot lengths in three or four colors of insulation and to cut up the different colored pieces into odd size. Then when you make a half dozen or so temporary connections and the wires cross each other or become otherwise entangled you will find it a simple matter to trace the circuit with the aid of the varicolored leads.

In fastening the ends of the wires to the clips twist them securely around the binding screws so that they will not fall out even if the screws themselves loosen. Of course the best idea is to solder the wires permanently in place, although it is desirable sometimes to remove a clip and to tighten the wire directly beneath an available binding post.

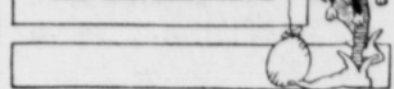
At any event, tape down the frayed ends of the insulation near the clips with narrow slices of ordinary white adhesive tape, so that the insulation will not run back and eventually bare the wire beneath to view. White adhesive tape is preferable to black friction tape because its outer surface is not sticky and does not tend to pick up dirt as easily as the latter material.

Strong small spring clips with tenacious jaws can be bought for less than 5 cents each in any radio store. Keep a box of them on hand; they are extremely useful for making quick, solderless connections and in holding two ends of wire together.

## Towel Rod Insulators

Glass towel rods make excellent antenna insulators. Such rods may be obtained in the nickel and dime stores.

# CAP AND BELLS



THE P. O. LINE

Seafaring men, as a rule, close their minds against everything but the sailor's life. This was illustrated in a most emphatic manner recently when a traveler walking along the Liverpool docks asked a sailor where the main post office was. "I dunno, guv'nor," said the tar. "What's the color of her funnels?"—D. A. C. News.

## Naughty Harold

Gladys—You ought to be ashamed of yourself! What do you mean by hurting father?

Harold—Hurting your father! Why, I didn't—

Gladys—You did. His bunton has simply been killing him ever since he kicked you downstairs last night.

## DELAYED BY A WRECK



"Jim says he was delayed in getting back by a wreck."

"Wreck is right—I saw her."

## Radio

I'll write no postcards as it flings its various sounds erratic; No writing could express the things I think about the static.

## Well, Well

Army Doctor—What's the matter with your arm?

Recruit—It was broken when I was a boy.

Army Doctor—What idiot set it again?

Recruit—You did, sir!—Munich Nebelspalter.

## Economy

Son (home from college)—Dad, I know how you can keep your bills down.

Dad—How?

Son—With a paper weight.—Good Hardware.

## PREPARED WITH CAPERS



Diner—Was this mutton prepared with capers?

Waiter—Yes, sir, indeed it was. The chef burnt three fingers when he toiled it up.

## Commercial Rating

The crowd, admiring, follows Promoters of banality Who show a million dollars And a thirty-cent mentality.

## A Self-Announcer

She—It's nearly six weeks now since baby was born. Have you told the registrar yet?

He—If the registrar lives anywhere within ten miles' radius he'll know already.—London Passing Show.

## The Generous Butcher

Mr. Newed (solemnly)—And how do you get along with the butcher, darling?

Mrs. Newed—Oh, splendidly! He's such a generous man, dear! When I order a four-pound joint, he always sends one weighing six or seven!

## Mutual Compliments

Maud—Did you hear what your friend Edith said about you?

Marie—No. I was in the other group talking about her.

## That's Fair

Bank Clerk—As you work in a theater, can you get me a few tickets for the show?

Actor—Certainly. And, as you work in a bank, can you get me a few notes?—Paris Journal Amusant.

## A Great Fight

Hobbs—So your wife recovered. I hear the doctors made a great fight for her life.

Dobbs—They did, and they almost got it, too.