

INSULATE HIVES FOR WINTER USE

Loss of Heat Through Bottom Is Very Rapid, Notwithstanding Belief to Contrary.

DEFECT SHOULD BE REMEDIED

Leaving South Front Unpacked on Theory That Sun Will Furnish Necessary Warmth Erroneous—Sawdust Not Expensive.

(Prepared by the United States Department of Agriculture.)

Contrary to the usual belief of beekeepers, the loss of heat through the bottom of beehives otherwise insulated is very rapid, so that the insulation on the top and sides is never used to its full capacity, as so much of the heat escapes below. On the supposition that "heat rises," it has been the practice for beekeepers not to insulate the bottoms of hives in which bees are wintered. This is a serious neglect which should be remedied in all commercial insulated hives, according to United States Department of Agriculture circular 222, The Insulating Value of Commercial Double-Walled Beehives, by E. F. Phillips, apiculturist.

Insulating Value. Tests have been made of the insulating value of eight different types of hives. It is clear from the results of these tests that leaving any part of the hive without insulation renders the escape of heat at that point easy. Some beekeepers, in addition to leaving the bottoms of their hives unprotected, also leave the fronts, facing the south, unpacked, on the erroneous theory that the warming of the hive by the sun will overcome the loss of heat at this point.

Space for Insulating. The insulating value of an ordinary insulating material depends on the air spaces confined in the material, and the insulating value is increased by increasing the number and decreasing the size of these air spaces. In



Four inches of insulating material in bottom of winter packing case below bottom of hive.

The so-called dead-air spaces in hive construction there are doubtless convection currents within each cavity which tend to dissipate the heat. Since sawdust or other insulating material costs so little, it would seem advisable to increase the thickness of the space for insulation in cold climates to four or even six inches, allowing the beekeeper to fill this space with cheap insulating materials. A comparison of these is given in the circular, together with the results of tests made in the form of a temperature table. The circular is available upon application to the United States Department of Agriculture, Washington, D. C.

TO ESTABLISH HONEY GRADES

Beekeepers From Various Parts of Country Send Samples to Agricultural Department.

Samples of honey are being received by the United States Department of Agriculture from beekeepers in all parts of the country in connection with the work of establishing reliable color grades for extracted honey. A new type of spectrophotometer will be used in this work, which will be done by agriculturists of the department in co-operation with the division of grades and standards of the bureau of agricultural economics. It is also planned to use the honey examined in other investigations. The pollen content of the honeys will be identified by the microchemical laboratory of the bureau of chemistry.

SOW RAPE IN FALL FOR HOGS

By Turning Animals on Crop Month or Six Weeks They May Be Cheaply Finished.

Dwarf Essex rape may be sown in late summer or early fall and the hogs given a fine start toward fattening. By turning pigs on rape a month or six weeks they may be easily and cheaply finished. According to Minnesota authorities, an acre of rape will carry from twenty to thirty pigs for several weeks.

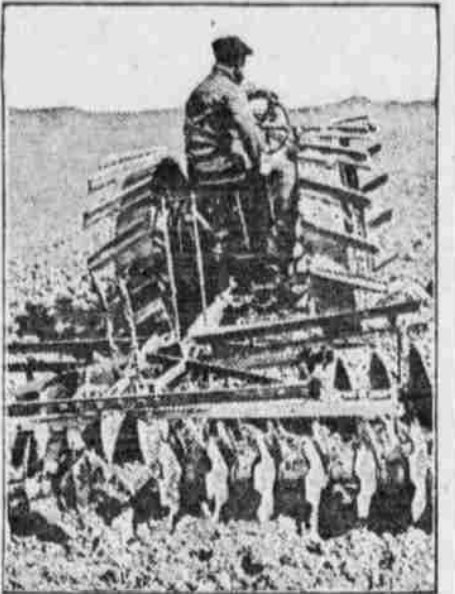
Dwarf Essex rape should be sown on rich land. Five pounds of seed broadcast will sow an acre. The soil should be prepared well and sowing done in late summer or very early fall.

TRACTOR RESPONSIVE TO GOOD TREATMENT

If Not Just Right It Falls Short in Producing Power.

Operator Should Carefully Examine His Machine Every Week or Ten Days and Tighten Up Loose Bolts and Nuts.

The tractor is as responsive to good treatment as an animal or any other machine. In the case of a great many machines the response to good treatment is not so noticeable. This is true because the tractor is a power-furnishing machine, while the average farm machine consumes power, says E. R. Gross of the Colorado experiment station. If the tractor is not just right in every way, it falls short in the production of power. This is sure to be very noticeable, as it is usually pulling a full load and only a



One Man and Tractor Doing the Work of Two Men and Four Horses.

small loss in power cuts down the amount of work done. In the case of the power-driven machine, any disorder calls for greater power to operate it. The horses or the machine furnishing the power work harder and approximately the same results are accomplished. Hence it is much easier to overlook a slight indisposition on the part of a power-consuming machine than on the part of the power producer.

If any part through which power is transmitted is loose, it may cause a reduction of power. The tractor operator should examine his machine thoroughly every week or ten days to prevent such loss. A bolt in the crank case is loose, oil is lost. The adjustment of a valve stem loosens, the valve is out of proper time and the cylinder does not give full power. The clutch is not adjusted to take hold evenly. Slippage here causes loss of power. Similar leaks may develop in the fuel system and the ignition system. Any of these cause heavy drains on the power. Usually they can be quickly repaired if attended to early. Left too long, they may result in a breakdown involving a larger repair bill and loss of much valuable time.

The throb and rhythm of the tractor should be a part of the operator so that he detects the trouble in its earliest stage.

SELF-FEEDER FOR CHICKENS

Home-Made Contrivance Reported to Department of Agriculture From Indiana Agent.

A good home-made self-feeder for poultry reported to the United States Department of Agriculture by the county extension agent of Knox county, Indiana, is one made of an old mower wheel, a barrel with both ends knocked out, an old washtub, and a small platform of rough boards. The wheel is first laid on the platform. The barrel is then placed on the wheel, filled with dry mash, and the tub turned over the top of it for a cover. A barrel should be used which leaves just enough space between its edge and the rim of the mower wheel to allow room to feed. This prevents the feed from being scratched outside the rim.

SILO IS HANDY IN EMERGENCY

In Seasons of Drought Farmer Has Supply of Feed for Stock Stored in Years of Plenty.

In seasons of drought, when the pastures are "burnt up" and the crops partially or totally ruined, the farmer having live stock must dispose of a large part of his herd—usually at a sacrifice, or buy high-priced feed. Here the farmer with the silo is ahead of the man who has none. He can keep his stock in good shape by giving them the silage he has stored from years of plenty. Corn properly ensiled will keep for many years.

HAVE COLLAR FIT PROPERLY

One That Sets Perfectly in Spring May Be Too Large by Fall—Pads Are Necessary.

A properly fitted collar is one that lies snugly along the sides of the neck with room enough at the bottom to allow a hand to be passed through. Sweet pads are necessary to adjust the collar to different horses and are also made necessary by the loss of flesh; a collar that fits perfectly in the spring may be too large by fall.

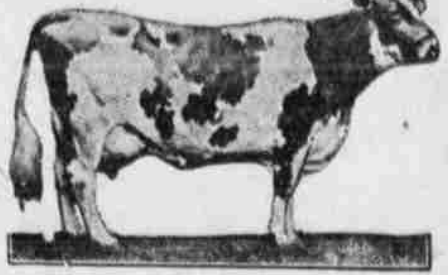
DAIRY HINTS

FEED POINTS FOR DAIRYMAN

To Obtain Maximum Milk Production Cow Must Be Attended to at Proper Moment.

If you would get a maximum milk production from your cows, feed the right feed at the right time and in the right amounts, advises M. H. Keeney, dairy specialist of the New Jersey State College of Agriculture. Mr. Keeney gives the following practical suggestions for dairymen in feeding for milk production:

1. Feed all the roughage a cow will



More Guernseys Have Been Imported to United States During Past 33 Years Than Any Other Breed.

clean up. Part of it should be a legume such as clover or alfalfa.

2. Feed some succulent feed such as silage or roots.

3. Feed a balanced ration.

4. Feed grain in accordance to milk production: For a Holstein or Ayrshire, approximately one pound of grain for each 4 pounds of milk; for a Guernsey or Jersey, about one pound grain for each 3 pounds of milk. A variety of grains in the mixture is desirable.

5. During short pastures supplement with silage or some green feed, together with some grain.

6. Feed and milk regularly.

7. Supply an abundance of pure fresh water at all times.

8. Give access to salt daily.

9. Purchase grain feeds on the basis of their protein and energy content and not alone on just the cost per cwt.

GROWING RATIORS FOR CALF

In Feeding Young Dairy Animals Material Supplied Must Be Fresh-Building—Salt Is Needed.

"There are two things to remember in feeding dairy calves," says E. A. Hanson, dairy specialist with the agricultural extension division of the University of Minnesota. "The feed must make them grow and must supply flesh-building material so they will be in good condition.

Growing feeds, he says, consist of skim milk, clover hay, oats, bran and oil meal. The fattening feeds are corn, barley and oil meal. For calves under six months old in good condition and having a soft, mellow hide a mixture of 30 pounds ground corn, 30 pounds ground oats, 30 pounds bran and 10 pounds oil meal, fed three to five pounds daily, is recommended by Mr. Hanson. A mixture of 30 pounds ground corn, 20 pounds ground barley, 40 pounds ground oats and 10 pounds oil meal, also fed at the rate of from three to five pounds a day, is advised for calves in poor condition.

"Salt improves the calf's appetite, so keep a box with clean salt in sheltered place where the calf may eat of it freely," Mr. Hanson advises. "Provide all the good clover or alfalfa hay the calf will eat up clean. Never allow the calves or yearlings to run with the herd."

NEW BETTER-SIRES EMBLEMS

Certificate of Improved Design for Recognition of Good Work in Improving Stock.

A new emblem of improved design for recognition of good work in improving live stock is ready for distribution by the bureau of animal industry of the United States Department of Agriculture. The certificate, which measures 8½ by 10½ inches, resembles a steel engraving and is suitable for framing.

A person holding an old emblem and desiring to exchange it for a new one may do so by returning the old one to the bureau of animal industry. About 7,800 of the old emblems have been issued to breeders and others working with the department in improving the utility value of farm animals, reducing the number of runts, and in other ways benefiting the live stock of the country.

Bull Is Most Important

Have you a ready dairy bull? If not see your county agent about getting one or forming a co-operative bull association. The bull is the most important part of the dairy herd as he is the sire of your future herd.

Make Silo Fit Herd

In installing a silo make it fit the size of your herd. The diameter should allow you to feed your herd at least two inches off the surface to prevent surface spoilage, then make it deep enough to last as long as you expect to feed during the year.

Silo a Necessity

The silo has come to be recognized as a necessity on farms where ten or more dairy cattle are kept. In fact it is now recognized as the most profitable building on the dairy farm.

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COULD DO WITHOUT UNIFORM

Youthful Fijian Proved Anew That Necessity is the Fertile Mother of Invention.

A traveler from Fiji in the old days reports that at times in the past when the game was first introduced there the Fijians used to get waves of cricket madness, and in some outlying villages—where it was not so readily quelled by law—a match would be kept up for weeks, on end. Incidentally, they wore their pads strapped on their naked, bootless legs with a very ludicrous effect. But evidently the Fijians have no sense of the ludicrous, for our traveler further reports: "Another distinguishing mark that rather amused me once upon country was when my house boy, Esau, came in one day with his hair cut away from one side of his head, looking like a somewhat weird 'parting' for the remainder stood up as usual like a bass broom with bristles five inches long. I asked him what on earth he had been doing and he replied: 'Sir, I am now a member of the Lomaloma "A" team, and we have agreed to cut our hair like this, as the store cannot get 11 sashes all the same color.'"—London Tit-Bits.

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NOTHING WORSE IN PROSPECT

Traveler Satisfied He Had Got Over the Most Uncomfortable Part of His Journey.

W. S. Inglis, the well-known coal operator, told a railroad story at a railroad men's banquet in Scranton.

"There used to be a little line," he said, "a branch line about 12 miles long, that was notorious for its bumps, general discomfort and dirt.

"A train on this line pulled into town one morning, late half an hour, as usual, and a man said as he rose and brushed himself off:

"Well, thank goodness, the worst part of my journey is over."

"Goin' far?" said another man.

"Hong Kong, China," said the first chap."

Helped Him Off. They found him lying on the sidewalk, both eyes were black and blue and one almost closed, his nose was bleeding, several teeth were missing and his map was decorated with cuts and bruises. He looked like the wreck of the Hesperus.

"What happened?" asked the cop who was applying first aid.

"I just told a big boob where to get off," he whispered, "and he said it wasn't his station, but it was mine."—Cincinnati Enquirer.

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AT LEAST GUILTY OF LYING

Truly Clergyman Had Refrained From Blasphemy, but He Had Sinned in Another Direction.

A clergyman who years ago settled in Massachusetts once reproved a workman for swearing while he was plowing a new field.

"Swear!" said the man. "I guess you'd swear!"

Whereupon the preacher took the plow and hurried after it, indignantly denying the charge. Then, as the field became more impassable, he began panting:

"I never saw the like! I never saw the like!" When he had gone once round the field he stopped, breathless, and added:

"There, you see I didn't find it necessary to swear."

"No," said the other, "but you've told more'n 50 lies. You said you never did see the like, and you saw it all the time I was plowin'."

Henry Hadn't Changed. Mr. Dulverton was feeling rather pleased with himself.

"So you heard me make my speech last night, Maria?"

"Yes," answered his wife. "I was up in the gallery."

"Well, you haven't told me what you thought of it," said Henry, expecting to be highly praised.

"Oh, it reminded me so much of your courting me, Henry."

"Really? How was that?"

"Why Henry, I thought you would never come to the point."

Amenities. Rastus and Mose were having a heated argument. In reply to some remark of Rastus, Mose said:

"Guess I know, niggah! Don't you think I've got any brains?"

"Huh!" Rastus replied. "Niggah, if brains were dynamite, you couldn't blow off your hat!"—Labor Clarion.

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