

# VENTILATION for highest profits

For profitable meat, milk and egg production, animals need plenty of fresh air. In fact, adequate supplies of fresh air can be more important than feed. For example, researchers have calculated that, on the average, cattle that eat 50 pounds of feed and drink 100 pounds of water a day need 200 pounds of fresh air. Laying hens, on the other hand, need as much as ten times more air as feed to maintain production.

Tests have shown that a properly ventilated laying house in this part of the country can result in hens laying about two extra eggs per month during the winter. You can also expect about a 5% increase in milk production through proper ventilation of the dairy barn. Granted, you don't normally measure air flow through your buildings in terms of pounds per day per animal. But this does point out how you may profit from doing some figuring on this subject.

Not only will proper ventilation result in better livestock production but it can also mean a longer building life. Livestock give off moisture in breathing. This must be removed from the building or it will condense on walls and ceilings and speed up decay. In poorly ventilated buildings you may occasionally notice frost or ice on the bottom side of the roof. This is a result of not providing sufficient ventilation to move out moisture given off by the animals. Do not overlook such danger signs.

Just how much moisture do animals breathe out during a 24-hour day? Well, on the average, you can figure 30 dairy cows will produce about two barrels of water every 24 hours. A hundred hens will breathe about 2½ gallons of water into the air each day. This water must be removed to prevent management problems, to keep the birds healthy and happy.

Moisture removal becomes more difficult as temperatures decline. For instance air at 30 degrees will absorb only about half as much moisture as air at 40 to 45 degrees. For most efficient operation it's generally best if you can maintain building temperature at about this latter level. This doesn't necessarily mean supplemental heat has to be added. With sufficient insulation in the walls and ceiling, animal heat will tend to maintain the building temperature at near the desired level.

Rate of air exchange needed varies, depending on weather conditions. For instance, for farrowing houses in the summer, an air movement of 150 cubic feet per minute per sow is often recommended. In the winter, however, 20 to 45 cubic feet of air per minute per sow and litter should be sufficient. Make sure the fans you use can be controlled to give this variation in air movement.

Contrary to popular opinion, fan blade size has little to do with its capacity to move air. When buying ventilating fans, you'll note that each is given two ratings—one is the free delivery rate while the other is based on delivery under ½ inch static pressure. Use the latter figure in selecting the fan. If you know your air movement needs, you can easily determine the best size of fan for the job you have to perform. Another point, make certain the fan motor is sealed, has permanently lubricated bearings and built-in overload protection.

If you're not thoroughly acquainted with ventilation principles, you had best rely on the advice of ventilation engineers. Additional information may be obtained from your county agent. While he probably won't give you specific engineering advice, he can suggest reputable sources of assistance. Also, the state agricultural college may be able to send you bulletins and circulars that can be helpful in answering many of your ventilating questions.

## HOW ONE EXTRA WEANER MAKES ALL THE OTHERS COST LESS

*You make the biggest headway in weaning more pigs at less cost per pig when you creep-feed them with a well-fortified feed containing Aureomycin*

Always use a good starter. It is the most important swine feed you buy. It determines future profits. Besides being palatable and well-fortified, it should be packed with antibiotic power.

Early and continuous feeding of this kind of starter feed is the only proved way hog producers have found to bring full litters through the most critical period—and to turn out more husky weaners. Pigs need this kind of feed, need it to be free of scouring and "unseen" diseases, need it to stand up under stress.

One extra weaner saved reduces the cost of all the other weaners—pays the feeding costs for the entire litter!

### How Aureomycin reduces cost per pig

Most hog producers know that AUREOMYCIN® is a "must" in any

pig starter feed. And they know it must be there in sufficient quantity. Your feed manufacturer or feed dealer knows this too, and is prepared to serve you with a starter feed containing 100 grams of AUREOMYCIN.

AUREOMYCIN does the best job of fighting not just a few, but the widest variety of disease organisms—and, in turn, the best job of permitting pigs to reach full growth potential and most efficient use of feed.

When you give a starter feed containing AUREOMYCIN, you provide extra protection against scouring, stress and disease. Your pigs grow fast and uniformly. You save those extra weaners.

For best results, continue feeding a starter past vaccination (at 6 to 7 weeks) for hog cholera and erysipelas. AUREOMYCIN

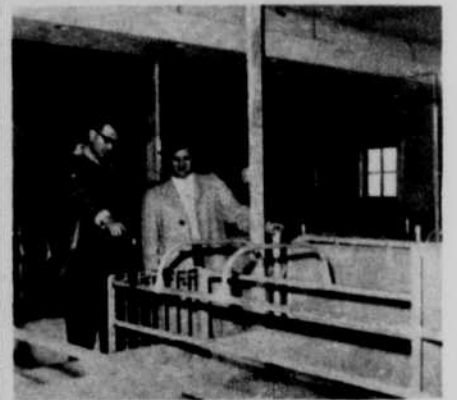
guards against vaccination reaction, keeps pigs vigorous.

### See your feed manufacturer

Talk to your feed man. Let him advise you on a breeding-to-market program for swine that will pay off for you. American Cyanamid Company, Agricultural Division, New York 20, N. Y. \*AUREOMYCIN is American Cyanamid Company's trademark for chlortetracycline.



Handling, moving, weaning, vaccination—AUREOMYCIN minimizes reactions from these stresses.



These two men are looking over a new central farrowing house. There have been a number of central houses built around the country during the last two or three years. This trend back to central farrowing is being made possible by a better understanding of the ventilation needs of this type of building. Note the central air duct at the top of this picture. This is a pressurized ventilation system, designed to meet the needs of sows farrowing in these quarters during all types of weather. Good ventilation can eliminate excess moisture, reduce disease and prevent many other problems which have been so common in the past.



Without some forced ventilation this stanchion dairy barn would be like a steam cabinet during winter. This particular dairyman uses a combination of natural and forced ventilation. Air enters the barn through partially opened windows along each side and is exhausted through ceiling fans above the center alleyway. Proper ventilation can often result in an additional two pounds of milk daily from cows that normally milk 40 pounds.



Starter pigs have little trouble with scours and "unseen" diseases when fed AUREOMYCIN. You save and wean more pigs.

