

Ontario Agricultural College and Experimental Farm.

VENTILATION OF FARM STABLES AND DWELLINGS.

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For people who live in house, ventilation is one of the many problems that have to be solved. Abundance of sunlight and of fresh pure air is the basis of cure that has been adopted at modern consumptive sanitariums. The prevalence of tuberculosis among both cattle and men is to a considerable extent due to close confinement, for longer or shorter periods, in ill-ventilated and badly lighted rooms. Dark, close basement stables for cattle, and tightly-bottled-up dwellings for men, women, and children, are too often found in this and other countries.

Ventilation is a matter more of accident than of plan in most of our houses and stables. As a consequence, the inmates are breathing the same air over and over again. This would be bad enough if every inmate of the house were perfectly healthy, for the products of respiration, even of a healthy animal, are a mild poison, which are, however, prevented from doing much harm by being more or less diluted. But when we remember not only that the expired breath of an unhealthy animal contains the usual constituent of carbonic acid, but that its presence is very likely to infect the air with the germs of disease as well, the necessity for frequently changing the air of occupied rooms is quite apparent.

In warm seasons, and in warm climates, the problem of ventilation is a comparatively easy one. We have only to throw open our dwellings to the action of the breeze, and the air is continuously changed. But in the wintry season, and in rigorous climates, the question is one of considerable complexity; for along with the demand for fresh air comes another more immediately urgent—the demand for warmth. In cold weather, these two requirements must necessarily conflict, and the one need is satisfied at the expense of the other. That being the case, we manage to have the more urgent need satisfied, and neglect the remoter necessity. We are more sensitive to cold than to impure air; and in order to secure a proper degree of warmth without too great cost, we are content to ignore the fact that we are breathing impurities.

During the greater part of the year in this country, the question of ventilation involves the question of temperature. We have not only to make provision for bringing fresh air into our dwellings, but we must warm it artificially after it is introduced. Therefore, ventilation, particularly for dwellings, is doubly expensive. We have to provide contrivances for renewing the air in houses and stables. That is one item of expense. In stables we have to guard against too great a reduction of temperature, and hence a system of ventilation in stables requires either careful watching or special appliances for warming the air. In houses, we generally expect to warm the incoming air by the consumption of a little more fuel.