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PROF. A. J. COOK, LANSING, MICH.—As indicated in the preceding answer, when the activity is great the air required is great. This need not be actively in the sense of motion. Thinking is activity, any vital act increases the amount of air necessary to health.

DR. DUNCAN, EMBRO.—A very strong colony requires more air or ventilation because there is more heat and moisture thrown off. A larger doorway will answer every purpose. The principal condition is when your hives are exposed to a burning sun all day.

DR. J. C. THOM, STREETSVILLE, ONT.—A rise in temperature in the repository of over 46° degrees I have found to be followed pretty constantly by uneasiness which is generally settled by a fall of a few degrees brought about the admission of a fresh current of air. There may be other theoretical conditions, which I fancy are of little consequence in practical application.

G. W. DEMAREE, CHRISTIANBURG, KY.—When it is a question of protection from cold the minimum quality of air is best, but when dampness is likely to be in excess, the greater amount of air is necessary. The practical "why" is when your sitting rocm is cold, you close the doors and windows, and when it is damp, you ventilate it by letting in the air. I could give you the philosophy of your actions in this matter, but facts are sufficient for all practical purposes.

DR. C. C. MILLER, MARENGO, ILL .-- Whenever the exigencies of the case are such that a greater than the normal quantity of oxygen is evidently seen to be required by the conditions of the inmates of the hive, then, in such existing circumstances, the above mentioned inmates will require more air, because the facilities of the bees for obtaining it from the air are greater than those for obtaining it from other substances easily within their acquisition. Seriously, aren't these queries of late getting rather conundrumy than practical? If, however, they are not asked by some old head trying to chaff us, but honestly asked by some one seeking light, I humbly ask pardon, and reply that I don't think I know all the conditions. Anything that awakens the bees to greater activity makes an increase of air imperative. Among such causes temperature stands prominent. There seems to be a Point at which bees remain nearly dormant. If warmer or colder they become more active and need more air. I suppose anything that tends to their discomfort, even to the quality of their **food**, might make them require more air.

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ALLEN PRINGLE, SELBY, ONT .- It is a law of animal life, including humans as well as bees, that the air must correspond with the food, or in other words, the breathing must, or ought to be, proportionate to the amount of nutrition. This physiological principle affords the data necessary to answer the above query. Briefly stated it means just this: The more a man eats the more he ought to breathe-the more a bee eats the more it must breathe. The more food the more oxygen, and this applies to all animals. The blood loaded with nutrient materials derived from the food, must be oxygenated and this is accomplished by breathing in the oxygen of the air. It therefore follows that bees require more air in the conditions which necessitate the consumption of more food, and less air in the conditions which necessitate the consumption of less food. What are the conditions then requiring a minimum of food and a minimum of air? A comfortable and quiescent condition-an hibernating condition, if you please. Whatever tends to increase the eating, such as cold, brooding, etc., brings with it the necessity for more ventilation -more air. and vice versa.

S. CORNEIL, LINDSAY, ONT .- The more quiet bees remain the less air they require. It is held by some that certain strains of bees, owing to something like temperament, are more disposed to become drowsy in winter than others. Such stocks will require less air. Foul air has the effect of making bees uneasy. A smaller quantity will suffice when the air is pure than when it is foul. There is a degree of heat below which the temperature of the cluster cannot go without rousing the bees to activity, and similarly there is a degree of heat above which the temperature of the cluster cannot rise without causing the bees to become uneasy. "In all cases the amount of oxygen consumed bears an exact proportion to that of the heat evolved." Therefore if bees are kept either too warm or too cold they require more air. The quantity of air required is to some extent affected by the number of bees in the colony. In an ordinary colony containing say 15,000 bees, having a temperature of say 70 ° inside the cluster and 50° in the air immediately surrounding it, these temperatures may be maintained, perhaps, with ordinary protection. In a nucleus containing 5,000 bees, the loss of heat by radiation is greater in proportion to number, but the surface exposed is proportionately greater and on account of the smaller number of bees to radiate their heat into each other, they will require to consume more oxygen, in proportion to their number to maintain the above temperatures. But these differences m

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