

Translated by David Heaf

g – Variant of the ecological roof

We have seen that the original Warré hive roof had a not inconsiderable fault regarding the circulation of air in the hive. This is because the ventilation chamber under the roof does not communicate with the inside of the body of his hive. We have also seen the simple but effective idea of a roof which follows all the tentative improvements of this original roof, with a really dynamic ventilation chamber, the only one that exists in hives currently in use. This modified roof fitted with an insulating, 'floating' quilt made of expanded polystyrene mounted on a piece of fabric.

Although it is true that this piece of polystyrene has a number of advantages, it is no less true that it is not very ecological and that a quilt made of natural materials would conform better to our general philosophy. But we have also seen that a quilt of fabric filled with natural materials offers an ideal habitat for a multitude of small creatures, ones a lot smaller than a mouse, and that as a result, this natural material should be replaced regularly. Without redesigning the top cover of the roof to make it removable, this is not easy in the above mentioned design given that the quilt is imprisoned in the roof.

However, there is a variant of this ecological roof, which at the same time goes back to the principle of Abbé Warré of having access to the insulating quilt, whether to replace or quickly change the material used for its filling, or to adjust the volume of the filling according to the season and climatic circumstances, or even remove it completely. This new conception also allows one to place a feeder under the quilt.

This variant is obviously a bit more complicated, therefore demanding more work, but it is nevertheless very interesting because it allows us to refine the efficiency of the regulation of ventilation (temperature, humidity) the importance of which we have already understood.

In this variant (see Fig. 18 on page 77), we will see again in the top part and under the roof the ventilation chamber of the ecological roof in its previous form only without the insulating quilt.

The latter is in a separate and easily accessible compartment of its own one layer down. A quilt which could be made of cotton or jute of a suitably close weave, and in which one could put the natural material of one's choice. The volume of this is adjusted according to the material used, its insulating properties, the season and the weather at the time. The quilt differs from the slab of polystyrene in that it totally fills the frame and covers the whole of the top-bar cloth (moustiquaire, fly screen).

This quilt, is held a few millimetres above the top-bar cloth and the top-bars of the top box (± 10 mm), by a screen of 3 mm mesh fixed under an interior frame. This prevents the quilt from becoming stuck to the top-bar cloth.

And in case a feeder has to be used temporarily (see fig 18, p. 77), one adds under the quilt, an eke made of wood sufficiently deep to allow placing in it this accessory without it being deprived of the protection of the quilt.

In order to realise this variant, there are no obligatory dimensions, but given that a small feeder of the 'Lorho' brand is 60 mm tall, an eke that is 80-100 mm deep is perfectly satisfactory and could if the need arises house other types of feeders. And as regards the quilt, this height of 80-100 mm is also highly suitable.

As for the ventilation chamber: its height can be maintained as in the original design.

In summary, this modular roof therefore comprises three very distinct elements:

1. The roof itself, in which there is only the ventilation chamber.
2. The module housing the insulating quilt.
3. An eke intended for the temporary housing of a feeder.

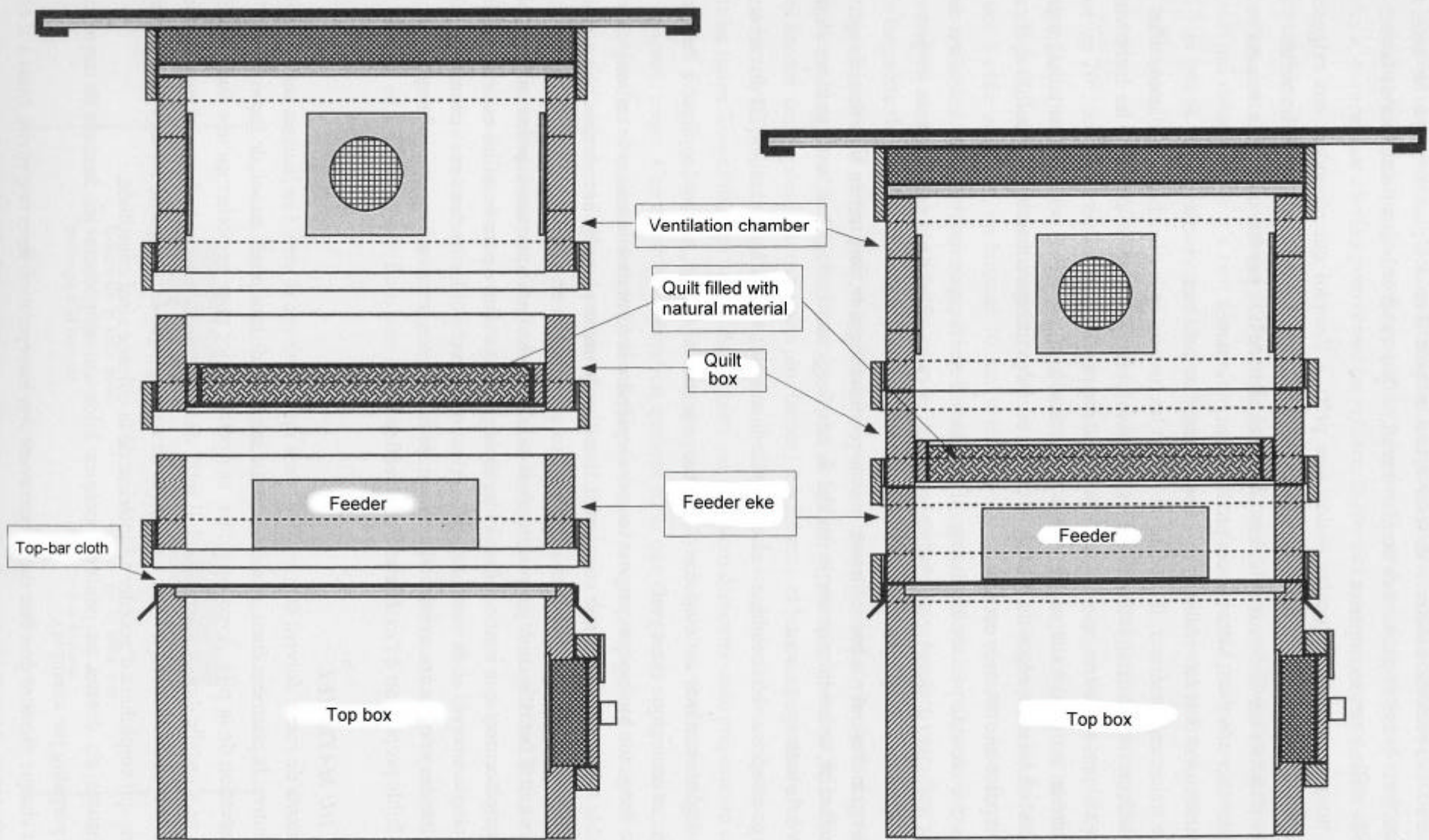


Fig. 18: Variant of the ecological roof (version with feeder).