

SBA Technical Data Sheet Number 14 - The Ivan Breydin DIY Bottle Feeder

It's simple & cheap

It's easy to make, make it in minutes

It won't leak; standing up or lying down

Feeding bees either during a period of dearth or to augment winter stores can be quite a time consuming task and there are numerous methods currently available to the beekeeper. The beekeeper with a couple of colonies can get the job done using multiples of inverted honey jars with small holes punched in the jar lid. The next level up might be the 2½ litre pickle pail with the lid holed similar to the honey jar method. The beekeeper running more than 20 colonies if feeding syrup will probably favour the 2 gallon bucket or the more modern 5 litre version, which provides a feeding regime of moderate efficiency. The Miller feeder is the ultimate quantity syrup feeder, with a capacity of around 2 gallons. The weakness of the Miller Feeder is that it is not suitable for syrup feeding in the early spring because the bees are reluctant to break the cluster at this time of year when temperatures are low. The other syrup feeding methods mentioned are defined as contact feeders because the clustering bees are in contact with the syrup, especially when these feeders are placed directly on the brood frames' top bars, right in the way of the cluster and are thus ideal all season feeders. Unfortunately all of these contact feeders mentioned have one major weakness - if not placed correctly on the hive they will leak, sometimes with disastrous consequences. I started experimenting with what has turned out to be an extremely cost effective, simple and virtually leak proof feeder. The design centres on the classic 2, 3, and 5 litre plastic bottle or bucket with a lid.

Equipment & Consumables

- A plastic bottle (ridged preferably as this type is strongest) or a bucket with a lid.
- An instrument for making holes in the bottle or bucket lid. The easiest way to make a hole in plastic is with hot metal, I use a 15mm copper tube about 90mm long with piece of wood inserted into the copper tube for use as a handle to prevent your hand being burnt. You can, however, make a hole large or small and any size or shape you wish.
- A sponge that will absorb fluid, cut into roughly 22mm squares. A cellulose car sponge is best as it will hold more liquid. Also an electric kitchen knife is the easiest way to cut the sponge. You can plug the holes with any material that absorbs fluid - cotton wool is very good at holding fluid, or whatever you can find to do the job.

Method of Preparation

Make holes in the side of your bottle in a line or in the bucket lid with the heated copper pipe. Rinse the sponge to remove any bacteria or smells, and insert your cut cubes of sponge, or whatever you are using, into the holes before filling the bottle with syrup. Place it in a container to catch any leaks. Put the lid on quickly, as the bottle will not be leak proof until the lid is put back on. If there are any small air bubbles coming from the sponge these will stop when the bottle is tilted or put flat on its side. When using a soft-sided bottle, test it by filling it with water and laying it on its



side - if the vacuum draws the sides in the bottle will not be suitable. This system will not work with milk containers as they are too soft.

Place the bottle on top of the hive frames on slats of wood or set the bottle directly on top of the frames with its sponges at a slight angle. If using square bottles place on slats of wood - do not put sponges directly on the frames. You can put the bottle on top of the crown board with sponges protruding through the feed hole.

In the photograph, you will see one bottle holding 3 litres and three 2-litre bottles of syrup placed on slats of wood on top of the frames. It is therefore possible to feed at least nine litres of syrup or more at the one time, depending on size of bottles. Note that when your bees empty the bottles and suck the sponges dry they will then start to dismantle the sponge if you don't refill or remove the bottles!

Health and Safety Information

The following hazards are identified:

1 Danger or burns and scalds from:

1. Hot metal
2. Heat source

Precautions:

1. Protective apron and gloves
2. Children continuously supervised
3. Protect vulnerable surfaces from hot metal and heat sources
4. Allow hot surfaces to cool before handling unprotected
5. Heat sources out of reach of vulnerable persons

2 Danger of cuts from:

1. Knife and other cutting tools

Precautions:

1. Use in accordance with manufacturer's instructions

DISCLAIMER: - Great care has been taken in the preparation of this technical sheet to ensure accuracy but the Scottish Beekeepers' Association cannot accept liability or responsibility. Beekeepers must therefore use the information at their own discretion and risk.



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