

Frequently Asked Questions on **APINOVAR**

The Integrated Pest Management
Bottom Board

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Frequently asked questions on **APINOVAR**

By Les Reines Chapleau inc.

GENERAL ASPECTS

1. If I use APINOVAR do I still have to treat my colonies against varroa?

Yes. APINOVAR must be seen as one element in a global integrated pest management strategy. It will not control varroa by itself. The main function of APINOVAR is to facilitate major operations involved in a control strategy: **monitoring** and **treatments**.

2. You say that APINOVAR fits in a global IPM strategy. How do you see this ideal strategy?

Our strategy involves the following:

- sampling with natural mites fall (4 samplings per year)
- using a bee stock improved for varroas resistance
- treating with formic acid by the flash method from the sampling drawer of APINOVAR as the main treatment

This combination gives us a perfect control. It is very cheap and it involves little labour.

3. Some people say that the screen of APINOVAR bottom boards will rust rapidly if formic acid is used. Is this true?

Starting in 2010, all the Apinovar bottom boards we fabricate are equipped with stainless steel screens. These will never rust. Apinovar manufactured previously have a galvanized steel screen that may rust over time if humid debris accumulate on its surface. Formic applied by the flash method is not a concern as the vapours dissipate very quickly after application.

Replacement stainless steel screens can be bought from the manufacturer (819-828-3009)

4. Won't the bees propolize the screen of APINOVAR?

No, the bees keep the screen of APINOVAR cleaner than the floor of a regular bottom board. They will not even build wax on it. One precaution: do not drop wax scrapings on the screen while working in the hive. The bees are incapable to clean those out.

5. Should I paint my APINOVAR boards?

No APINOVAR boards have been pre-dipped in paraffin. This protection is the best you can have for hive parts that are exposed to humidity.

6. Can I use APINOVAR with its sampling drawer removed during the beekeeping season?

We do not suggest removing permanently the sampling drawer unless you keep your bees in a warm areas (only during the warmest period of the summer). Cooling down your brood chambers creates conditions favourable for the multiplication of varroas. (See also questions 7, 9, 13 and 24).

7. What about the hive debris? Won't they accumulate in the sampling tray?

Yes. From time to time you have to clean out the hive debris accumulating in the sampling tray. We take advantage of regular samplings or of other normal operations in the yards to do it. This is quickly done. It is important to do it in order to avoid the development of wax moth. We suggest starting with a frequency of once a month. Wax moth develops slowly in colder areas and fast in very warm regions. In very warm areas some of our customers choose to remove the sampling drawers during the peak of the season. There should be no inconvenience in doing this if the nights are warm and if the brood chamber is not cooled down. We stress that this practice should be limited to warm periods in warm areas.

8. Should I remove my APINOVAR bottom boards during the winter?

No. You should leave Apinovar boards in place all year round. With Apinovar the winter debris accumulating on the floor of the hive will be drier, thus preventing the apparition of mould and contributing to a better environment for the bees, especially if the drawers are removed (see question 9).

9. Should I remove the drawers during the winter?

It is a good practice to remove the drawer for the wintering period. This is true for indoor wintering and also for outdoor wintering, provided the winter protection prevents air drafts from the bottom.

10. Can I add insulation to the APINOVAR board?

Many beekeepers take advantage of the design of our board to easily improve the insulation of the bottom of the hive. A piece of air bubble insulation is simply placed in the sampling drawer early in the spring, improving the conditions for the build up period. Other non water absorbing insulating material can also be used.

11. Can hives equipped with APINOVAR sit directly on the ground?

This is not a good idea. If you do so the sampling the drawer will not slide in and out easily. It can also be damaged. The life expectancy of Apinovar will also be shortened.

12. What is the use of the moulding reducing the entrance of the APINOVAR board? What happens if I take it off?

We suggest that you do not remove this moulding. It has many functions:

- it makes the hive warmer, creating a condition unfavourable for the development of varroas;
- it transforms your hive into a better “gas chamber” for formic flash treatments;
- it prevents water seepage into the sampling tray;
- it helps the bees climb directly on the wall of the super as they get back from the field, minimizing therefore bee congestion on the screen;

13. With the reduced size of the entrance, won't my colonies lack ventilation during heat waves?

During heat waves, all strong colonies will benefit from additional ventilation. During July and August we create a top opening for extra ventilation. In our case, we take advantage of the winter entrance of our inner covers. Some customers, in warm areas, simply remove the sampling tray. Other options also exist.

14. How long will last the APINOVAR bottom board?

Apinovar bottom boards will last longer than standard bottom board. Their airy design and their screened bottom prevent the accumulation of moulds or hive debris that retain humidity and cause rotting. Paraffin dipping also extends its longevity. APINOVAR will not be easily broken: its assembling is stronger than standard bottom boards. If the screen gets damaged, you can easily slide in a new piece of mesh as a replacement.

15. Is Apinovar protected by a patent? May I build myself bottom board inspired from the design of APINOVAR?

Apinovar is not protected by a patent. Added to the important costs of development, the cost of acquiring a patent becomes prohibitive. So it is not illegal to copy APINOVAR. Nevertheless, through our long experience, we found solutions to the numerous technical difficulties involved in the fabrication of such a product. Potential corrosion of screen, warping or swelling of the wood, infiltration of water or bees into the sampling tray and insufficient protection of the wood are only a few of the numerous problems that one has to face when building such a product. Large scale fabrication gives us access to the best prices for the materials and to sophisticated highly efficient equipments. You can take advantage of all these. Too often beekeepers engaging into the adventure of self building have to live with an end product they do not like to work with. Most of the time, they do not find the expected economy. APINOVAR is a top quality product and we accept the challenge of offering it at the lowest possible prices.

QUESTIONS ON SAMPLING WITH APINOVAR

16. With APINOVAR should I protect my sticky board with a screen when sampling?

No, with APINOVAR the bees do not have access to the sampling tray.

17. What kind of sticky board should I use with APINOVAR?

You can use any kind of sticky board. We use reusable pieces of “Corroplast” (cardboard like plastic sheets) that we cut to the full dimension of the sampling drawer. It is important to use full dimension cartons in order to have the right information on your infestation level. Do not extrapolate from smaller cartons! In order to facilitate the counting, we draw lines on them. The lines should be perpendicular to the longest side

of the carton and a few centimetres apart. We coat the cartons with vegetable grease using a roller painter. We first liquefy the grease in a micro-wave oven.

18. What duration do you suggest for natural mites fall sampling with APINOVAR?

You can sample for any duration from 1 day to 7 days. Long periods will give you more accurate information on your infestation levels. The drawback is that very long samplings result in more hive debris on the cartons and consequently more difficult counting. Seven days sampling can be a logical choice in the context of a research project. The rule of thumb is: choose longer sampling periods for spring and shorten the sampling period as the infestation progresses. We base our sampling durations on the following table:

May	July-August	Before fall treatment	After fall treatment
3 - 4 days	1 - 2 days	1 - 2 days	3 - 4 days

19. I do not want to read my sticky boards in the field. What is the best method to carry those at home for counting?

The sampling cartons are left in their sampling tray that are pulled out, stacked and taped together. We have an additional set of sampling drawers to replace the ones that have been just removed. Additional sampling drawers can be obtained from our distributors.

20. I sometimes have a hard time pulling out the sampling drawer with my fingers, what is the best method?

Use your hive tool. On each side under the sampling tray, there is a groove that has been specially designed to receive the curved side of a standard hive tool.

QUESTION ON MOVING BEES WITH APINOVAR

21. Can I permanently fasten my Apinovar boards to my hives?

Yes you can do it the same way as you fasten a standard bottom board.

22. Does Apinovar suit a palletized operation?

Yes with no problem. Just make sure that the design of your pallet will not interfere with the operation of the sampling drawer.

23. Can I use Apinovar if I move my hives with a boom?

Yes. Here are the 2 ways of doing it:

- Fix your APINOVAR boards to your hives permanently and use a mechanism that grabs the hive at the level of the handles of the first super;
- Set your hives on small pallets for 2 hives and use adapted forks to lift the whole pallets instead of individual hives.

24. While making nucs, can I close completely the entrance of APINOVAR boards until the nucs are dropped at their new location?

Yes, this is what we do. When it is warm we remove the sampling trays to provide ample ventilation and make sure our nucs do not get damaged by the heat.

25. Can we remove the sampling drawers while hives are moved?

Removing the trays on hives being moved does not represent a problem. It may even help keep your bees inside the hives. Your bees will stay more quiet, mostly when hives are strong and when it is warm. (See question 6.)

26. What is the best way to transport and store APINOVAR boards?

Pile them up crosswise. They were designed to be piled up that way.

QUESTIONS ON FLASH TREATMENTS WITH APINOVAR

27. It is said that formic vapours are heavier than air. How can formic work if applied from the bottom?

This is theoretically true but an important part of the vapours still rise up. Put your nose one meter above an open container of formic and... tell me. The bees will also tell you. Application of formic acid from the bottom of the hive is largely practiced in Europe. It is also the first way of delivering formic to colonies that has been tested successfully in Canada (K. Clark, 1992, B.C. Ministry of Agriculture, Fisheries and Food).

28. You say you use a “drench gun” to inject formic on paper towels in the sampling tray. What is it exactly?

This is an instrument used by veterinarians and farmers to give oral liquid medications to cattle. It will deliver a precise and steady dosage. It also makes the handling of formic a lot safer. You will prefer a drench gun with a capacity of 20 or 30 ml, not more. Their small nozzle well adapted to formic. The drench gun must be rinsed thoroughly immediately after each use, cleaned with soapy water and then completely oiled as a protection against corrosion. There are many brands on the market at different prices. The plastic ones tend to fall apart rapidly. A good drench gun will cost over 160\$. They can be obtained from farm supply stores or from veterinarian supply places and from some bee supply stores.

29. You say that the dosage for flash must be adapted to temperature conditions and hive size; how can we know what dosage to use?

With APINOVAR we use safely the dosages of the following chart:

Maximum temperature anticipated in the next 6 hours	DOUBLES	SINGLES
20 – 24 Celsius	40 ML	20 ML
16 - 19 Celsius	45 ML	22 ML
10 – 15 Celsius	55 ML	27 ML

For weaker yards we cut down these dosages by 5 ml.

Please be very cautious. For the moment we prefer not to use flash on nucleus colonies or on weak colonies that do not fill their super(s). There is more information on flash on the APINOVAR page of our website. Please read that information carefully and remember that formic can kill your colonies if misused. Formic can also cause serious injuries: use appropriate protection equipment and have plenty of water on hand.

30. Is the flash method still a legal way to use formic in Canada?

Yes it is. PM CRA has reiterated this authorization in its conclusion of a decision about formic (decision #C94-05 and decision #RDD2005-02).

31. If I use APINOVAR, can I use other treatments than flash?

Yes. You can use any other type of treatment. Nevertheless you will find many advantages to treat by the flash method: it has a good efficiency, it is versatile, it is cheap and it is fast.

For updates of this document and for more information on IPM and APINOVAR please consult our website: <http://www.apinovar.com>