

Varroa Control Info Sheet

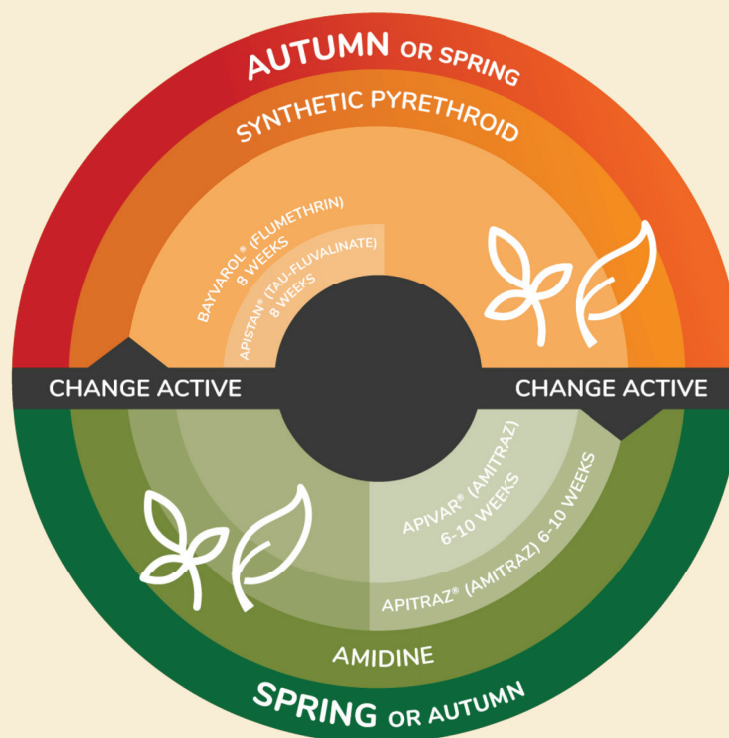


	Synthetic Options		Organic Options	
	Bayvarol	Amitraz	FormicPro BioGro Certified	Thymovar
	Must be rotated with a different active ingredient			
Active Ingredient	3.6 mg Flumethrin	500mg Amitraz	Formic Acid	Thymol
Application Type	Impregnated polymer strip	Plastic Polymer Strip	Polysaccharide Gel Strip	Wafer
Visits Required	2	2	1	2
Treatment Duration	6-8 Weeks	6-10 Weeks	1 Week	3-4 Weeks
Usage and Withholding Periods				
When To Use	Late summer - After the honey harvest. Or early spring prior to the honey flow.	Late summer - After the honey harvest. Or early spring prior to the honey flow.	Outside daytime temperature highs should be between 10°C–29°C on the first three days of application.	Outside daytime temperature highs should be between 12°C–30°C on the first three days of application.
Product Placement	Inside the hive. Close to brood cells.	Inside the hive. Close to brood cells.	On the top bars of frames in the bottom brood box. Hive must not be disturbed during treatment period.	On the top bars of frames in each brood box.
Pack Size	20 strips per pack -Treats 5 brood boxes 800 strips per carton -Treats 200 brood boxes	10 strips per pack -Treats 5 brood boxes 420 strips per carton -Treats 210 brood boxes	2, 10 and 25 treatment packs available	10 wafers per pack -Treats 5 brood boxes
Treatment Dosage	4 strips per brood box or 2 strips per nucel and/ or young colonies.	Two strips per brood box.	Two strips per brood box.	Two applications of one wafer per brood chamber at a 3-4 week interval.
Can Be Used With Honey Boxes On	YES (Only as an emergency treatment)	NO	YES Honey must be removed 2 weeks after treatment.	NO



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Withholding Period	No withholding period.	Wait 14 days after removing strips before placing honey supers on the hive.	No withholding period.	No withholding period.
Requires Rotating?	YES	YES	NO	NO
Seasonal Rotation Notes	Bayvarol & Apistan should not be rotated Bayvarol's active ingredient (Flumethrin) and Apistan's (Fuvalinate) are from the same chemical family so rotating them will limit efficacy and can cause resistance.	Apitraz is ideal for seasonal rotation with Bayvarol strips.	Can be used as a standalone treatment or as a third treatment when using using synthetic varroa control products.	Can be used as a standalone treatment or as a third treatment when using using synthetic varroa control products.





Varroa Control Efficacy

Treatment efficacy of synthetic varroa treatments are reported to be generally above 98%, which makes them the most efficient and effective method to manage varroa in New Zealand. These efficacies have been demonstrated in the multiple studies that are required for registration. However, it is important to remember there are a significant number of variables that can, and do, have an impact on the achieved treatment efficacy. Understanding and addressing these factors goes a long way to ensuring effective control of varroa in your hives.

Factors Effecting Efficacy

- 1. Storage of the treatment**—All varroa treatments should be stored according to the manufacturer's directions. For the majority of treatments, high temperatures for extended periods of time can degrade the active ingredients in the products.
- 2. Re-Infestation**—With very high hive stocking rates in parts of New Zealand, many apiaries owned by different beekeepers are close together. By treating for varroa at different times, there is an increased re-invasion risk once strips are removed. One study reported 65 mites were carried into a hive per day from surrounding hives, meaning post treatment hives can be quickly overrun with varroa. In the early days of varroa in New Zealand, many hives had to be treated twice in the Autumn.
- 3. Brood nest location and hive activity**—Synthetic treatments rely on bees contacting the strips and spread the treatment throughout the hive. It is very important that strips are placed in the brood nest to ensure emerging bees carrying varroa come in contact with the strips, increasing effectiveness of the treatment.
- 4. Hive condition**—Poorly managed or weak hives will often exhibit poor treatment efficacies. This is a result of reduced activity within the hive and a reduction in bee contact with the strips. A reduction in the spread of the active ingredient allows varroa to multiply unchecked in parts of the hive.
- 5. Mite levels**—Varroa treatments are not a silver bullet to control varroa. If mite levels are significantly elevated at the end of a season, have or are approaching Parasitic Mite Syndrome, the hives may already be severely damaged and not survive despite being treated. This issue is amplified when combined with low activity within the hive and significant levels of brood.

What can I do to maximise my treatment effectiveness?

- 1. Hive strength**—Ensure that mite levels don't reach levels that threaten the hives health.
- 2. Coordinate treatments with local beekeepers**—Starting and finishing your treatments on the same days as your neighbours will help to reduce reinfestation.
- 3. Treat per the manufacturer's instructions**—The registration of synthetics is based on data collected under particular conditions and application. To have certainty of high knock down, it is very important to read and follow the application instructions.
- 4. Store product safely**—Keep cool and out of the sun.
- 5. Mite level monitoring**—With high levels of re-infestation, mite monitoring is very important to ensure that further treatments can be administered if required.
- 6. Ensure rotation of chemical families in your applications**—This will reduce the likelihood of resistance to the active ingredients. Apitraz for example should be alternated with treatments of Bayvarol.
- 7. Some beekeepers are using a third treatment in a 12-month period**—This is to ensure that mite levels remain low throughout the year. FormicPro is a good option for this third treatment.