

WHAT IS THE DIFFERENCE BETWEEN ITALIAN AND CARNIOLAN HONEY BEES?

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This article is focused on the generalities of each bee. As we all know, the queens will ultimately determine the characteristics of the hive. So each hive will ultimately have their own characteristics. We keep a ratio of 50% Italian and 50% Carniolan hives in our bee yards. We do not have a favorite but we like to have beekeepers know what the differences are between these two bees.

With that said, let's look at the following characteristics: popularity of the bee, spring brood production, fall brood production, swarming tendencies, temperament, honey production, and wintering.

Popularity:

By far, the **Italian** honey bee is the most popular bee for beekeepers in the USA. The Italian bee is so popular and manageable that they are easy to work with for new beekeepers and experienced beekeepers.

Carniolan bees are in the minority of bees in the USA.

Spring Brood Production:

Italian queens begin very early in increasing their brood production. The queens tend to begin increasing their brood production once the pollen begins to come into the hive. In Georgia, we can see this happen once the Maple trees begin to bloom.

The **Carniolan** Queens have a slower start-up in brood production and require more pollen and some nectar coming into the hive. We have seen about a 45 day delay on brood production.

Fall Brood Production:

Italian queens tend to reduce their brood production, as soon as, the nectar sources end. In NE Georgia, this can be seen in August. This will mean that you will have average hive population going into winter.

Carniolan queens tend to continue strong brood production into late September. This means that you will have stronger hives going into winter.

Swarming:

First, all bees have tendencies to swarm under certain circumstances. It is the way they were designed to reproduce themselves.

Italian bees will tend to swarm during their second year within the hive. This will happen during the Spring season and into summer. Overall, the Italian has average tendencies to swarm.

The **Carniolan** bee has a higher tendency to swarm in the first year going forward. This should not be under-estimated. The reason why swarming is a higher risk is due to the following issues: 1. The queen production of brood is explosive. Once the queen begins to lay maximum eggs the hive can run out of bee space within 60 days. 2. Lack of bee space can be overcome by adding additional supers and allowing more bee space within the hive. 3. The Carniolan just has a genetic trait to swarm.

Temperament:

Italian bees are a more laid back type of bee. They are very popular because they are the easiest of the honey bees to work with. We have found the Italian bee to be passive and would keep a year round entrance reducer on the hive year round. This can spell problems when it comes to small hive beetles, European Hornets, etc...

The **Carniolan** bee will aggressively defend the hive. However, they are manageable. Carniolans tend to need a little smoke to calm the hive when you have to work them. Once the smoke has entered the hive the bees will calm really well.

Honey Production:

Italian bees once again are the standard for honey production. Italians tend to not gather nectar during cooler and overcast days. So if you have a cool and overcast Spring season your honey production will be lower.

Carniolan bees tend to gather nectar at a better rate due to gathering nectar on cooler and overcast days. It has been our experience that the Carniolans produce about 15% more honey than the Italians due to their ability to fly on cool and overcast days.

Wintering:

Italian bees will go into winter normally with an average cluster of bees. The cluster must be as large as possible to help generate hive warmth during the winter months. Low hive warmth equals a loss of bees.

The **Carniolans** normally will go into winter with a large cluster of bees. This is a positive, in one regard, and a negative also. The positive is that the cluster will keep the hive warm throughout the winter season. The main negative is that the large cluster needs to eat and thus they will eat through their stored honey much more rapidly. This means you will need to feed your hive sugar water in early to mid-February.

The following table is an added summary, not originally in the report.

| | Italian Bees | Carniolan Bees |
|--------------------------------|---|---|
| Popularity | Most popular | In the minority |
| Spring Brood Production | Begin very early | Slower start-up |
| Fall Brood Production | Reduce their brood production | Continue strong brood production |
| Swarming | Swarm during their second year | Higher tendency in the first year |
| Temperament | More laid back | Will aggressively defend the hive |
| Honey Production | Are the standard for honey production | Gather nectar at a better rate due to gathering on cooler and overcast days |
| Wintering | Go into winter normally with an average cluster of bees | Go into winter with a large cluster of bees |