# What Race Do I Want

There are several races of the honeybee. Each of these races has different advantages and disadvantages linked to their original regional background. Each region likely has a differing climate, topography, resources and predators. Because of difference in background, each race of honey bees have evolved slightly in a different manner than their cousins allowing them to better take advantage of their specific situation. Today the Italian Honey Bee is the most commonly kept honey bee in the United States, conversely the Africanized Honey Bee is the most feared and illegal to keep in many regions. Fitting somewhere between these two extremes include many of the other races and the Feral Honey Bee, though technically not a race in its own, it may be acclimated to the area in which it has been found. The following is a partial listing of the races of honeybee that may be available to a prospective beekeeper, along side is a brief amount of information regarding each race and some common advantages and disadvantages with each.

## Western European Honey Bee

#### Apis mellifera mellifera

The Western European Honey Bee, also known as: German black bee, Heathland bee, brown bee or black bee, was the first honeybee imported to the Americas. This distinctly marked bee is brown and black in color and over winter well.

<b>Pros and Cons of the WEHB</b>	
Pros	Cons
<ul> <li>Overwinter exceptionally well</li> <li>Decent honey yield even in poor years</li> <li>Good for spare time beekeeping</li> <li>Needs very moderate food supplies</li> <li>Good for northern climate</li> </ul>	<ul> <li>Slow Spring build up</li> <li>Not commercially availably in the US</li> <li>Aggressive</li> <li>Produces abundance of propolis</li> <li>Queens like to run on comb</li> </ul>

# Italian Honey Bee (Golden Italian)

### Apis mellifera ligustica

Italian bees are the most common stock bee, and likely are the race to be found in packages or as unspecified breeds and queens for sale.

Pros and Cons of the Italian Honey Bee honey bee	
Pros	Cons
<ul> <li>Good beginner bee</li> <li>Queens do not run and are easy to spot</li> <li>Readily builds comb</li> <li>Unparalleled comb builders</li> <li>Good honey producer</li> <li>Only moderate tendency to swarm</li> <li>Relatively easy and calm to work with</li> <li>Lower range propolis producer</li> <li>Strong cleaning behavior</li> <li>Mod- resistant to EFB</li> </ul>	<ul> <li>Continuous brood rearing continues after honey flow ceases</li> <li>More likely to starve during long winters</li> <li>Poor flight orientation, highly prone to drifting</li> <li>Tendency to rob caused by aggressive foraging</li> </ul>

# **Starline Honey Bee**

### Apis mellifera: hybrid

The Starline is an Italian hybrid known for its vigor and strong honey production.

Pros and Cons of the Starline honey bee	
Pros	Cons
<ul> <li>Good brood producers</li> <li>Creates large honey crop under correct conditions</li> <li>Minimal propolis</li> <li>Fast spring build up</li> </ul>	<ul> <li>Poor at overwintering due to large population</li> <li>Offspring queen often do not have same traits as</li> </ul>
• Well suited to clover honey production	mother, requires annual requeening

## **Cordovan Honey Bee**

### Apis mellifera ?

A genetic trait, usually found in the <u>Italian</u> race, cordovans are used mainly for tracking the genetic makeup due to the wide variance in color.

Pros and Cons of the Cordovan honey bee	
Pros	Cons
<ul> <li>Most traits found in strains of Italian honeybees</li> <li>Attractive coloration make queen location less difficult</li> <li>Superb comb builders</li> <li>Very gentle</li> <li>Coloration trait is useful in open mating based breeding programs</li> <li>The cordovan trait may be bred into any race of honeybee</li> </ul>	<ul> <li>Consume large amounts of food in winter</li> <li>Italian cordovans may perform poorly under cold wet conditions</li> <li>The cordovan trait is recessive</li> </ul>

## **Caucasian Honey Bee**

# Apis mellifera caucasica

Pros and Cons of the Caucasian honey bee	
Pros	Cons
<ul> <li>Low swarming instinct</li> <li>Large and Strong population</li> <li>Calm when on comb</li> <li>Overwinters well by stopping brood production in the fall</li> <li>Forages earlier and on cooler days</li> <li>Has a longer tongue than most races and can</li> </ul>	<ul> <li>Purebreds not widely available in U.S.</li> <li>Slow spring startup</li> <li>Produces an abundance of propolis, which may be beneficial to propolis collectors, but makes the overall hive more difficult to work.</li> <li>Makes wet capped comb, which is poor for honey comb sale</li> </ul>

thereby take advantage or more nectar sources than most.	<ul> <li>Once brought to a level of alarm they are difficult to calm and easily stings.</li> <li>Susceptible to Nosema</li> </ul>
	• Prone to rob

# **Carniolan Honey Bee**

Apis mellifera carnica

Pros and Cons of the Carniolan honey bee	
Pros	Cons
<ul> <li>Earlier morning forager</li> <li>Forages on colder and wetter days than most other bees</li> <li>Overwinters well on small stores, as queen stops laying in the fall</li> <li>Explosive build up in early spring</li> <li>Exceptionally gentle and easy to work</li> <li>May interrupt brood rearing during times of drought</li> <li>Does not typically propolize heavily</li> <li>Creates less brace and burr comb</li> <li>Crosses well with other varieties</li> </ul>	<ul> <li>Likely to swarm unless carefully managed</li> <li>If pollen is scarce brood rearing greatly diminishes</li> </ul>

# **Midnight Honey Bee**

Apis mellifera: Hybrid

The Midnight hybrid is a combination of both the <u>Caucasian</u> and <u>Carniolan</u> races.

Pros and Cons of the Midnight honey bee	
Pros	Cons

Very gentle     resemble their mother
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### **Buckfast Honey Bee**

#### Apis mellifera: hybrid

The <u>Buckfast hybrid</u> was produced by <u>Brother Adam</u> of the <u>Buckfast Abbey</u>. Brother Adam crossed a great many races of bees with the British bee in hopes of creating a superior breed. The results are what is now know as the Buckfast Bee.

Pros and Cons of the Buckfast honey bee	
Pros	Cons
<ul> <li>Highly <u>Tracheal Mite</u> Tolerant</li> <li>Extremely gentle, with low sting instinct</li> <li>Resistant to <u>Chalkbrood</u></li> <li>Low swarm instinct</li> <li>Overwinters exceptionally well</li> <li>Well suited to cool, wet climates</li> </ul>	<ul> <li>Not widely available</li> <li>Builds up slowly in spring</li> <li>Poor early spring pollinators</li> </ul>

## **Russian Honey Bee**

Apis mellifera carnica?

In 1997 the USDA imported 100 queens from Primorsky territory of Russia 40 of these queens were selected to breed from to start the Russian Queen program

Pros and Cons of the Russian honey bee	
Pros	Cons
<ul> <li>Resistant to Varroa Mites</li> <li>Resistant to Tracheal Mite</li> <li>Winter tolerant</li> </ul>	<ul> <li>Brood rearing is highly dependent on forage availability</li> <li>Increased tendency to swarm</li> </ul>

Tend to propolize
• Expensive

## Yugo Honey Bee

Apis mellifera carnica?

In 1993, the USDA chose a black bee Yugoslavian bee that showed to be gentle, excellent resistance to tracheal mites and so should not require chemical treatment.

Pros and Cons of the Yugo honey bee	
Pros	Cons
<ul> <li>Low swarm instinct</li> <li>Overwinters well</li> <li>Crosses usually produce heterosis (hybrid vigor)</li> </ul>	<ul> <li>Not widely available in U.S.</li> <li>Queens difficult to locate</li> </ul>
• Tracheal mite resistant	• Queens are small making them hard to excluders

### SMR

### Apis Mellifera Hybrid

"Suppression Mite Reproduction" and this trait were discovered by John Harbo and Jeffery Harris. Bees with this trait seek out brood cells containing mites they open them up and remove the developing brood and mites. The trait, which may be controlled by only two genes, can be bred into any population of bees.

Pros and Cons of the SMR	
Pros	Cons
<ul> <li>Crosses usually produce heterosis (hybrid vigor)</li> <li>Mite resistant</li> <li>Easy to establish in IPM</li> </ul>	<ul> <li>Not widely used</li> <li>Price</li> <li>Time</li> <li>Learning curve!</li> </ul>

<ul><li>program</li><li>Its your bee so they Have the qualities you want</li></ul>	

# Minnesota Hygienic

Apis Mellifera Ligustica Hybrid

Developed by Dr. Marla Spivak at the University of Minnesota Bee Lab these bees show a strong tendency to be resistant to American Foulbrood and Chalkbrood.

Pros and Cons of the Minnesota Hygienic	
Pros	Cons
<ul> <li>Low swarm instinct</li> <li>Tracheal mite resistant</li> <li>Super Hygienic</li> <li>AFB resistant</li> <li>Chalkbrood resistant</li> <li>These are Italian Bees so they maintain some of their traits</li> </ul>	<ul> <li>Price</li> <li>Honey production</li> <li>Availability</li> <li>Continuous brood rearing after honey flow ends</li> <li>Brood rearing in winter causing starvation</li> <li>Poor flight orientation</li> <li>Highly prone to drift</li> <li>Tendency to rob do to aggressive foraging habits</li> <li>Brood removal</li> </ul>

## **Africanized Honey Bee**

### Apis mellifera scutellata

The <u>Africanized honey bee</u>, also known as the killer bee. Because of the media attention received, Africanized bees have been given a bad name. This is not to say that they can't be more dangerous than standard honeybees, their representation has simply been blown out of proportion. There have been several more recent breeding programs that have produced a more gentle form of this race. This gentler form of bee has even become one of the more sought after honeybee races in regions of Brazil.

Pros and Cons of the Africanized honey bee	
Pros	Cons
<ul> <li>Good honey producer</li> <li>Strongly protects hives against predators</li> <li>Resistance to Varroa mites</li> </ul>	<ul> <li>Overly defensive, occasionally dangerous</li> <li>Readily swarms or absconds</li> <li>Difficult to keep near to human habitations and livestock</li> </ul>
• Well suited to tropical climates	• Overwinters poorly in temperate climates

### **Feral Honey Bee**

Apis mellifera ...

Feral honey bees consist of escaped swarms and unmanaged colonies

Pros and Cons of the feral honey bee	
Pros	Cons
<ul><li>Genetically diverse</li><li>Often acclimated to the area they are present in</li></ul>	• Not commercially available (must be captured, or obtained through interbreeding with
• May be captured for free	local drones)

<ul> <li>Unknown parentage, may be Africanized</li> <li>Not selected by humans</li> </ul>
<ul> <li>Feral nesting cavities may contain American Foulbrood</li> </ul>

## New World Carniolan®

#### Apis mellifera carnica

Sue Cobey, New World Carniolan® Bee Breeding Program; keeping records, a closed breeding population and controlling gene flow through instrumental insemination. The selected traits that are part of the New World Carniolan® Bee Breeding Program are the following:

- Industry: Honey producers and pollinators. Those found susceptible to disease or mites are eliminated, as are those that dwindle in winter, which is a final selecting criterion.
- Rapid Spring Buildup: The signal trait of the Carniolan honey bee.
- Gentleness: Calm, gentle and a pleasure to work with no matter the size of the population.
- Overwintering: Efficient use of winter stores and winter clusters having a high tolerance for severe cold. Those that dwindle and do not survive winter are automatically eliminated.
- Pollen Collection: Efficient pollinators that work in cool and drizzly weather.
- Brood Viability: Solid brood patterns to maintain the integrity of the breeding population.
- Resistance to Parasitic Mites: Undetectable levels of tracheal mites; reduced levels of Varroa.
- Hygienic Behavior: High uncapping and removing of brood killed by freezing.

Pros and Cons of the NWC	
Pros	Cons
<ul> <li>Earlier morning forager</li> <li>Forages on colder and wetter days than most</li> </ul>	Likely to swarm unless carefully managed

<ul> <li>other bees</li> <li>Overwinters well on small stores, as queen stops laying in the fall</li> <li>Explosive build up in early spring</li> <li>Exceptionally gentle and easy to work</li> <li>May interrupt brood rearing during times of drought</li> <li>Does not typically propolize heavily</li> <li>Creates less brace and burr comb</li> <li>Crosses well with other varieties</li> </ul>	• If pollen is scarce brood rearing greatly diminishes
varieties	

## J. W. IMHN \*

Just. Whatevers. In My Hive Now\*

This can consist of whatever honey bees you have, what you were sold or what you captured from escaped swarms and unmanaged colonies! If they are what you like and have what you want, then they are yours!

Pros and Cons of the J. W. IMHN	
Pros	Cons
<ul> <li>Good honey producer</li> <li>Strongly protects hives against predators</li> <li>Resistance to Varroa mites</li> <li>Well suited to for what you think they are!</li> </ul>	<ul> <li>Not commercially available (must be captured, or obtained through interbreeding with local drones)</li> <li>Unknown parentage, may be Africanized</li> <li>Not selected by humans</li> <li>Feral nesting cavities may contain American Foulbrood</li> </ul>