

race	scientific name	origin	appearance	temperament/behavior	honey production	propolis	disease/pests	brood production	overwintering	swarming	comments
Italian	<i>Apis mellifera</i> linguistica	Appenine Peninsula of Italy	a classic golden yellow with black bands on the abdomen	very gentle, easy to work; prone to robbing and drifting, stay on combs during inspections; keep clean hives	very good under good conditions	moderate	fair resistance to European foulbrood and wax moths; robbing and drifting promote spread of diseases/pests	rapid spring build-up; maintains large brood area regardless of food supply, thus large portion of resources consumed for brood rearing	overwinter with large population, thus require large food supply for winter; can starve if food stores are exhausted	moderate	somewhat prone to drifting and robbing, but good mixture of characteristics makes the Italian a good choice for beginners; by far the most popular bee in the U.S.; queens are fairly easy to locate; these bees do well in temperate or warm climates, over long warm seasons with abundant forage and good weather, not as well during cold wet springs or hot dry summers;
Carniolan	<i>Apis mellifera</i> carnica	alpine regions of Austria, Slovenia, Yugoslavia, and Danube Valley	dark brown to gray or black, largest of domestic bee races	gentle, non-aggressive not prone to robbing, construct new comb slowly; forage earlier in the morning	reputed slightly less than Italians, but can do well in adverse climates	little	-	slow spring starters, but then build up very fast; brood production slows in times of nectar or pollen dearth, stops in fall	fly in cooler weather, overwinter in smaller clusters, efficient users of winter food stores, good choice for colder climates	can be very prolific, prone to excessive swarming	can be difficult to find the queen; does well in long cold winters, short springs and hot summers; better suited to northern climates than in the south; said to cross well with other races; best traits have been bred into "New World Carniolan" queens
Caucasian	<i>Apis mellifera</i> caucasica	Caucasian mountains between the Black Sea and Caspian Sea; pure-breeds not widely available in U.S.	silver-gray to dark brown or yellow; has longest tongue of domestic bee strains (can work flowers other bees can't reach)	very gentle; somewhat prone to robbing; forages earlier and on colder days; once alarmed, can be difficult to calm	fair to good, especially in wet climates	excessive, very sticky; also produces burr comb	susceptible to disease, especially nosema	slower build-up than Italians; becomes large and stong; can adjust boor rearing to current conditions; stops prd in fall	maintain good overwintering stores	low	difficult to locate queen; do well in both warm/humid and cold/damp climates; can fly in poor weather
German / English ("black bees")	<i>Apis mellifera</i> mellifera	northern Europe	dark brown to black	tend to be runny (run all over combs during inspection); often described as "excitable" or "mean" or "irritable"	can be good	lots	prone to diseases, especially EFB, don't defend well against wax moths	build up slowly in the spring	well-adapted to cold, damp climates	moderate to high	The bees originally brought ot America by early colonists, later fell out of favor when Italians became available
Russian	<i>Apis mellifera</i> caucasica	a type of hybrid, bred from Caucasian bees originally brought to U.S. from eastern Russia for its increased ability to resist/tolerate Varroa mites	a sub-type of Caucasian, selected for resistance or tolerance to Varroa mites	aggressive/defensive of hives, often observed to head-butt before stinging,	moderate to good	excessive, very sticky; also produces burr comb	able to remove some varroa mites/tolerate some mites in nest	brood production slows in times of dearth	overwinter well with small stores	moderate to high; always keeps some swarm cells ready	swarming unpredictable; can be expensive
Buckfast	hybrid of many races	bred from bee races collected from all over	golden to light grayish-brown	fairly gentle, low instinct to sting; can be defensive when disturbed; inclined to rob	excellent	little	highly resistant to tracheal mites and chalkbrood, other common ailments; very hygienic	start later, but build up fast in spring, makes them pslow down in fall for small clusters, survive cold winters and cool damp springs	require less than Italians, but more than Carniolans	low	A hybrid developed by Brother Adam of Buckfast Abbey, a mixture of many races of bees; an excellent choice for beginners.
Cordovan	not a tue race, but a color due to a recessive genetic trait; often found in Italians, but can be found in other races	technically term refers a color, not a true race, so could be found in any type of bee, but usually of Italians	yellow bodies; reddish brown legs, head	very gentle; prone to robbing; excellent comb builders	good	little	fair	fair	consumes large volume of honey in winter	-	Color makes queen easy to locate; may perform poorly under cold, wet conditions; cordovan color can be bred into any line of bees, thus making it useful for open-mated breeding programs
VSH	not a tue race, but a genetic trait for mite resistance; but can be found in other races	isolated by USDA honey bee scientists	-	-	-	-	actively remove reproducing mites	removal of mites can impact brood production in heavily infested colonies	reduced mite populations should increase winter survivorship	-	VHS (Varroa Sensitive Hygienic) trait was originally isolated from bee stocks by the USDA scientists and introduced into commecial breeding stocks. Traits may share common genetic basis with Minnesota Hygienic traits

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Minnesota Hygienic	hybrid of mainly Italians	developed as a result of research by Dr. Marla Spivak at the University of Minnesota	yellow with black bands; mainly from Italian stocks	exceptionally hygienic	good	moderate	bred to be very resistant to American Foul Brood and other diseases; shows some resistance to Varroa	similar to Italians	similar to Italians	moderate	selected for ability to detect, uncap, and remove diseased brood before they became contagious to the colony; some report that hygienic behavior is lost or reduced after queen replacement
Starline	hybrid line of Italian bees	hybrid produced by crossing two unrelated lines of Italians, produced for hobbyists, not suitable for commercial operations	similar to Italians	gentle	excellent under good conditions (especially suited for clover)	minimal	-	prolific brood producers; fast spring build-up	overwinter poorly; due to large population, needs large food reserve	moderate; large populations may require attention to prevent swarms	queens resulting from swarm/supercedure do not have same traits as mother; require requeening each year
Midnite	hybrid <i>Apis mellifera caucasia</i> X <i>carnica</i>	hybrid of Caucasian and Carniolan bees	varies, generally darker	very gentle	fair to good	moderate	-	-	-	-	queens resulting from swarm/supercedure do not have same traits as mother; require requeening each year
Yugo	sub-type of Carniolan	-	-	-	-	-	tracheal mite resistant; varroa tollerant	-	overwinter well	low	crosses usually produce queens with excellent hybrid vigor
All American	strain of Italian	a strain of Italians that have been selected over many years in the U.S. for desirable characteristics	darker than normal Italian	gentle; don't run on the combs	good	moderate	resistant to tracheal mites	prolific and build up quickly	generally keep an open brood nest, but will store honey below if crowded down in time	low	adapt well to most North American climates, but do best in warmer regions, especially in the southwest
Pol-line	strain of mainly Italian stock	hygienic Italian line bred for VSH behavior and good pollination traits	much like Italians; golden yellow	calm and gentle; easy workability	very good	-	bred for mite and disease resistance	bred for early build-up for almond pollination	-	high brood productivity can lead to early swarming	bred for commercial pollination industry; intended to be gentle, prolific, productive, and resistant to disease and mites
Africanized Honey Bee	hybrid <i>Apis mellifera linguistica</i> X <i>scutellata</i>	The result of accidental release from a Brazilian breeding program between African bees and European bees, attempting to produce a vigorous honey producer adapted to the tropics; Arrived in the U.S. in 1990	much like Italians; precise morphometric measurements needed to determine AHB prevalence	extremely defensive of hive territory, occasionally dangerous; prone to absconding	generally smaller colonies, so collect less honey per hive	-	resistance to varroa mites reported	maintain smaller colonies than Italians	lack ability to cluster, have not established in colder climates; well-suited for tropical climates	high	because of their defensive nature, these bees should not be kept near human dwellings or around tethered/penned livestock; hives should be spaced apart to prevent alarm pheromone from one colony spreading to another

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