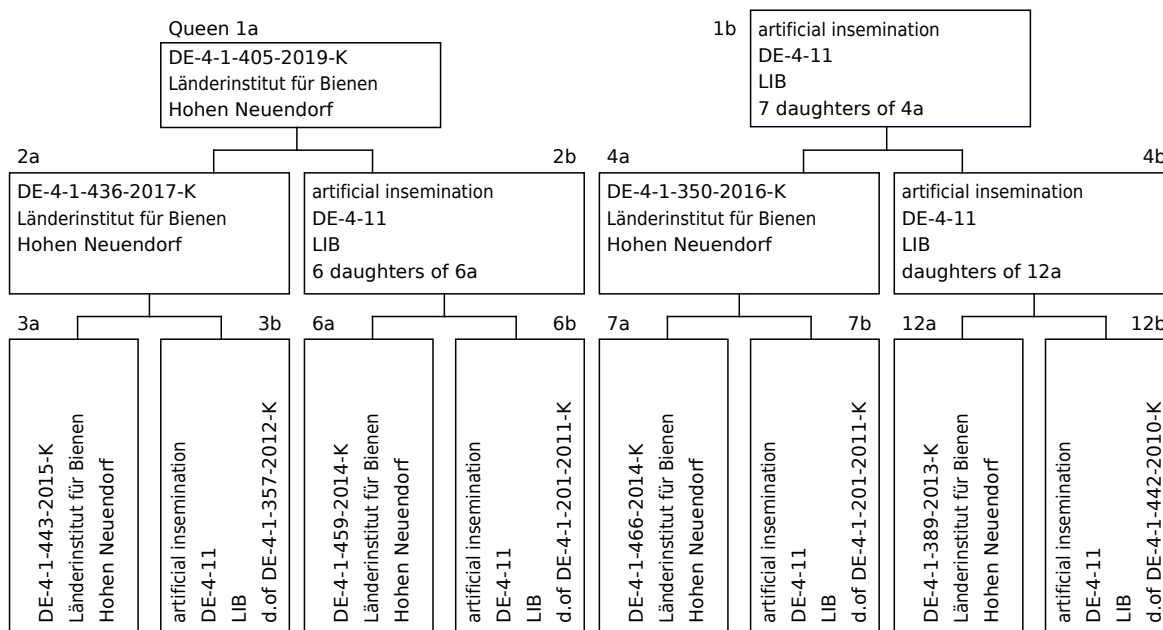


Tester of the queen: Länderinstitut für Bienenkunde, 16540 Hohen Neuendorf, DE-4-1, Apiary 1
 Breeder of the queen: Länderinstitut für Bienenkunde, 16540 Hohen Neuendorf, DE-4-1
1a Studbook number: **DE-4-1-405-2019-K**

Race line: -33 Sign: green 5 Daughters of Queen: 8.4%
 Generation: Hatch date: 11.06.2019 Workers: 11.6%

A. Pedigree



B. Own performance

Performance test year	No. of the colony 544			comparable colonies at the apiary		
	kg	%	Ranking	number	Yield average kg	
	32.7	142.1	4	31	23.0	
	Assessment*	Breeding values			Reliability	
Total breeding value¹	-	104	■			
Honey yield	-	97	■			0.54
Defensive behavior	3.20	104	■			0.62
Steadiness on comb	3.20	103	■			0.62
Swarming drive	4	104	■			0.53
Varroa	-	104	■			0.56
Performance index	-	102	■			0.54
Robustness in winter	3.70	70% 100% 170%				
Development in Spring	3.60					
Colony strength	3.20					

¹In accordance with the resolution of the breeder convention of 9th April 2011, for the total breeding value, Varroa tolerance is weighted by 40% and honey yield, gentleness, calmness during inspection, and swarming tendency are each weighted by 15%.

C. Performance of the sisters

See page 2

D. Body features, see appendix

See attached characteristic documents:

E. Results

Class Av

Selected for Varroa tolerance. Suitable for breeding with no restrictions; suitable for use as a 4a colony at frequently visited mating stations.

Breeding selection report DE-4-1-405-2019-K

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Performance of the sisters

Amount of checked sisters: 16

Studbook number	Tester of the queen	Apiary	Total breeding value	Yield kg	Breeding Value Honey	Defensive behavior	Breeding Value Defensive Behavior	Calmness during inspection	Breeding Value Calmness	Swarming drive	Breeding Value Swarming	Varroa-index	Performance index
DE-4-1-383-2019-K	DE-4-1	1	104	32.2	97	3.3	105	3.2	103	4	104	102	103
DE-4-1-385-2019	DE-4-1	1	104	19.6	93	3.3	105	3.2	103	4	104	104	101
DE-4-1-389-2019	DE-4-1	1	105	23.1	94	3.3	105	3.2	103	4	104	106	102
DE-4-1-392-2019	DE-4-1	1	101	27.2	95	3.3	105	3.2	103	4	104	97	102
DE-4-1-398-2019	DE-4-1	1	106	31.7	97	3.2	104	3.2	103	4	104	107	102
DE-4-1-399-2019	DE-4-1	1	104	20.4	92	3	102	3	100	4	104	107	99
DE-4-1-404-2019	DE-4-1	1	103	32.7	97	3.2	104	3.2	103	4	104	100	102
DE-4-1-405-2019-K	DE-4-1	1	104	32.7	97	3.2	104	3.2	103	4	104	104	102
DE-4-1-381-2019-K	DE-4-1	2	104	37.3	98	3.1	101	3.2	100	4	104	105	101
DE-4-1-386-2019	DE-4-1	2	101	23.1	93	3.3	103	3.2	101	4	104	100	100
DE-4-1-388-2019	DE-4-1	2	103	48.4	100	3.2	100	3	99	4	104	102	101
DE-4-1-390-2019	DE-4-1	2	103	12.2	90	3.2	102	3.1	100	4	104	105	99
DE-4-1-393-2019	DE-4-1	2	104	28.2	95	3.3	103	3.2	101	4	104	104	101
DE-4-1-394-2019	DE-4-1	2	103	18	91	3.3	102	3	100	4	104	105	99
DE-4-1-396-2019	DE-4-1	2	104	18.8	93	3.5	105	3.4	104	4	104	104	102
DE-4-1-403-2019	DE-4-1	2	104	25.9	94	3.4	104	3.3	103	4	104	104	101