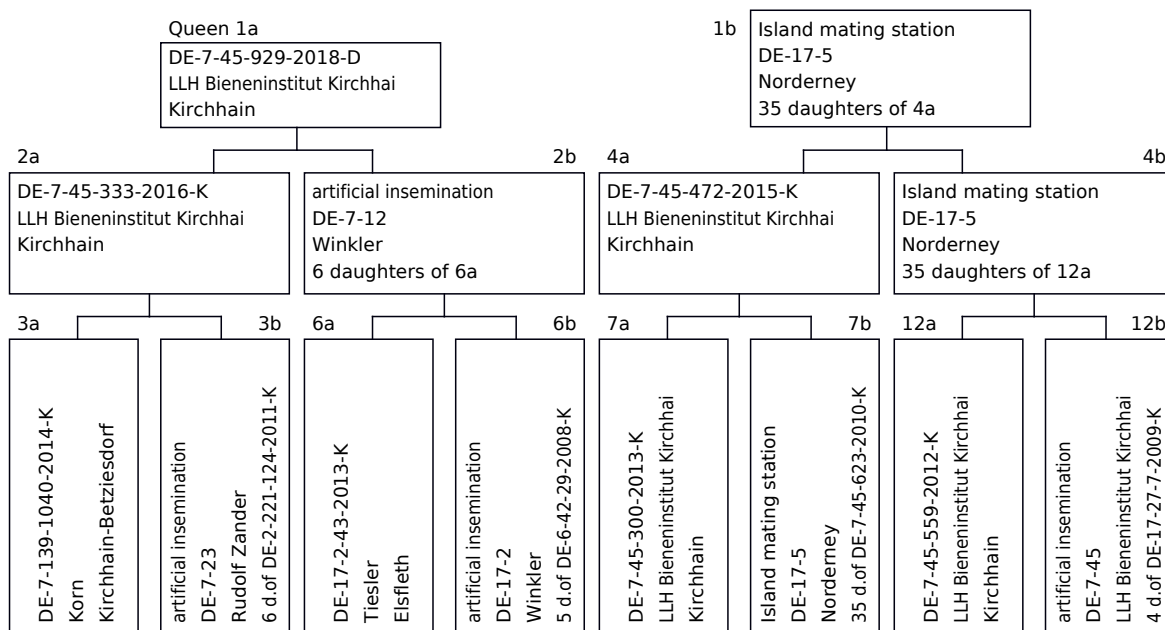


Tester of the queen: Ottersbach, Detlef, 26532 Großheide, DE-17-69, Apiary 2
 Breeder of the queen: LLH Bieneninstitut Kirchhai, 35274 Kirchhai, DE-7-45
1a Studbook number: **DE-7-45-929-2018-D**

Race line: -70 Sign: red 82 Daughters of Queen: 0.9%
 Generation: 0 Hatch date: 07.06.2018 Workers: 2.7%

A. Pedigree



B. Own performance

| Performance test year | No. of the colony 375 | | | comparable colonies at the apiary | |
|---|-----------------------|-----------------|---------|-----------------------------------|------------------|
| | kg | % | Ranking | number | Yield average kg |
| | | | | 0 | |
| | Assessment* | Breeding values | | | Reliability |
| Total breeding value¹ | - | 112 | | | |
| Honey yield | - | (106) | | | 0.37 |
| Defensive behavior | 3.80 | 116 | | | 0.54 |
| Steadiness on comb | 3.70 | 110 | | | 0.54 |
| Swarming drive | 4 | 116 | | | 0.36 |
| Varroa | - | 103 | | | 0.28 |
| Performance index | - | 114 | | | 0.48 |
| Robustness in winter | 3.60 | | 70% | 100% | 170% |
| Development in Spring | 3.50 | | | | |
| Colony strength | 3.60 | | | | |

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 D

Suitable for use as a drone colony at mating stations.

Breeding selection report DE-7-45-929-2018-D

Page 2

Performance of the sisters

Amount of checked sisters: 55

| Studbook number | Tester of the queen | Apiary | Total breeding value | Yield kg | Breeding Value Honey | Defensive behavior | Breeding Value Defensive | Calmness during inspection | Breeding Value Calmness | Swarming drive | Breeding Value Swarming | Varroa-index | Performance index |
|--------------------|---------------------|--------|----------------------|----------|----------------------|--------------------|--------------------------|----------------------------|-------------------------|----------------|-------------------------|--------------|-------------------|
| DE-7-45-295-2018 | DE-7-45 | 1 | 110 | | 106 | | Behavior | | 109 | | drive | 103 | 111 |
| DE-7-45-297-2018 | DE-7-45 | 3 | 111 | | 106 | | 118 | | inspection | | 115 | 101 | 115 |
| DE-7-45-293-2018 | DE-7-45 | 4 | 112 | | 107 | | 115 | | 107 | | 118 | 104 | 114 |
| DE-7-45-309-2018** | DE-7-140 | 1 | 112 | | (106) | | (116) | | (110) | | (116) | (103) | 114 |
| DE-7-45-296-2018 | DE-7-175 | 1 | 110 | | 100 | | (115) | | (108) | | (115) | (103) | 111 |
| DE-7-45-304-2018 | DE-7-176 | 1 | 111 | | 104 | | 115 | | 108 | | 115 | 104 | 112 |
| DE-7-176-35-2018 | DE-7-176 | 1 | 115 | | 111 | | 118 | | 112 | | 117 | 104 | 117 |
| DE-7-45-313-2018 | DE-7-177 | 1 | 115 | | 110 | | 121 | | 116 | | 118 | 102* | 119 |
| DE-7-45-306-2018 | DE-7-322 | 1 | 115 | | 108 | | 116 | | 111 | | 119 | 106 | 116 |
| DE-7-45-302-2018 | DE-13-477 | 1 | 110 | | 104 | | 113 | | 107 | | 118 | 101 | 113 |
| DE-7-45-890-2018 | DE-17-69 | 1 | 112 | | (105) | 3.8 | 116 | 3.6 | 109 | 4 | 116 | 103 | 114 |
| DE-7-45-891-2018 | DE-17-69 | 1 | 111 | | (105) | 3.7 | 115 | 3.6 | 109 | 4 | 116 | 103 | 113 |
| DE-7-45-894-2018 | DE-17-69 | 1 | 113 | | (106) | 3.7 | 116 | 3.8 | 111 | 4 | 116 | 104 | 114 |
| DE-7-45-895-2018 | DE-17-69 | 1 | 112 | | (106) | 3.8 | 116 | 3.7 | 110 | 4 | 116 | 103 | 114 |
| DE-7-45-896-2018 | DE-17-69 | 1 | 113 | | (106) | 3.7 | 116 | 3.8 | 111 | 4 | 116 | 105 | 114 |
| DE-7-45-897-2018 | DE-17-69 | 1 | 112 | | (106) | 3.8 | 116 | 3.7 | 110 | 4 | 116 | 103 | 114 |
| DE-7-45-899-2018-D | DE-17-69 | 2 | 112 | | (106) | 3.7 | 116 | 3.8 | 110 | 4 | 116 | 103 | 114 |
| DE-7-45-900-2018-D | DE-17-69 | 2 | 112 | | (106) | 3.8 | 116 | 3.7 | 110 | 4 | 116 | 103 | 114 |
| DE-7-45-902-2018-D | DE-17-69 | 2 | 112 | | (106) | 3.7 | 115 | 3.7 | 109 | 4 | 116 | 103 | 114 |
| DE-7-45-904-2018-D | DE-17-69 | 2 | 112 | | (106) | 3.7 | 116 | 3.8 | 110 | 4 | 116 | 103 | 114 |
| DE-7-45-905-2018-D | DE-17-69 | 2 | 113 | | (106) | 3.8 | 116 | 3.7 | 110 | 4 | 116 | 105 | 114 |
| DE-7-45-906-2018-D | DE-17-69 | 2 | 112 | | (106) | 3.8 | 116 | 3.7 | 110 | 4 | 116 | 103 | 114 |
| DE-7-45-908-2018-D | DE-17-69 | 2 | 112 | | (106) | 3.8 | 117 | 3.8 | 111 | 4 | 116 | 103 | 115 |
| DE-7-45-910-2018-D | DE-17-69 | 2 | 112 | | (106) | 3.8 | 116 | 3.7 | 110 | 4 | 116 | 103 | 114 |
| DE-7-45-911-2018-D | DE-17-69 | 2 | 114 | | (106) | 3.8 | 117 | 3.8 | 111 | 4 | 116 | 105 | 115 |
| DE-7-45-912-2018-D | DE-17-69 | 2 | 114 | | (106) | 3.8 | 117 | 3.8 | 111 | 4 | 116 | 106 | 115 |
| DE-7-45-913-2018-D | DE-17-69 | 2 | 112 | | (105) | 3.7 | 115 | 3.6 | 108 | 4 | 116 | 105 | 113 |
| DE-7-45-914-2018-D | DE-17-69 | 2 | 113 | | (106) | 3.8 | 116 | 3.7 | 110 | 4 | 116 | 104 | 114 |
| DE-7-45-916-2018-K | DE-17-69 | 2 | 112 | | (106) | 3.7 | 115 | 3.7 | 109 | 4 | 116 | 104 | 114 |
| DE-7-45-917-2018-D | DE-17-69 | 2 | 113 | | (106) | 3.8 | 117 | 3.8 | 111 | 4 | 116 | 103 | 115 |
| DE-7-45-918-2018-D | DE-17-69 | 2 | 113 | | (106) | 3.8 | 116 | 3.7 | 110 | 4 | 116 | 105 | 114 |
| DE-7-45-919-2018-D | DE-17-69 | 2 | 112 | | (106) | 3.8 | 117 | 3.8 | 111 | 4 | 116 | 102 | 115 |
| DE-7-45-920-2018-D | DE-17-69 | 2 | 112 | | (106) | 3.7 | 116 | 3.8 | 110 | 4 | 116 | 102 | 114 |
| DE-7-45-921-2018-D | DE-17-69 | 2 | 112 | | (106) | 3.8 | 116 | 3.7 | 110 | 4 | 116 | 103 | 114 |
| DE-7-45-922-2018-D | DE-17-69 | 2 | 113 | | (106) | 3.8 | 117 | 3.8 | 111 | 4 | 116 | 103 | 115 |
| DE-7-45-923-2018-D | DE-17-69 | 2 | 113 | | (106) | 3.7 | 116 | 3.8 | 110 | 4 | 116 | 104 | 114 |
| DE-7-45-924-2018-D | DE-17-69 | 2 | 112 | | (106) | 3.8 | 117 | 3.8 | 111 | 4 | 116 | 102 | 115 |
| DE-7-45-926-2018-D | DE-17-69 | 2 | 112 | | (106) | 3.7 | 115 | 3.7 | 109 | 4 | 116 | 103 | 114 |
| DE-7-45-927-2018-D | DE-17-69 | 2 | 112 | | (105) | 3.7 | 115 | 3.6 | 108 | 4 | 116 | 104 | 113 |
| DE-7-45-929-2018-D | DE-17-69 | 2 | 112 | | (106) | 3.8 | 116 | 3.7 | 110 | 4 | 116 | 103 | 114 |
| DE-7-45-930-2018-D | DE-17-69 | 2 | 112 | | (106) | 3.7 | 115 | 3.7 | 109 | 4 | 116 | 104 | 114 |
| DE-7-45-931-2018-D | DE-17-69 | 2 | 111 | | (106) | 3.8 | 117 | 3.8 | 111 | 4 | 116 | 101 | 115 |
| DE-7-45-933-2018-D | DE-17-69 | 2 | 110 | | (105) | 3.7 | 115 | 3.6 | 108 | 4 | 116 | 101 | 113 |
| DE-7-45-935-2018-D | DE-17-69 | 2 | 112 | | (106) | 3.8 | 117 | 3.8 | 111 | 4 | 116 | 103 | 115 |
| DE-7-45-938-2018-D | DE-17-69 | 2 | 112 | | (106) | 3.8 | 117 | 3.8 | 111 | 4 | 116 | 102 | 115 |
| DE-7-45-939-2018-D | DE-17-69 | 2 | 112 | | (105) | 3.7 | 115 | 3.6 | 108 | 4 | 116 | 104 | 113 |
| DE-7-45-940-2018-D | DE-17-69 | 2 | 111 | | (106) | 3.7 | 115 | 3.7 | 109 | 4 | 116 | 102 | 114 |
| DE-7-45-941-2018-D | DE-17-69 | 2 | 112 | | (106) | 3.8 | 116 | 3.7 | 110 | 4 | 116 | 103 | 114 |
| DE-7-45-942-2018-D | DE-17-69 | 2 | 113 | | (106) | 3.8 | 117 | 3.8 | 111 | 4 | 116 | 104 | 115 |
| DE-7-45-943-2018-D | DE-17-69 | 2 | 113 | | (106) | 3.8 | 116 | 3.7 | 110 | 4 | 116 | 104 | 114 |
| DE-7-45-944-2018-D | DE-17-69 | 2 | 111 | | (106) | 3.8 | 116 | 3.7 | 110 | 4 | 116 | 102 | 114 |
| DE-7-45-949-2018 | DE-17-69 | 3 | 113 | | (106) | 3.8 | 116 | 3.7 | 110 | 4 | 116 | 104 | 114 |

| | | | | | | | | | | | | | |
|------------------|----------|---|-----|--|-------|-----|-----|-----|-----|---|-----|-----|-----|
| DE-7-45-951-2018 | DE-17-69 | 3 | 111 | | (106) | 3.8 | 117 | 3.8 | 111 | 4 | 116 | 101 | 115 |
| DE-7-45-953-2018 | DE-17-69 | 3 | 113 | | (106) | 3.8 | 116 | 3.7 | 110 | 4 | 116 | 104 | 114 |
| DE-7-45-955-2018 | DE-17-69 | 3 | 112 | | (105) | 3.8 | 115 | 3.6 | 109 | 4 | 116 | 104 | 113 |

Only one Varroa trait was recorded

Colony without performance tests