



MEZINÁRODNÍ TESTOVÁNÍ DRŮBEŽE  
státní podnik, ÚSTRAŠICE

---

390 02 Tábor 2

Tel.: 381 200 320

**4<sup>th</sup> part fattening test of the final product of XLIX.  
international test of parents from of broilers**

**10. 6. 2021 - 12. 7. 2021**

Study Investigator: Ing. Hana Horná  
Ing. Markéta Krekulová

Ústřašice, July 2021



### 3.2 Housing system

Pullets were kept in windowless house with full control of the environment. They were kept in deep litter system. Manually filled tube feeders and nipple automatic drinkers were used.

### 3.3 Lighting programme

Pullets were kept in windowless house. All the birds were submitted to the following lighting programme.

| Age         | Hours of light | Hours of darkness |
|-------------|----------------|-------------------|
| Day 1 – 7   | 23             | 1                 |
| Day 8 - 29  | 18             | 6                 |
| Day 30 - 32 | 23             | 1                 |

### 3.4 Stocking density

17,2 broilers per square meter

### 3.5 Feeding

Feed was produced in XXXXXXXXXX

Day 1 – 10 Starter (BR1)  
Day 11 – 21 Grower (BR2-A)  
Day 22 – 28 Grower (BR2-B)  
Day 29 – 32 Finisher (BR3)

## Diet formulas

|                                | <b>Starter BR1</b> | <b>Grower BR2-A</b> | <b>Grower BR2-B</b> | <b>Finisher BR3</b> |
|--------------------------------|--------------------|---------------------|---------------------|---------------------|
| Age                            | Days 1 - 10        | Days 11 - 21        | Day 22 - 28         | Day 29 - 32         |
| <b>Components (%)</b>          |                    |                     |                     |                     |
| Wheat                          | 41.42              | 49.66               | 51.28               | 57.12               |
| Maize                          | 15.00              | 13.00               | 13.00               | 10.00               |
| Soybean extr. groats           | 31.50              | 30.45               | 28.55               | 24.80               |
| Soybean extr.                  | 4.00               | -                   | -                   | -                   |
| Fish meal                      | 1.50               | -                   | -                   | -                   |
| MCP – monocalciumphosphate     | 0.47               | 0.31                | 0.18                | 0.16                |
| Calcium carbonate              | 1.47               | 1.21                | 1.20                | 1.13                |
| Salt                           | 0.28               | 0.24                | 0.23                | 0.26                |
| Soybean oil                    | 2.46               | 2.50                | 2.50                | 2.62                |
| Animal fat                     | -                  | 0.90                | 1.33                | 2.50                |
| Sodium sulfate                 | 0.13               | 0.10                | 0.11                | 0.08                |
| Premixes of amino acid         | 0.85               | 0.86                | 0.86                | 0.86                |
| Vitamin and mineral supplement | 0.92               | 0.77                | 0.76                | 0.47                |
| <b>Nutrient content</b>        |                    |                     |                     |                     |
| Crude protein (g/kg)           | 23.36              | 21.17               | 20.48               | 19.15               |
| Fat (g/kg)                     | 5.16               | 5.24                | 5.66                | 6.86                |
| Lysine (g/kg)                  | 1.30               | 1.17                | 1.13                | 1.05                |
| Methionine (g/kg)              | 0.63               | 0.56                | 0.54                | 0.50                |
| Ca (g/kg)                      | 0.94               | 0.78                | 0.75                | 0.70                |
| P (g/kg)                       | 0.45               | 0.39                | 0.36                | 0.35                |
| Vitamin A (IU/kg)              | 15000              | 10000               | 10000               | 10000               |
| Vitamin D3 (IU/kg)             | 5000               | 5000                | 5000                | 5000                |
| ME (MJ/kg)                     | 12.40              | 12.70               | 12.90               | 13.40               |

### 3.6 Veterinary precautions

The chicken house was disinfected by [REDACTED] before the chick placement. On the first days old chickens was applied to the water solution of permanganate. On days 1 and 12 chickens were vaccinated with [REDACTED]

## **4 Parameters recorded**

### **4.1 Live weight**

Live weight was measured on days 1 (all the birds in each pen were weighed altogether), 7 and 14 (20 % of the birds were weighed altogether, without fasting). On day 32 birds were weighed individually, after 12 hours of fasting.

### **4.2 Feed conversion ratio (FCR)**

Feed conversion ratio was calculated as feed consumption per 1 kg of live weight for the periods 1 – 14 days and 1 – 32 days.

### **4.3 Mortality**

All pens were checked three times a day to see if there were any dead or ill birds. Dead chickens were registered by date and reason of mortality on the day of death.

### **4.4 Carcass analysis**

The carcass analysis was done on 20 cocks and 20 hens per each genotype on day 32. Breast muscles was weighed without skin and thigh muscles with bone and skin.

### **4.5 Statistical analyses**

Performance results of live weight at the age of 32 days were statistically evaluated.

## **5 Results**

|          |    |                                                       |
|----------|----|-------------------------------------------------------|
| Tab. No. | 1a | Hatchability                                          |
|          | 1b | Broiler results at the age of 7 days                  |
|          | 1c | Broiler results at the age of 14 days                 |
|          | 1d | Broiler results at the age of 32 days                 |
|          | 2a | Mortality during growing period at the age of 14 days |
|          | 2b | Mortality during growing period at the age of 32 days |
|          | 3  | Results of carcass analysis                           |
|          | 4a | Statistical analysis - cocks                          |
|          | 4b | Statistical analysis - hens                           |

**Hatchability****Tab. No. 1a**

Test: 49

Part fattening: 4

| Cross      | Sample | Fertility | Hatchability |       | Birds housed | Average weight |       |       |
|------------|--------|-----------|--------------|-------|--------------|----------------|-------|-------|
|            |        |           | Set          | Fert. |              | hatch. eggs    | 1-day |       |
|            |        | %         | %            | %     |              |                | ♂     | ♀     |
|            |        |           | g            | g     | g            | g              | g     |       |
| ██████████ | 1      | 82.11     | 69.00        | 84.03 | 560          | 69.81          | 47.32 | 47.46 |
| ██████████ | 2      | 90.00     | 76.78        | 85.31 | 560          | 70.22          | 48.96 | 48.14 |
| ██████████ | 3      | 90.67     | 79.22        | 87.38 | 560          | 73.06          | 48.07 | 48.36 |
| ██████████ | 4      | 88.67     | 80.67        | 90.98 | 560          | 69.50          | 48.25 | 48.11 |
| ██████████ | 5      | 87.22     | 73.11        | 83.82 | 560          | 72.50          | 48.43 | 48.43 |
| ██████████ | 6      | 92.56     | 76.78        | 82.95 | 560          | 73.10          | 48.18 | 48.14 |
| ██████████ | 7      | 93.00     | 80.33        | 86.38 | 560          | 69.90          | 47.25 | 47.64 |
| ██████████ | 8      | 92.33     | 75.00        | 81.23 | 560          | 72.08          | 48.36 | 48.14 |
| ██████████ | 9      | 94.33     | 78.67        | 83.39 | 560          | 70.26          | 47.00 | 47.04 |
| ██████████ | 10     | 84.33     | 71.00        | 84.19 | 560          | 71.69          | 49.18 | 48.68 |
| ██████████ | 11     | 89.56     | 74.11        | 82.75 | 560          | 72.82          | 48.93 | 48.29 |
| ██████████ | 12     | 85.33     | 73.56        | 86.20 | 560          | 71.13          | 48.93 | 48.57 |

**Broiler results at the age of 7 days**

**Tab. No. 1b**

Test: 49

Part fattening: 4

| Cross      | Sample | Average live weight at 7 days |      |             |           |      |             |           |      |             |
|------------|--------|-------------------------------|------|-------------|-----------|------|-------------|-----------|------|-------------|
|            |        | male                          |      |             | female    |      |             | average   |      |             |
|            |        | mortality                     |      | live weight | mortality |      | live weight | mortality |      | live weight |
|            |        | birds                         | %    | g           | birds     | %    | g           | birds     | %    | g           |
| ██████████ | 1      | 0                             | 0.00 | 208.33      | 4         | 2.86 | 200.00      | 4         | 0.71 | 204.20      |
| ██████████ | 2      | 0                             | 0.00 | 208.33      | 12        | 8.57 | 203.33      | 12        | 2.14 | 205.89      |
| ██████████ | 3      | 0                             | 0.00 | 215.00      | 8         | 5.71 | 209.17      | 8         | 1.43 | 212.13      |
| ██████████ | 4      | 0                             | 0.00 | 214.17      | 1         | 0.71 | 218.33      | 1         | 0.18 | 216.25      |
| ██████████ | 5      | 3                             | 2.14 | 217.50      | 6         | 4.29 | 210.00      | 9         | 1.61 | 213.77      |
| ██████████ | 6      | 0                             | 0.00 | 211.67      | 1         | 0.71 | 200.83      | 1         | 0.18 | 206.26      |
| ██████████ | 7      | 0                             | 0.00 | 215.83      | 3         | 2.14 | 201.67      | 3         | 0.54 | 208.79      |
| ██████████ | 8      | 0                             | 0.00 | 213.33      | 2         | 1.43 | 216.67      | 2         | 0.36 | 214.99      |
| ██████████ | 9      | 4                             | 2.86 | 221.67      | 5         | 3.57 | 201.67      | 9         | 1.61 | 211.68      |
| ██████████ | 10     | 0                             | 0.00 | 207.50      | 7         | 5.00 | 197.50      | 7         | 1.25 | 202.56      |
| ██████████ | 11     | 0                             | 0.00 | 197.50      | 1         | 0.71 | 212.50      | 1         | 0.18 | 204.99      |
| ██████████ | 12     | 1                             | 0.71 | 209.17      | 1         | 0.71 | 204.17      | 2         | 0.36 | 206.67      |

**Broiler results at the age of 14 days**

**Tab. No. 1c**

Test: 49

Part fattening: 4

| Cross      | Sample | Average live weight at 14 days |             |         |        |             |         |         |             |         |
|------------|--------|--------------------------------|-------------|---------|--------|-------------|---------|---------|-------------|---------|
|            |        | male                           |             |         | female |             |         | average |             |         |
|            |        | birds                          | live weight | FCR     | birds  | live weight | FCR     | birds   | live weight | FCR     |
|            |        |                                | g           | g       |        | g           | g       |         | g           |         |
| ██████████ | 1      | 276                            | 577.50      | 1102.64 | 274    | 525.00      | 1112.96 | 550     | 551.35      | 1107.54 |
| ██████████ | 2      | 278                            | 558.33      | 1116.83 | 267    | 515.83      | 1168.97 | 545     | 537.51      | 1141.34 |
| ██████████ | 3      | 275                            | 565.00      | 1082.86 | 267    | 498.33      | 1203.64 | 542     | 532.16      | 1138.58 |
| ██████████ | 4      | 278                            | 566.67      | 1095.96 | 278    | 526.67      | 1104.75 | 556     | 546.67      | 1100.19 |
| ██████████ | 5      | 271                            | 580.83      | 1110.51 | 269    | 539.17      | 1114.90 | 540     | 560.08      | 1112.61 |
| ██████████ | 6      | 278                            | 578.33      | 1082.25 | 277    | 529.17      | 1166.26 | 555     | 553.79      | 1122.31 |
| ██████████ | 7      | 275                            | 565.00      | 1088.01 | 276    | 512.50      | 1144.93 | 551     | 538.70      | 1115.14 |
| ██████████ | 8      | 275                            | 582.50      | 1082.17 | 276    | 536.67      | 1127.46 | 551     | 559.54      | 1103.93 |
| ██████████ | 9      | 261                            | 554.17      | 1065.21 | 270    | 519.17      | 1169.25 | 531     | 536.37      | 1116.42 |
| ██████████ | 10     | 273                            | 580.00      | 1089.43 | 268    | 545.83      | 1088.98 | 541     | 563.07      | 1089.21 |
| ██████████ | 11     | 274                            | 586.67      | 1096.82 | 275    | 541.67      | 1159.38 | 549     | 564.13      | 1126.91 |
| ██████████ | 12     | 275                            | 575.00      | 1093.12 | 277    | 531.67      | 1085.07 | 552     | 553.25      | 1089.24 |



**Broiler results at the age of 32 days**

**Tab. No. 1d**

Test: 49

Part fattening: 4

| Cross      | Sample | Average live weight at 32 days |             |         |        |             |         |         |             |         |
|------------|--------|--------------------------------|-------------|---------|--------|-------------|---------|---------|-------------|---------|
|            |        | male                           |             |         | female |             |         | average |             |         |
|            |        | birds                          | live weight | FCR     | birds  | live weight | FCR     | birds   | live weight | FCR     |
|            |        |                                | g           | g       |        | g           | g       |         | g           |         |
| ██████████ | 1      | 274                            | 2155.44     | 1572.50 | 273    | 1916.67     | 1580.70 | 547     | 2036.27     | 1576.35 |
| ██████████ | 2      | 272                            | 2174.63     | 1536.94 | 267    | 1895.77     | 1568.25 | 539     | 2036.49     | 1551.38 |
| ██████████ | 3      | 272                            | 2194.08     | 1488.46 | 264    | 1858.83     | 1607.20 | 536     | 2028.96     | 1542.04 |
| ██████████ | 4      | 274                            | 2096.57     | 1585.31 | 276    | 1821.27     | 1559.07 | 550     | 1958.42     | 1573.07 |
| ██████████ | 5      | 267                            | 2114.94     | 1560.86 | 269    | 1923.57     | 1558.25 | 536     | 2018.90     | 1559.61 |
| ██████████ | 6      | 272                            | 2227.83     | 1526.31 | 270    | 1981.52     | 1538.10 | 542     | 2105.13     | 1531.84 |
| ██████████ | 7      | 271                            | 2174.94     | 1523.39 | 271    | 1883.65     | 1621.06 | 542     | 2029.30     | 1568.72 |
| ██████████ | 8      | 270                            | 2210.78     | 1524.69 | 273    | 1924.95     | 1601.87 | 543     | 2067.07     | 1560.82 |
| ██████████ | 9      | 257                            | 2011.25     | 1548.11 | 268    | 1928.17     | 1592.07 | 525     | 1968.84     | 1570.08 |
| ██████████ | 10     | 266                            | 2249.81     | 1553.68 | 267    | 1958.13     | 1521.75 | 533     | 2103.70     | 1538.79 |
| ██████████ | 11     | 267                            | 2142.92     | 1568.79 | 273    | 2003.19     | 1545.16 | 540     | 2072.28     | 1557.24 |
| ██████████ | 12     | 270                            | 2188.30     | 1587.06 | 275    | 1963.09     | 1508.01 | 545     | 2074.66     | 1549.32 |

**Mortality in the age 14 days**

**Tab. No. 2a**

Test: 49

Part fattening: 4

| Cross      | Sample | Mortality in the period |      |        |      |       |      | Mortality according causes |   |   |   |   |   |   |   |   |    |    |    |    |    |
|------------|--------|-------------------------|------|--------|------|-------|------|----------------------------|---|---|---|---|---|---|---|---|----|----|----|----|----|
|            |        | male                    |      | female |      | total |      | 1                          | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
|            |        | birds                   | %    | birds  | %    | birds | %    |                            |   |   |   |   |   |   |   |   |    |    |    |    |    |
| ██████████ | 1      | 4                       | 1.43 | 6      | 2.14 | 10    | 1.79 |                            |   |   |   |   |   |   |   |   |    | 7  |    |    | 3  |
| ██████████ | 2      | 2                       | 0.71 | 13     | 4.64 | 15    | 2.68 |                            |   |   |   |   |   |   |   |   |    | 3  |    | 9  | 3  |
| ██████████ | 3      | 5                       | 1.79 | 13     | 4.64 | 18    | 3.21 |                            |   |   |   |   |   |   |   |   |    | 9  |    | 3  | 6  |
| ██████████ | 4      | 2                       | 0.71 | 2      | 0.71 | 4     | 0.71 |                            |   |   |   |   |   |   |   |   |    | 2  |    |    | 2  |
| ██████████ | 5      | 9                       | 3.21 | 11     | 3.93 | 20    | 3.57 |                            |   |   |   |   |   |   |   |   |    | 9  |    | 6  | 5  |
| ██████████ | 6      | 2                       | 0.71 | 3      | 1.07 | 5     | 0.89 |                            |   |   |   |   |   |   |   |   |    | 3  |    |    | 2  |
| ██████████ | 7      | 5                       | 1.79 | 4      | 1.43 | 9     | 1.61 |                            |   |   |   |   |   |   |   |   |    | 6  |    |    | 3  |
| ██████████ | 8      | 5                       | 1.79 | 4      | 1.43 | 9     | 1.61 |                            |   |   |   |   |   |   |   |   |    | 6  |    |    | 3  |
| ██████████ | 9      | 19                      | 6.79 | 10     | 3.57 | 29    | 5.18 |                            |   |   |   |   |   |   |   |   |    | 18 |    | 4  | 7  |
| ██████████ | 10     | 7                       | 2.50 | 12     | 4.29 | 19    | 3.39 |                            |   |   |   |   |   |   |   |   |    | 8  |    | 1  | 10 |
| ██████████ | 11     | 6                       | 2.14 | 5      | 1.79 | 11    | 1.96 |                            |   |   |   |   |   |   |   |   |    | 7  |    |    | 4  |
| ██████████ | 12     | 5                       | 1.79 | 3      | 1.07 | 8     | 1.43 |                            |   |   |   |   |   |   |   |   |    | 5  |    |    | 3  |

Causes: 1 – Viral diseases  
 2 – Bacterial diseases  
 3 – Moulds diseases  
 4 – Parasitary diseases  
 5 – Tumors

6 – Wounds  
 7 – Digestive track diseases  
 8 – Respiratory tract diseases  
 9 – Reproduction tract diseases  
 10 – Locomotion apparatus diseases

11 – Sudden death syndrome  
 12 - Cannibalism  
 13 – Yolk sac. infam.  
 14 – Culling and other causes

**Mortality during the masts in 32 days**

**Tab. No. 2b**

Test: 49

Part fattening: 4

| Cross    | Sample | Mortality in the period |      |         |      |        |      | Mortality according causes |   |   |   |   |   |   |   |   |    |    |    |    |    |
|----------|--------|-------------------------|------|---------|------|--------|------|----------------------------|---|---|---|---|---|---|---|---|----|----|----|----|----|
|          |        | 1 - 14                  |      | 15 - 32 |      | 1 - 32 |      | 1                          | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
|          |        | birds                   | %    | birds   | %    | birds  | %    |                            |   |   |   |   |   |   |   |   |    |    |    |    |    |
| ████████ | 1      | 10                      | 1.79 | 3       | 0.54 | 13     | 2.32 |                            |   |   |   |   |   |   |   |   |    | 10 |    |    | 3  |
| ████████ | 2      | 15                      | 2.68 | 6       | 1.07 | 21     | 3.75 |                            |   |   |   |   |   |   |   |   |    | 8  |    | 9  | 4  |
| ████████ | 3      | 18                      | 3.21 | 6       | 1.07 | 24     | 4.29 |                            |   |   |   |   |   |   |   |   |    | 12 |    | 3  | 9  |
| ████████ | 4      | 4                       | 0.71 | 6       | 1.07 | 10     | 1.79 |                            |   |   |   |   |   |   |   |   |    | 7  |    |    | 3  |
| ████████ | 5      | 20                      | 3.57 | 4       | 0.71 | 24     | 4.29 |                            |   |   |   |   |   |   |   |   |    | 11 |    | 6  | 7  |
| ████████ | 6      | 5                       | 0.89 | 13      | 2.32 | 18     | 3.21 |                            |   |   |   |   |   |   |   |   |    | 10 |    |    | 8  |
| ████████ | 7      | 9                       | 1.61 | 9       | 1.61 | 18     | 3.21 |                            |   |   |   |   |   |   |   |   |    | 14 |    |    | 4  |
| ████████ | 8      | 9                       | 1.61 | 8       | 1.43 | 17     | 3.04 |                            |   |   |   |   |   |   |   |   |    | 11 |    |    | 6  |
| ████████ | 9      | 29                      | 5.18 | 6       | 1.07 | 35     | 6.25 |                            |   |   |   |   |   |   |   |   |    | 23 |    | 4  | 8  |
| ████████ | 10     | 19                      | 3.39 | 8       | 1.43 | 27     | 4.82 |                            |   |   |   |   |   |   |   |   |    | 16 |    | 1  | 10 |
| ████████ | 11     | 11                      | 1.96 | 9       | 1.61 | 20     | 3.57 |                            |   |   |   |   |   |   |   |   |    | 13 |    |    | 7  |
| ████████ | 12     | 8                       | 1.43 | 7       | 1.25 | 15     | 2.68 |                            |   |   |   |   |   |   |   |   |    | 11 |    |    | 4  |

Causes: 1 – Viral diseases  
 2 – Bacterial diseases  
 3 – Moulds diseases  
 4 – Parasitary diseases  
 5 – Tumors

6 – Wounds  
 7 – Digestive track diseases  
 8 – Respiratory tract diseases  
 9 – Reproduction tract diseases  
 10 – Locomotion apparatus diseases

11 – Sudden death syndrome  
 12 - Cannibalism  
 13 – Yolk sac. infam.  
 14 – Culling and other causes

Results of carcass analysis in 32 days

Tab. No. 3 (page 1)

Test: 49

Part fattening: 4

| Cross | Sample | Sex | Weight      |             |            |             | Ratio of<br>abd. fat<br>to live<br>weight | Breast meat without<br>skin |                 |                 | Thigh meat with bone<br>and skin |                 |                 | Breast meat and thighs |                 |                 | Carcass      |              |
|-------|--------|-----|-------------|-------------|------------|-------------|-------------------------------------------|-----------------------------|-----------------|-----------------|----------------------------------|-----------------|-----------------|------------------------|-----------------|-----------------|--------------|--------------|
|       |        |     | Total       | Body        | Gibl.      | Abd.<br>fat |                                           | weight                      | percentage      |                 | weight                           | percentage      |                 | weight                 | percentage      |                 | value        | quality      |
|       |        |     |             |             |            |             |                                           |                             | total<br>weight | body<br>carcass |                                  | total<br>weight | body<br>carcass |                        | total<br>weight | body<br>carcass |              |              |
|       |        |     | g           | g           | g          | g           |                                           | g                           | %               | %               | %                                | g               | %               | %                      | g               | %               | %            | %            |
| █     | 1      | ♂   | 2257        | 1585        | 142        | 27          | 1.17                                      | 496                         | 21.97           | 31.28           | 494                              | 21.90           | 31.19           | 990                    | 43.87           | 62.47           | 70.23        | 76.52        |
|       |        | ♀   | 2032        | 1423        | 122        | 24          | 1.17                                      | 437                         | 21.53           | 30.74           | 431                              | 21.23           | 30.31           | 869                    | 42.76           | 61.04           | 70.05        | 76.04        |
|       |        | ♂   | <b>2144</b> | <b>1504</b> | <b>132</b> | <b>25</b>   | <b>1.17</b>                               | <b>467</b>                  | <b>21.76</b>    | <b>31.02</b>    | <b>463</b>                       | <b>21.58</b>    | <b>30.77</b>    | <b>929</b>             | <b>43.34</b>    | <b>61.79</b>    | <b>70.14</b> | <b>76.29</b> |
| █     | 2      | ♂   | 2233        | 1581        | 133        | 28          | 1.23                                      | 499                         | 22.37           | 31.59           | 499                              | 22.33           | 31.54           | 998                    | 44.70           | 63.13           | 70.80        | 76.75        |
|       |        | ♀   | 1921        | 1334        | 115        | 25          | 1.30                                      | 441                         | 22.95           | 33.04           | 416                              | 21.65           | 31.15           | 857                    | 44.60           | 64.19           | 69.48        | 75.44        |
|       |        | ♂   | <b>2077</b> | <b>1458</b> | <b>124</b> | <b>26</b>   | <b>1.26</b>                               | <b>470</b>                  | <b>22.64</b>    | <b>32.25</b>    | <b>457</b>                       | <b>22.01</b>    | <b>31.36</b>    | <b>927</b>             | <b>44.65</b>    | <b>63.62</b>    | <b>70.19</b> | <b>76.14</b> |
| █     | 3      | ♂   | 2220        | 1557        | 133        | 22          | 1.00                                      | 518                         | 23.35           | 33.30           | 474                              | 21.36           | 30.47           | 993                    | 44.72           | 63.77           | 70.12        | 76.09        |
|       |        | ♀   | 1898        | 1303        | 118        | 25          | 1.30                                      | 435                         | 22.92           | 33.37           | 401                              | 21.12           | 30.75           | 836                    | 44.04           | 64.12           | 68.67        | 74.90        |
|       |        | ♂   | <b>2059</b> | <b>1430</b> | <b>125</b> | <b>23</b>   | <b>1.14</b>                               | <b>477</b>                  | <b>23.15</b>    | <b>33.34</b>    | <b>438</b>                       | <b>21.25</b>    | <b>30.60</b>    | <b>914</b>             | <b>44.40</b>    | <b>63.93</b>    | <b>69.45</b> | <b>75.55</b> |
| █     | 4      | ♂   | 2139        | 1476        | 128        | 21          | 1.00                                      | 471                         | 22.00           | 31.88           | 450                              | 21.06           | 30.52           | 921                    | 43.06           | 62.40           | 69.01        | 74.97        |
|       |        | ♀   | 1872        | 1296        | 116        | 20          | 1.06                                      | 434                         | 23.19           | 33.51           | 388                              | 20.74           | 29.96           | 822                    | 43.93           | 63.47           | 69.21        | 75.39        |
|       |        | ♂   | <b>2005</b> | <b>1386</b> | <b>122</b> | <b>21</b>   | <b>1.02</b>                               | <b>452</b>                  | <b>22.56</b>    | <b>32.64</b>    | <b>419</b>                       | <b>20.91</b>    | <b>30.26</b>    | <b>872</b>             | <b>43.47</b>    | <b>62.90</b>    | <b>69.11</b> | <b>75.17</b> |
| █     | 5      | ♂   | 2172        | 1501        | 130        | 26          | 1.22                                      | 486                         | 22.38           | 32.39           | 458                              | 21.10           | 30.53           | 944                    | 43.48           | 62.92           | 69.10        | 75.10        |
|       |        | ♀   | 1982        | 1386        | 116        | 27          | 1.38                                      | 466                         | 23.52           | 33.64           | 414                              | 20.89           | 29.87           | 880                    | 44.41           | 63.51           | 69.92        | 75.79        |
|       |        | ♂   | <b>2077</b> | <b>1443</b> | <b>123</b> | <b>27</b>   | <b>1.29</b>                               | <b>476</b>                  | <b>22.93</b>    | <b>32.99</b>    | <b>436</b>                       | <b>21.00</b>    | <b>30.21</b>    | <b>912</b>             | <b>43.92</b>    | <b>63.20</b>    | <b>69.49</b> | <b>75.43</b> |
| █     | 6      | ♂   | 2277        | 1543        | 136        | 29          | 1.27                                      | 497                         | 21.82           | 32.21           | 467                              | 20.49           | 30.24           | 964                    | 42.31           | 62.45           | 67.76        | 73.74        |
|       |        | ♀   | 2041        | 1440        | 122        | 26          | 1.29                                      | 462                         | 22.63           | 32.07           | 434                              | 21.26           | 30.13           | 896                    | 43.89           | 62.20           | 70.56        | 76.52        |
|       |        | ♂   | <b>2159</b> | <b>1491</b> | <b>129</b> | <b>28</b>   | <b>1.28</b>                               | <b>479</b>                  | <b>22.20</b>    | <b>32.14</b>    | <b>450</b>                       | <b>20.86</b>    | <b>30.19</b>    | <b>930</b>             | <b>43.06</b>    | <b>62.33</b>    | <b>69.08</b> | <b>75.05</b> |

Results of carcass analysis in 32 days

Tab. No. 3 (page 2)

Test: 49

Part fattening: 4

| Cross    | Sample | Sex | Weight      |             |            |             | Ratio of<br>abd. fat<br>to live<br>weight | Breast meat without<br>skin |                 |                 | Thigh meat with bone<br>and skin |                 |                 | Breast meat and thighs |                 |                 | Carcass      |              |
|----------|--------|-----|-------------|-------------|------------|-------------|-------------------------------------------|-----------------------------|-----------------|-----------------|----------------------------------|-----------------|-----------------|------------------------|-----------------|-----------------|--------------|--------------|
|          |        |     | Total       | Body        | Gibl.      | Abd.<br>fat |                                           | weight                      | percentage      |                 | weight                           | percentage      |                 | weight                 | percentage      |                 | value        | quality      |
|          |        |     |             |             |            |             |                                           |                             | total<br>weight | body<br>carcass |                                  | total<br>weight | body<br>carcass |                        | total<br>weight | body<br>carcass |              |              |
|          |        |     | g           | g           | g          | g           |                                           | g                           | %               | %               | %                                | g               | %               | %                      | g               | %               | %            | %            |
| ████████ | 7      | ♂   | 2258        | 1536        | 135        | 23          | 1.02                                      | 505                         | 22.36           | 32.86           | 477                              | 21.11           | 31.03           | 981                    | 43.47           | 63.89           | 68.04        | 74.04        |
|          |        | ♀   | 1914        | 1376        | 118        | 25          | 1.31                                      | 451                         | 23.55           | 32.76           | 414                              | 21.61           | 30.07           | 864                    | 45.16           | 62.84           | 71.87        | 78.05        |
|          |        | ♂   | <b>2086</b> | <b>1456</b> | <b>127</b> | <b>24</b>   | <b>1.15</b>                               | <b>478</b>                  | <b>22.91</b>    | <b>32.82</b>    | <b>445</b>                       | <b>21.34</b>    | <b>30.58</b>    | <b>923</b>             | <b>44.25</b>    | <b>63.39</b>    | <b>69.80</b> | <b>75.88</b> |
| ████████ | 8      | ♂   | 2304        | 1576        | 135        | 25          | 1.09                                      | 508                         | 22.06           | 32.25           | 467                              | 20.27           | 29.63           | 975                    | 42.33           | 61.89           | 68.40        | 74.24        |
|          |        | ♀   | 1987        | 1395        | 119        | 28          | 1.40                                      | 467                         | 23.51           | 33.49           | 416                              | 20.95           | 29.83           | 883                    | 44.46           | 63.32           | 70.21        | 76.21        |
|          |        | ♂   | <b>2145</b> | <b>1485</b> | <b>127</b> | <b>26</b>   | <b>1.23</b>                               | <b>488</b>                  | <b>22.73</b>    | <b>32.83</b>    | <b>442</b>                       | <b>20.58</b>    | <b>29.73</b>    | <b>929</b>             | <b>43.32</b>    | <b>62.56</b>    | <b>69.24</b> | <b>75.15</b> |
| ████████ | 9      | ♂   | 2128        | 1475        | 136        | 26          | 1.21                                      | 458                         | 21.52           | 31.03           | 450                              | 21.13           | 30.47           | 907                    | 42.65           | 61.50           | 69.35        | 75.76        |
|          |        | ♀   | 2029        | 1431        | 125        | 28          | 1.37                                      | 460                         | 22.69           | 32.15           | 438                              | 21.57           | 30.57           | 898                    | 44.25           | 62.72           | 70.56        | 76.73        |
|          |        | ♂   | <b>2078</b> | <b>1453</b> | <b>131</b> | <b>27</b>   | <b>1.29</b>                               | <b>459</b>                  | <b>22.09</b>    | <b>31.58</b>    | <b>444</b>                       | <b>21.35</b>    | <b>30.52</b>    | <b>903</b>             | <b>43.43</b>    | <b>62.10</b>    | <b>69.94</b> | <b>76.23</b> |
| ████████ | 10     | ♂   | 2313        | 1652        | 140        | 26          | 1.12                                      | 537                         | 23.24           | 32.54           | 517                              | 22.36           | 31.30           | 1055                   | 45.60           | 63.84           | 71.43        | 77.48        |
|          |        | ♀   | 2097        | 1492        | 123        | 28          | 1.34                                      | 501                         | 23.89           | 33.58           | 453                              | 21.61           | 30.36           | 954                    | 45.50           | 63.94           | 71.15        | 77.02        |
|          |        | ♂   | <b>2205</b> | <b>1572</b> | <b>131</b> | <b>27</b>   | <b>1.22</b>                               | <b>519</b>                  | <b>23.55</b>    | <b>33.03</b>    | <b>485</b>                       | <b>22.00</b>    | <b>30.86</b>    | <b>1004</b>            | <b>45.55</b>    | <b>63.89</b>    | <b>71.30</b> | <b>77.26</b> |
| ████████ | 11     | ♂   | 2194        | 1513        | 136        | 30          | 1.38                                      | 472                         | 21.52           | 31.21           | 462                              | 21.04           | 30.52           | 934                    | 42.56           | 61.73           | 68.94        | 75.15        |
|          |        | ♀   | 2084        | 1443        | 121        | 34          | 1.61                                      | 467                         | 22.40           | 32.36           | 436                              | 20.92           | 30.21           | 903                    | 43.33           | 62.57           | 69.24        | 75.07        |
|          |        | ♂   | <b>2139</b> | <b>1478</b> | <b>129</b> | <b>32</b>   | <b>1.49</b>                               | <b>469</b>                  | <b>21.95</b>    | <b>31.77</b>    | <b>449</b>                       | <b>20.98</b>    | <b>30.37</b>    | <b>918</b>             | <b>42.93</b>    | <b>62.14</b>    | <b>69.09</b> | <b>75.11</b> |
| ████████ | 12     | ♂   | 2257        | 1566        | 131        | 22          | 0.98                                      | 523                         | 23.18           | 33.41           | 473                              | 20.96           | 30.21           | 996                    | 44.14           | 63.61           | 69.39        | 75.20        |
|          |        | ♀   | 2006        | 1385        | 123        | 23          | 1.14                                      | 458                         | 22.83           | 33.07           | 415                              | 20.69           | 29.98           | 873                    | 43.52           | 63.05           | 69.03        | 75.18        |
|          |        | ♂   | <b>2132</b> | <b>1476</b> | <b>127</b> | <b>23</b>   | <b>1.06</b>                               | <b>491</b>                  | <b>23.02</b>    | <b>33.25</b>    | <b>444</b>                       | <b>20.84</b>    | <b>30.10</b>    | <b>935</b>             | <b>43.85</b>    | <b>63.35</b>    | <b>69.22</b> | <b>75.19</b> |

**Statistical analysis - Cocks on the age of 32 days**

**Tab. No. 4a**

Test: 49

Part fattening: 4

| Cross      | Sample | Sample size | Average | Standard deviation | Coefficient of variation | Standard error of mean | Precision select. average | Standard error of coeff. of variation |
|------------|--------|-------------|---------|--------------------|--------------------------|------------------------|---------------------------|---------------------------------------|
|            |        |             | g/birds | g/birds            | %                        | g/birds                | %                         | %                                     |
| ██████████ | 1      | 274         | 2155.44 | 282.74             | 13.12                    | 17.08                  | 0.79                      | 0.57                                  |
| ██████████ | 2      | 272         | 2174.63 | 259.88             | 11.95                    | 15.76                  | 0.72                      | 0.52                                  |
| ██████████ | 3      | 272         | 2194.08 | 319.71             | 14.57                    | 19.39                  | 0.88                      | 0.64                                  |
| ██████████ | 4      | 274         | 2096.57 | 211.48             | 10.09                    | 12.78                  | 0.61                      | 0.44                                  |
| ██████████ | 5      | 267         | 2114.94 | 234.28             | 11.08                    | 14.34                  | 0.68                      | 0.49                                  |
| ██████████ | 6      | 272         | 2227.83 | 237.17             | 10.65                    | 14.38                  | 0.65                      | 0.46                                  |
| ██████████ | 7      | 271         | 2174.94 | 226.44             | 10.41                    | 13.76                  | 0.63                      | 0.45                                  |
| ██████████ | 8      | 270         | 2210.78 | 249.95             | 11.31                    | 15.21                  | 0.69                      | 0.49                                  |
| ██████████ | 9      | 257         | 2011.25 | 296.30             | 14.73                    | 18.48                  | 0.92                      | 0.67                                  |
| ██████████ | 10     | 266         | 2249.81 | 242.22             | 10.77                    | 14.85                  | 0.66                      | 0.47                                  |
| ██████████ | 11     | 267         | 2142.92 | 261.74             | 12.21                    | 16.02                  | 0.75                      | 0.54                                  |
| ██████████ | 12     | 270         | 2188.30 | 207.45             | 9.48                     | 12.62                  | 0.58                      | 0.41                                  |

Statistical analysis - Hens on the age of 32 days

Tab. No. 4b

Test: 49

Part fattening: 4

| Cross      | Sample | Sample size | Average | Standard deviation | Coefficient of variation | Standard error of mean | Precision select. average | Standard error of coeff. of variation |
|------------|--------|-------------|---------|--------------------|--------------------------|------------------------|---------------------------|---------------------------------------|
|            |        |             | g/birds | g/birds            | %                        | g/birds                | %                         | %                                     |
| ██████████ | 1      | 273         | 1916.67 | 237.32             | 12.38                    | 14.36                  | 0.75                      | 0.54                                  |
| ██████████ | 2      | 267         | 1895.77 | 196.22             | 10.35                    | 12.01                  | 0.63                      | 0.45                                  |
| ██████████ | 3      | 264         | 1858.83 | 234.18             | 12.60                    | 14.41                  | 0.78                      | 0.56                                  |
| ██████████ | 4      | 276         | 1821.27 | 199.71             | 10.97                    | 12.02                  | 0.66                      | 0.47                                  |
| ██████████ | 5      | 269         | 1923.57 | 216.68             | 11.26                    | 13.21                  | 0.69                      | 0.49                                  |
| ██████████ | 6      | 270         | 1981.52 | 214.86             | 10.84                    | 13.08                  | 0.66                      | 0.47                                  |
| ██████████ | 7      | 271         | 1883.65 | 239.36             | 12.71                    | 14.54                  | 0.77                      | 0.56                                  |
| ██████████ | 8      | 273         | 1924.95 | 216.20             | 11.23                    | 13.08                  | 0.68                      | 0.49                                  |
| ██████████ | 9      | 268         | 1928.17 | 221.50             | 11.49                    | 13.53                  | 0.70                      | 0.50                                  |
| ██████████ | 10     | 267         | 1958.13 | 204.84             | 10.46                    | 12.54                  | 0.64                      | 0.46                                  |
| ██████████ | 11     | 273         | 2003.19 | 210.69             | 10.52                    | 12.75                  | 0.64                      | 0.46                                  |
| ██████████ | 12     | 275         | 1963.09 | 229.76             | 11.70                    | 13.86                  | 0.71                      | 0.51                                  |