

| rok  | Pšenice ozimá<br>y1 | Ječmen jarní<br>y2 | Řepka ozimá<br>y3 | Srážky<br>y4 | Teplota<br>y5 | ti |
|------|---------------------|--------------------|-------------------|--------------|---------------|----|
| 2000 | 4.34                | 3.03               | 2.61              | 684          | 9.1           | 1  |
| 2001 | 4.95                | 3.75               | 2.84              | 803          | 7.8           | 2  |
| 2002 | 4.64                | 3.72               | 2.27              | 855          | 8.7           | 3  |
| 2003 | 4.14                | 3.91               | 1.55              | 504          | 8.2           | 4  |
| 2004 | 5.96                | 4.91               | 3.6               | 666          | 7.8           | 5  |
| 2005 | 5.15                | 4.15               | 2.88              | 720          | 7.7           | 6  |
| 2006 | 4.58                | 3.55               | 3.01              | 703          | 8.2           | 7  |
| 2007 | 5.01                | 3.44               | 3.06              | 741          | 9.1           | 8  |
| 2008 | 5.88                | 4.64               | 2.94              | 619          | 8.9           | 9  |
| 2009 | 5.33                | 4.23               | 3.18              | 744          | 8.4           | 10 |
| 2010 | 5.08                | 3.91               | 2.83              | 867          | 7.2           | 11 |
| 2011 | 5.78                | 4.95               | 2.8               | 627          | 8.5           | 12 |
| 2012 | 4.34                | 4.31               | 2.76              | 689          | 8.3           | 13 |
| 2013 | 5.75                | 4.61               | 3.45              | 727          | 7.9           | 14 |
| 2014 | 6.61                | 5.56               | 3.95              | 657          | 9.4           | 15 |
| 2015 | 6.5                 | 5.43               | 3.43              | 532          | 9.4           | 16 |
| 2016 | 6.57                | 5.45               | 3.46              | 637          | 8.7           | 17 |
| 2017 | 5.77                | 4.96               | 2.91              | 683          | 8.6           | 18 |
| 2018 | 5.46                | 4.93               | 3.43              | 522          | 9.6           | 19 |

|        |        |             |             |          |       |     |
|--------|--------|-------------|-------------|----------|-------|-----|
| suma   | 101.84 | 83.44       | 56.96       | 12980    | 161.5 | 190 |
| průměr | 5.36   | 4.391578947 | 2.997894737 | 683.1579 | 8.5   | 10  |
| n      | 19     |             |             |          |       |     |

|    |        |    |        |           |          |
|----|--------|----|--------|-----------|----------|
| a1 | 4.483  | b1 | 0.088  | smodch y1 | 0.76642  |
| a2 | 3.38   | b2 | 0.101  | smodch y2 | 0.736058 |
| a3 | 2.468  | b3 | 0.053  | smodch y3 | 0.529576 |
| a4 | 750.08 | b4 | -6.693 | smodch y4 | 99.92845 |
| a5 | 8.069  | b5 | 0.0049 | smodch y5 | 0.654047 |

|      |    |     |         |
|------|----|-----|---------|
| 2000 | 1  | t   | 25      |
| 2001 | 2  | pše | 6.683   |
| 2002 | 3  | ječ | 5.905   |
| 2003 | 4  | řep | 3.793   |
| 2004 | 5  | sra | 582.755 |
| 2005 | 6  | tep | 8.1915  |
| 2006 | 7  |     |         |
| 2007 | 8  |     |         |
| 2008 | 9  |     |         |
| 2009 | 10 |     |         |
| 2010 | 11 |     |         |
| 2011 | 12 |     |         |
| 2012 | 13 |     |         |
| 2013 | 14 |     |         |
| 2014 | 15 |     |         |
| 2015 | 16 |     |         |
| 2016 | 17 |     |         |
| 2017 | 18 |     |         |
| 2018 | 19 |     |         |

|      |    |
|------|----|
| 2019 | 20 |
| 2020 | 21 |
| 2021 | 22 |
| 2022 | 23 |
| 2023 | 24 |
| 2024 | 25 |

| ti2  | y1t      | y2t      | y3t      | y4t      | y5t      | y'1     | y'2   |
|------|----------|----------|----------|----------|----------|---------|-------|
| 1    | 4.34     | 3.03     | 2.61     | 684      | 9.1      | 4.571   | 3.481 |
| 4    | 9.9      | 7.5      | 5.68     | 1606     | 15.6     | 4.659   | 3.582 |
| 9    | 13.92    | 11.16    | 6.81     | 2565     | 26.1     | 4.747   | 3.683 |
| 16   | 16.56    | 15.64    | 6.2      | 2016     | 32.8     | 4.835   | 3.784 |
| 25   | 29.8     | 24.55    | 18       | 3330     | 39       | 4.923   | 3.885 |
| 36   | 30.9     | 24.9     | 17.28    | 4320     | 46.2     | 5.011   | 3.986 |
| 49   | 32.06    | 24.85    | 21.07    | 4921     | 57.4     | 5.099   | 4.087 |
| 64   | 40.08    | 27.52    | 24.48    | 5928     | 72.8     | 5.187   | 4.188 |
| 81   | 52.92    | 41.76    | 26.46    | 5571     | 80.1     | 5.275   | 4.289 |
| 100  | 53.3     | 42.3     | 31.8     | 7440     | 84       | 5.363   | 4.39  |
| 121  | 55.88    | 43.01    | 31.13    | 9537     | 79.2     | 5.451   | 4.491 |
| 144  | 69.36    | 59.4     | 33.6     | 7524     | 102      | 5.539   | 4.592 |
| 169  | 56.42    | 56.03    | 35.88    | 8957     | 107.9    | 5.627   | 4.693 |
| 196  | 80.5     | 64.54    | 48.3     | 10178    | 110.6    | 5.715   | 4.794 |
| 225  | 99.15    | 83.4     | 59.25    | 9855     | 141      | 5.803   | 4.895 |
| 256  | 104      | 86.88    | 54.88    | 8512     | 150.4    | 5.891   | 4.996 |
| 289  | 111.69   | 92.65    | 58.82    | 10829    | 147.9    | 5.979   | 5.097 |
| 324  | 103.86   | 89.28    | 52.38    | 12294    | 154.8    | 6.067   | 5.198 |
| 361  | 103.74   | 93.67    | 65.17    | 9918     | 182.4    | 6.155   | 5.299 |
| 2470 | 1068.38  | 892.07   | 599.8    | 125985   | 1639.3   | 101.897 | 83.41 |
| 130  | 56.23053 | 46.95105 | 31.56842 | 6630.789 | 86.27895 | 5.363   | 4.39  |

**Predikce**

|           |          |           |          |
|-----------|----------|-----------|----------|
| student t | 1.714    | s' yn+1   | 1.0887   |
| s'y1      | 0.567757 | t*s'y1    | 0.973136 |
| s'y2      | 0.4346   | t*s'y2    | 0.744905 |
| s'y3      | 0.428571 | t*s'y3    | 0.734571 |
| s'y4      | 91.87672 | t*s'y4    | 157.4767 |
| s'y5      | 0.592947 | t*s'y5    | 1.016311 |
| levostr 1 | 5.709864 | pravostr1 | 7.656136 |
| levostr 2 | 5.160095 | pravostr2 | 6.649905 |
| levostr 3 | 3.058429 | pravostr3 | 4.527571 |
| levostr 4 | 425.2783 | pravostr4 | 740.2317 |
| levostr 5 | 7.175189 | pravostr5 | 9.207811 |



| y'3    | y'4      | y'5      | e1     | e2       |         |
|--------|----------|----------|--------|----------|---------|
| 2.521  | 743.387  | 9.073912 |        | -0.231   | -0.451  |
| 2.574  | 736.694  | 9.078848 |        | 0.291    | 0.168   |
| 2.627  | 730.001  | 9.083809 |        | -0.107   | 0.037   |
| 2.68   | 723.308  | 9.088793 |        | -0.695   | 0.126   |
| 2.733  | 716.615  | 9.093803 |        | 1.037    | 1.025   |
| 2.786  | 709.922  | 9.098837 |        | 0.139    | 0.164   |
| 2.839  | 703.229  | 9.103895 |        | -0.519   | -0.537  |
| 2.892  | 696.536  | 9.108979 |        | -0.177   | -0.748  |
| 2.945  | 689.843  | 9.114087 |        | 0.605    | 0.351   |
| 2.998  | 683.15   | 9.119221 |        | -0.033   | -0.16   |
| 3.051  | 676.457  | 9.124379 |        | -0.371   | -0.581  |
| 3.104  | 669.764  | 9.129564 |        | 0.241    | 0.358   |
| 3.157  | 663.071  | 9.134773 |        | -1.287   | -0.383  |
| 3.21   | 656.378  | 9.140008 |        | 0.035    | -0.184  |
| 3.263  | 649.685  | 9.145269 |        | 0.807    | 0.665   |
| 3.316  | 642.992  | 9.150556 |        | 0.609    | 0.434   |
| 3.369  | 636.299  | 9.155868 |        | 0.591    | 0.353   |
| 3.422  | 629.606  | 9.161207 |        | -0.297   | -0.238  |
| 3.475  | 622.913  | 9.166572 |        | -0.695   | -0.369  |
| 56.962 | 12979.85 | 173.2724 | suma e | -0.057   | 0.03    |
| 2.998  | 683.15   | 9.119599 | RSS    | 6.190971 | 3.91733 |

|              | Pšenice ozimá (y1) | Ječmen jarní (y2) |
|--------------|--------------------|-------------------|
| r2           | 0.414465725        | 0.598307131       |
| r            | 0.643790125        | 0.773503155       |
| zdnlivá kor. |                    |                   |
| pšenice      | -0.051730404       | 0.068644254       |
| ječmen       | -0.348056736       | 0.020335146       |
| řepka        | 0.190148305        | 0.048317612       |
| srážky       |                    |                   |
| r2           |                    |                   |
| pšenice      | 0.002676035        | 0.004712034       |
| ječmen       | 0.121143491        | 0.000413518       |
| řepka        | 0.036156378        | 0.002334592       |
| teplota      |                    |                   |



| e3       | e4          | e5           | y1-y1prum | y2-y2prum  | y3-y3prum  |           |
|----------|-------------|--------------|-----------|------------|------------|-----------|
| 0.089    | -59.387     | 0.026087942  | -1.02     | -1.3615789 | -0.3878947 |           |
| 0.266    | 66.306      | -1.278848243 | -0.41     | -0.6415789 | -0.1578947 |           |
| -0.357   | 124.999     | -0.383808676 | -0.72     | -0.6715789 | -0.7278947 |           |
| -1.13    | -219.308    | -0.888793475 | -1.22     | -0.4815789 | -1.4478947 |           |
| 0.867    | -50.615     | -1.293802759 | 0.6       | 0.5184211  | 0.6021053  |           |
| 0.094    | 10.078      | -1.398836649 | -0.21     | -0.2415789 | -0.1178947 |           |
| 0.171    | -0.229      | -0.903895266 | -0.78     | -0.8415789 | 0.0121053  |           |
| 0.168    | 44.464      | -0.008978731 | -0.35     | -0.9515789 | 0.0621053  |           |
| -0.005   | -70.843     | -0.214087166 | 0.52      | 0.2484211  | -0.0578947 |           |
| 0.182    | 60.85       | -0.719220695 | -0.03     | -0.1615789 | 0.1821053  |           |
| -0.221   | 190.543     | -1.924379439 | -0.28     | -0.4815789 | -0.1678947 |           |
| -0.304   | -42.764     | -0.629563524 | 0.42      | 0.5584211  | -0.1978947 |           |
| -0.397   | 25.929      | -0.834773073 | -1.02     | -0.0815789 | -0.2378947 |           |
| 0.24     | 70.622      | -1.240008212 | 0.39      | 0.2184211  | 0.4521053  |           |
| 0.687    | 7.315       | 0.254730935  | 1.25      | 1.1684211  | 0.9521053  |           |
| 0.114    | -110.992    | 0.249444239  | 1.14      | 1.0384211  | 0.4321053  |           |
| 0.091    | 0.701       | -0.455868425 | 1.21      | 1.0584211  | 0.4621053  |           |
| -0.512   | 53.394      | -0.561207185 | 0.41      | 0.5684211  | -0.0878947 |           |
| -0.045   | -100.913    | 0.43342783   | 0.1       | 0.5384211  | 0.4321053  |           |
| -0.002   | 0.15        | -11.77238057 |           |            |            |           |
| 3.448046 | 154208.7994 | 14.75607728  | TSS       | 10.5732    | 9.7520526  | 5.0481158 |

| Řepka ozimá (y3) | Srážky (y4) | Teplota (y5) |
|------------------|-------------|--------------|
| 0.316963766      | 0.142057238 | 0.1636       |
| 0.562995351      | 0.376904813 | 0.3692       |





| y4-y4prum  | y5-y5prum |
|------------|-----------|
| 0.8421053  | 0.6       |
| 119.84211  | -0.7      |
| 171.84211  | 0.2       |
| -179.15789 | -0.3      |
| -17.157895 | -0.7      |
| 36.842105  | -0.8      |
| 19.842105  | -0.3      |
| 57.842105  | 0.6       |
| -64.157895 | 0.4       |
| 60.842105  | -0.1      |
| 183.84211  | -1.3      |
| -56.157895 | 0         |
| 5.8421053  | -0.2      |
| 43.842105  | -0.6      |
| -26.157895 | 0.9       |
| -151.15789 | 0.9       |
| -46.157895 | 0.2       |
| -0.1578947 | 0.1       |
| -161.15789 | 1.1       |
| 179742.53  | 7.7       |

| rok  | Pšenice ozimá<br>y1 | Ječmen jarní<br>y2 | Řepka ozimá<br>y3 | Srážky<br>y4 | Teplota<br>y5 | ti |
|------|---------------------|--------------------|-------------------|--------------|---------------|----|
| 2000 | 4.49                | 3.79               | 3.3               | 710          | 9.2           | 1  |
| 2001 | 2.81                | 3.23               | 2.42              | 859          | 7.7           | 2  |
| 2002 | 3.98                | 4.01               | 2.69              | 795          | 8.7           | 3  |
| 2003 | 4.55                | 4.5                | 1.82              | 551          | 8.2           | 4  |
| 2004 | 4.69                | 4.63               | 2.96              | 641          | 7.8           | 5  |
| 2005 | 4.86                | 4.72               | 2.75              | 732          | 7.7           | 6  |
| 2006 | 4.62                | 4.1                | 3.05              | 748          | 8.2           | 7  |
| 2007 | 4.28                | 4.55               | 2.59              | 731          | 9.1           | 8  |
| 2008 | 4.65                | 4.3                | 2.67              | 612          | 8.9           | 9  |
| 2009 | 4.72                | 4.66               | 2.9               | 731          | 8.4           | 10 |
| 2010 | 4.89                | 4.5                | 3.2               | 866          | 7.3           | 11 |
| 2011 | 5.12                | 4.98               | 2.8               | 610          | 8.6           | 12 |
| 2012 | 4.94                | 4.89               | 2.77              | 677          | 8.3           | 13 |
| 2013 | 4.88                | 4.64               | 2.92              | 690          | 8.1           | 14 |
| 2014 | 5.38                | 4.89               | 3.46              | 668          | 9.5           | 15 |
| 2015 | 5.25                | 4.24               | 2.89              | 536          | 9.5           | 16 |
| 2016 | 5.62                | 5.21               | 2.9               | 568          | 8.7           | 17 |
| 2017 | 5.98                | 5.68               | 2.82              | 723          | 8.6           | 18 |
| 2018 | 5.57                | 5.74               | 3.38              | 458          | 9.8           | 19 |

|        |             |             |             |          |           |     |
|--------|-------------|-------------|-------------|----------|-----------|-----|
| suma   | 91.28       | 87.26       | 54.29       | 12906    | 162.3     | 190 |
| průměr | 4.804210526 | 4.592631579 | 2.857368421 | 679.2632 | 8.5421053 | 10  |
| n      | 19          |             |             |          |           |     |

|    |         |    |        |           |          |
|----|---------|----|--------|-----------|----------|
| a1 | 3.801   | b1 | 0.1    | smodch y1 | 0.686022 |
| a2 | 3.744   | b2 | 0.085  | smodch y2 | 0.602927 |
| a3 | 2.593   | b3 | 0.027  | smodch y3 | 0.367557 |
| a4 | 771.702 | b4 | -9.244 | smodch y4 | 106.8836 |
| a5 | 8.047   | b5 | 0.049  | smodch y5 | 0.681759 |

|      |    |     |         |
|------|----|-----|---------|
| 2000 | 1  | t   | 25      |
| 2001 | 2  | pše | 6.301   |
| 2002 | 3  | ječ | 5.869   |
| 2003 | 4  | řep | 3.268   |
| 2004 | 5  | sra | 540.602 |
| 2005 | 6  | tep | 9.272   |
| 2006 | 7  |     |         |
| 2007 | 8  |     |         |
| 2008 | 9  |     |         |
| 2009 | 10 |     |         |
| 2010 | 11 |     |         |
| 2011 | 12 |     |         |
| 2012 | 13 |     |         |
| 2013 | 14 |     |         |
| 2014 | 15 |     |         |
| 2015 | 16 |     |         |
| 2016 | 17 |     |         |
| 2017 | 18 |     |         |
| 2018 | 19 |     |         |

|      |    |
|------|----|
| 2019 | 20 |
| 2020 | 21 |
| 2021 | 22 |
| 2022 | 23 |
| 2023 | 24 |
| 2024 | 25 |

| ti2  | y1t      | y2t      | y3t      | y4t      | y5t      | y'1    | y'2    |
|------|----------|----------|----------|----------|----------|--------|--------|
| 1    | 4.49     | 3.79     | 3.3      | 710      | 9.2      | 3.901  | 3.829  |
| 4    | 5.62     | 6.46     | 4.84     | 1718     | 15.4     | 4.001  | 3.914  |
| 9    | 11.94    | 12.03    | 8.07     | 2385     | 26.1     | 4.101  | 3.999  |
| 16   | 18.2     | 18       | 7.28     | 2204     | 32.8     | 4.201  | 4.084  |
| 25   | 23.45    | 23.15    | 14.8     | 3205     | 39       | 4.301  | 4.169  |
| 36   | 29.16    | 28.32    | 16.5     | 4392     | 46.2     | 4.401  | 4.254  |
| 49   | 32.34    | 28.7     | 21.35    | 5236     | 57.4     | 4.501  | 4.339  |
| 64   | 34.24    | 36.4     | 20.72    | 5848     | 72.8     | 4.601  | 4.424  |
| 81   | 41.85    | 38.7     | 24.03    | 5508     | 80.1     | 4.701  | 4.509  |
| 100  | 47.2     | 46.6     | 29       | 7310     | 84       | 4.801  | 4.594  |
| 121  | 53.79    | 49.5     | 35.2     | 9526     | 80.3     | 4.901  | 4.679  |
| 144  | 61.44    | 59.76    | 33.6     | 7320     | 103.2    | 5.001  | 4.764  |
| 169  | 64.22    | 63.57    | 36.01    | 8801     | 107.9    | 5.101  | 4.849  |
| 196  | 68.32    | 64.96    | 40.88    | 9660     | 113.4    | 5.201  | 4.934  |
| 225  | 80.7     | 73.35    | 51.9     | 10020    | 142.5    | 5.301  | 5.019  |
| 256  | 84       | 67.84    | 46.24    | 8576     | 152      | 5.401  | 5.104  |
| 289  | 95.54    | 88.57    | 49.3     | 9656     | 147.9    | 5.501  | 5.189  |
| 324  | 107.64   | 102.24   | 50.76    | 13014    | 154.8    | 5.601  | 5.274  |
| 361  | 105.83   | 109.06   | 64.22    | 8702     | 186.2    | 5.701  | 5.359  |
| 2470 | 969.97   | 921      | 558      | 123791   | 1651.2   | 91.219 | 87.286 |
| 130  | 51.05105 | 48.47368 | 29.36842 | 6515.316 | 86.90526 | 4.801  | 4.594  |

### Predikce

|           |          |           |          |
|-----------|----------|-----------|----------|
| student t | 1.714    | s' yn+1   | 1.0887   |
| s'y1      | 0.351889 | t*s'y1    | 0.603138 |
| s'y2      | 0.339045 | t*s'y2    | 0.581122 |
| s'y3      | 0.33309  | t*s'y3    | 0.570917 |
| s'y4      | 92.07713 | t*s'y4    | 157.8202 |
| s'y5      | 0.616806 | t*s'y5    | 1.057205 |
| levostr 1 | 5.697862 | pravostr1 | 6.904138 |
| levostr 2 | 5.287878 | pravostr2 | 6.450122 |
| levostr 3 | 2.697083 | pravostr3 | 3.838917 |
| levostr 4 | 382.7818 | pravostr4 | 698.4222 |
| levostr 5 | 8.214795 | pravostr5 | 10.3292  |



| y'3    | y'4      | y'5     | e1     | e2       |          |
|--------|----------|---------|--------|----------|----------|
| 2.62   | 762.458  | 8.096   |        | 0.589    | -0.039   |
| 2.647  | 753.214  | 8.145   |        | -1.191   | -0.684   |
| 2.674  | 743.97   | 8.194   |        | -0.121   | 0.011    |
| 2.701  | 734.726  | 8.243   |        | 0.349    | 0.416    |
| 2.728  | 725.482  | 8.292   |        | 0.389    | 0.461    |
| 2.755  | 716.238  | 8.341   |        | 0.459    | 0.466    |
| 2.782  | 706.994  | 8.39    |        | 0.119    | -0.239   |
| 2.809  | 697.75   | 8.439   |        | -0.321   | 0.126    |
| 2.836  | 688.506  | 8.488   |        | -0.051   | -0.209   |
| 2.863  | 679.262  | 8.537   |        | -0.081   | 0.066    |
| 2.89   | 670.018  | 8.586   |        | -0.011   | -0.179   |
| 2.917  | 660.774  | 8.635   |        | 0.119    | 0.216    |
| 2.944  | 651.53   | 8.684   |        | -0.161   | 0.041    |
| 2.971  | 642.286  | 8.733   |        | -0.321   | -0.294   |
| 2.998  | 633.042  | 8.782   |        | 0.079    | -0.129   |
| 3.025  | 623.798  | 8.831   |        | -0.151   | -0.864   |
| 3.052  | 614.554  | 8.88    |        | 0.119    | 0.021    |
| 3.079  | 605.31   | 8.929   |        | 0.379    | 0.406    |
| 3.106  | 596.066  | 8.978   |        | -0.131   | 0.381    |
| 54.397 | 12905.98 | 162.203 | suma e | 0.061    | -0.026   |
| 2.863  | 679.262  | 8.537   | RSS    | 2.737459 | 2.433654 |

|    | Pšenice ozimá (y1) | Ječmen jarní (y2) |
|----|--------------------|-------------------|
| r2 | 0.676853505        | 0.628073212       |
| r  | 0.82271107         | 0.792510701       |

| zdánlivá kor. | srážky       | teplota      |
|---------------|--------------|--------------|
| pšenice       | -0.325497411 | 0.080256892  |
| ječmen        | -0.254811811 | -0.083704895 |
| řepka         | 0.227060816  | 0.21288511   |

| r2      | srážky      | teplota     |
|---------|-------------|-------------|
| pšenice | 0.105948565 | 0.006441169 |
| ječmen  | 0.064929059 | 0.007006509 |
| řepka   | 0.051556614 | 0.04532007  |



| e3       | e4          | e5       |     | y1-y1prum  | y2-y2prum  | y3-y3prum  |
|----------|-------------|----------|-----|------------|------------|------------|
| 0.68     | -52.458     | 1.104    |     | -0.3142105 | -0.8026316 | 0.4426316  |
| -0.227   | 105.786     | -0.445   |     | -1.9942105 | -1.3626316 | -0.4373684 |
| 0.016    | 51.03       | 0.506    |     | -0.8242105 | -0.5826316 | -0.1673684 |
| -0.881   | -183.726    | -0.043   |     | -0.2542105 | -0.0926316 | -1.0373684 |
| 0.232    | -84.482     | -0.492   |     | -0.1142105 | 0.0373684  | 0.1026316  |
| -0.005   | 15.762      | -0.641   |     | 0.0557895  | 0.1273684  | -0.1073684 |
| 0.268    | 41.006      | -0.19    |     | -0.1842105 | -0.4926316 | 0.1926316  |
| -0.219   | 33.25       | 0.661    |     | -0.5242105 | -0.0426316 | -0.2673684 |
| -0.166   | -76.506     | 0.412    |     | -0.1542105 | -0.2926316 | -0.1873684 |
| 0.037    | 51.738      | -0.137   |     | -0.0842105 | 0.0673684  | 0.0426316  |
| 0.31     | 195.982     | -1.286   |     | 0.0857895  | -0.0926316 | 0.3426316  |
| -0.117   | -50.774     | -0.035   |     | 0.3157895  | 0.3873684  | -0.0573684 |
| -0.174   | 25.47       | -0.384   |     | 0.1357895  | 0.2973684  | -0.0873684 |
| -0.051   | 47.714      | -0.633   |     | 0.0757895  | 0.0473684  | 0.0626316  |
| 0.462    | 34.958      | 0.718    |     | 0.5757895  | 0.2973684  | 0.6026316  |
| -0.135   | -87.798     | 0.669    |     | 0.4457895  | -0.3526316 | 0.0326316  |
| -0.152   | -46.554     | -0.18    |     | 0.8157895  | 0.6173684  | 0.0426316  |
| -0.259   | 117.69      | -0.329   |     | 1.1757895  | 1.0873684  | -0.0373684 |
| 0.274    | -138.066    | 0.822    |     | 0.7657895  | 1.1473684  | 0.5226316  |
| -0.107   | 0.022       | 0.097    |     |            |            |            |
| 2.032501 | 156927.7878 | 6.971781 | TSS | 8.4712632  | 6.5433684  | 2.4317684  |

| Řepka ozimá (y3) | Srážky (y4) | Teplota (y5) |
|------------------|-------------|--------------|
| 0.164188094      | 0.236857578 | 0.166684455  |
| 0.4052013        | 0.48668016  | 0.408270076  |





| y4-y4prum  | y5-y5prum  |
|------------|------------|
| 30.736842  | 0.6578947  |
| 179.73684  | -0.8421053 |
| 115.73684  | 0.1578947  |
| -128.26316 | -0.3421053 |
| -38.263158 | -0.7421053 |
| 52.736842  | -0.8421053 |
| 68.736842  | -0.3421053 |
| 51.736842  | 0.5578947  |
| -67.263158 | 0.3578947  |
| 51.736842  | -0.1421053 |
| 186.73684  | -1.2421053 |
| -69.263158 | 0.0578947  |
| -2.2631579 | -0.2421053 |
| 10.736842  | -0.4421053 |
| -11.263158 | 0.9578947  |
| -143.26316 | 0.9578947  |
| -111.26316 | 0.1578947  |
| 43.736842  | 0.0578947  |
| -221.26316 | 1.2578947  |
| 205633.68  | 8.3663158  |

| rok  | Pšenice ozimá<br>y1 | Ječmen jarní<br>y2 | Řepka ozimá<br>y3 | Srážky<br>y4 | Teplota<br>y5 | ti |
|------|---------------------|--------------------|-------------------|--------------|---------------|----|
| 2000 | 4.5                 | 3.1                | 2.8               | 911          | 8.7           | 1  |
| 2001 | 5.4                 | 3.4                | 3.2               | 1060         | 7.4           | 2  |
| 2002 | 5.4                 | 3.3                | 2.5               | 958          | 8.2           | 3  |
| 2003 | 4.8                 | 2.9                | 2                 | 582          | 7.6           | 4  |
| 2004 | 6.8                 | 4.0                | 4.3               | 844          | 7.4           | 5  |
| 2005 | 5.3                 | 3.8                | 2.8               | 949          | 7.4           | 6  |
| 2006 | 5.1                 | 3.3                | 3.7               | 862          | 7.9           | 7  |
| 2007 | 6.4                 | 3.6                | 3.3               | 912          | 8.5           | 8  |
| 2008 | 7.2                 | 4.0                | 2.9               | 836          | 8.3           | 9  |
| 2009 | 6                   | 3.9                | 3.8               | 878          | 7.8           | 10 |
| 2010 | 6.1                 | 4.1                | 3.1               | 1147         | 6.7           | 11 |
| 2011 | 7                   | 4.7                | 2.4               | 864          | 8             | 12 |
| 2012 | 6                   | 4.2                | 3.2               | 873          | 7.6           | 13 |
| 2013 | 6.6                 | 4.3                | 3.8               | 922          | 7.3           | 14 |
| 2014 | 7.4                 | 4.5                | 4.1               | 683          | 9             | 15 |
| 2015 | 7.4                 | 5.0                | 4.1               | 696          | 8.7           | 16 |
| 2016 | 6.8                 | 4.9                | 3.7               | 768          | 7.9           | 17 |
| 2017 | 7.2                 | 4.9                | 3.7               | 946          | 7.9           | 18 |
| 2018 | 6.3                 | 4.6                | 3.4               | 559          | 9             | 19 |

|        |             |             |             |           |           |     |
|--------|-------------|-------------|-------------|-----------|-----------|-----|
| suma   | 117.7       | 76.34       | 62.8        | 16250     | 151.3     | 190 |
| průměr | 6.194736842 | 4.017894737 | 3.305263158 | 855.2632  | 7.9631579 | 10  |
| n      | 19          |             |             |           |           |     |
| a1     | 5.02        | b1          | 0.118       | smodch y1 | 0.903372  |     |
| a2     | 2.995       | b2          | 0.103       | smodch y2 | 0.638702  |     |
| a3     | 2.774       | b3          | 0.053       | smodch y3 | 0.62935   |     |
| a4     | 949.842     | b4          | -9.458      | smodch y4 | 147.5601  |     |
| a5     | 7.695       | b5          | 0.027       | smodch y5 | 0.622906  |     |

|      |    |     |         |
|------|----|-----|---------|
| 2000 | 1  | t   | 25      |
| 2001 | 2  | pše | 7.97    |
| 2002 | 3  | ječ | 5.57    |
| 2003 | 4  | řep | 4.099   |
| 2004 | 5  | sra | 713.392 |
| 2005 | 6  | tep | 8.37    |
| 2006 | 7  |     |         |
| 2007 | 8  |     |         |
| 2008 | 9  |     |         |
| 2009 | 10 |     |         |
| 2010 | 11 |     |         |
| 2011 | 12 |     |         |
| 2012 | 13 |     |         |
| 2013 | 14 |     |         |
| 2014 | 15 |     |         |
| 2015 | 16 |     |         |
| 2016 | 17 |     |         |
| 2017 | 18 |     |         |
| 2018 | 19 |     |         |

|      |    |
|------|----|
| 2019 | 20 |
| 2020 | 21 |
| 2021 | 22 |
| 2022 | 23 |
| 2023 | 24 |
| 2024 | 25 |

| ti2  | y1t      | y2t      | y3t      | y4t      | y5t      | y'1   | y'2    |
|------|----------|----------|----------|----------|----------|-------|--------|
| 1    | 4.5      | 3.1      | 2.8      | 911      | 8.7      | 5.138 | 3.098  |
| 4    | 10.8     | 6.8      | 6.4      | 2120     | 14.8     | 5.256 | 3.201  |
| 9    | 16.2     | 9.9      | 7.5      | 2874     | 24.6     | 5.374 | 3.304  |
| 16   | 19.2     | 11.6     | 8        | 2328     | 30.4     | 5.492 | 3.407  |
| 25   | 34       | 19.95    | 21.5     | 4220     | 37       | 5.61  | 3.51   |
| 36   | 31.8     | 22.92    | 16.8     | 5694     | 44.4     | 5.728 | 3.613  |
| 49   | 35.7     | 23.03    | 25.9     | 6034     | 55.3     | 5.846 | 3.716  |
| 64   | 51.2     | 28.48    | 26.4     | 7296     | 68       | 5.964 | 3.819  |
| 81   | 64.8     | 36.18    | 26.1     | 7524     | 74.7     | 6.082 | 3.922  |
| 100  | 60       | 39.1     | 38       | 8780     | 78       | 6.2   | 4.025  |
| 121  | 67.1     | 44.66    | 34.1     | 12617    | 73.7     | 6.318 | 4.128  |
| 144  | 84       | 56.16    | 28.8     | 10368    | 96       | 6.436 | 4.231  |
| 169  | 78       | 53.95    | 41.6     | 11349    | 98.8     | 6.554 | 4.334  |
| 196  | 92.4     | 60.48    | 53.2     | 12908    | 102.2    | 6.672 | 4.437  |
| 225  | 111      | 66.75    | 61.5     | 10245    | 135      | 6.79  | 4.54   |
| 256  | 118.4    | 79.68    | 65.6     | 11136    | 139.2    | 6.908 | 4.643  |
| 289  | 115.6    | 83.3     | 62.9     | 13056    | 134.3    | 7.026 | 4.746  |
| 324  | 129.6    | 88.02    | 66.6     | 17028    | 142.2    | 7.144 | 4.849  |
| 361  | 119.7    | 87.78    | 64.6     | 10621    | 171      | 7.262 | 4.952  |
| 2470 | 1244     | 821.84   | 658.3    | 157109   | 1528.3   | 117.8 | 76.475 |
| 130  | 65.47368 | 43.25474 | 34.64737 | 8268.895 | 80.43684 | 6.2   | 4.025  |

### Predikce

|           |          |           |          |
|-----------|----------|-----------|----------|
| student t | 1.714    | s' yn+1   | 1.0887   |
| s'y1      | 0.582913 | t*s'y1    | 0.999114 |
| s'y2      | 0.213568 | t*s'y2    | 0.366056 |
| s'y3      | 0.546503 | t*s'y3    | 0.936705 |
| s'y4      | 136.7117 | t*s'y4    | 234.3238 |
| s'y5      | 0.602642 | t*s'y5    | 1.032928 |
| levostr 1 | 6.970886 | pravostr1 | 8.969114 |
| levostr 2 | 5.203944 | pravostr2 | 5.936056 |
| levostr 3 | 3.162295 | pravostr3 | 5.035705 |
| levostr 4 | 479.0682 | pravostr4 | 947.7158 |
| levostr 5 | 7.337072 | pravostr5 | 9.402928 |



| y'3    | y'4      | y'5     | e1     | e2      |          |
|--------|----------|---------|--------|---------|----------|
| 2.827  | 940.384  | 7.722   |        | -0.638  | 0.002    |
| 2.88   | 930.926  | 7.749   |        | 0.144   | 0.199    |
| 2.933  | 921.468  | 7.776   |        | 0.026   | -0.004   |
| 2.986  | 912.01   | 7.803   |        | -0.692  | -0.507   |
| 3.039  | 902.552  | 7.83    |        | 1.19    | 0.48     |
| 3.092  | 893.094  | 7.857   |        | -0.428  | 0.207    |
| 3.145  | 883.636  | 7.884   |        | -0.746  | -0.426   |
| 3.198  | 874.178  | 7.911   |        | 0.436   | -0.259   |
| 3.251  | 864.72   | 7.938   |        | 1.118   | 0.098    |
| 3.304  | 855.262  | 7.965   |        | -0.2    | -0.115   |
| 3.357  | 845.804  | 7.992   |        | -0.218  | -0.068   |
| 3.41   | 836.346  | 8.019   |        | 0.564   | 0.449    |
| 3.463  | 826.888  | 8.046   |        | -0.554  | -0.184   |
| 3.516  | 817.43   | 8.073   |        | -0.072  | -0.117   |
| 3.569  | 807.972  | 8.1     |        | 0.61    | -0.09    |
| 3.622  | 798.514  | 8.127   |        | 0.492   | 0.337    |
| 3.675  | 789.056  | 8.154   |        | -0.226  | 0.154    |
| 3.728  | 779.598  | 8.181   |        | 0.056   | 0.041    |
| 3.781  | 770.14   | 8.208   |        | -0.962  | -0.332   |
| 62.776 | 16249.98 | 151.335 | suma e | -0.1    | -0.135   |
| 3.304  | 855.262  | 7.965   | RSS    | 6.81468 | 1.352365 |

|    | Pšenice ozimá (y1) | Ječmen jarní (y2) |
|----|--------------------|-------------------|
| r2 | 0.536084128        | 0.815827249       |
| r  | 0.732177661        | 0.903231559       |

| zdánlivá kor. | srážky      | teplota      |
|---------------|-------------|--------------|
| pšenice       | 0.11573023  | 0.078905646  |
| ječmen        | 0.282535191 | -0.107940521 |
| řepka         | 0.10705391  | 0.00503223   |

| r2      | srážky      | teplota     |
|---------|-------------|-------------|
| pšenice | 0.013393486 | 0.006226101 |
| ječmen  | 0.079826134 | 0.011651156 |
| řepka   | 0.01146054  | 2.53233E-05 |





| e3       | e4          | e5       |     | y1-y1prum  | y2-y2prum  | y3-y3prum  |
|----------|-------------|----------|-----|------------|------------|------------|
| -0.027   | -29.384     | 0.978    |     | -1.6947368 | -0.9178947 | -0.5052632 |
| 0.32     | 129.074     | -0.349   |     | -0.7947368 | -0.6178947 | -0.1052632 |
| -0.433   | 36.532      | 0.424    |     | -0.7947368 | -0.7178947 | -0.8052632 |
| -0.986   | -330.01     | -0.203   |     | -1.3947368 | -1.1178947 | -1.3052632 |
| 1.261    | -58.552     | -0.43    |     | 0.6052632  | -0.0278947 | 0.9947368  |
| -0.292   | 55.906      | -0.457   |     | -0.8947368 | -0.1978947 | -0.5052632 |
| 0.555    | -21.636     | 0.016    |     | -1.0947368 | -0.7278947 | 0.3947368  |
| 0.102    | 37.822      | 0.589    |     | 0.2052632  | -0.4578947 | -0.0052632 |
| -0.351   | -28.72      | 0.362    |     | 1.0052632  | 0.0021053  | -0.4052632 |
| 0.496    | 22.738      | -0.165   |     | -0.1947368 | -0.1078947 | 0.4947368  |
| -0.257   | 301.196     | -1.292   |     | -0.0947368 | 0.0421053  | -0.2052632 |
| -1.01    | 27.654      | -0.019   |     | 0.8052632  | 0.6621053  | -0.9052632 |
| -0.263   | 46.112      | -0.446   |     | -0.1947368 | 0.1321053  | -0.1052632 |
| 0.284    | 104.57      | -0.773   |     | 0.4052632  | 0.3021053  | 0.4947368  |
| 0.531    | -124.972    | 0.9      |     | 1.2052632  | 0.4321053  | 0.7947368  |
| 0.478    | -102.514    | 0.573    |     | 1.2052632  | 0.9621053  | 0.7947368  |
| 0.025    | -21.056     | -0.254   |     | 0.6052632  | 0.8821053  | 0.3947368  |
| -0.028   | 166.402     | -0.281   |     | 1.0052632  | 0.8721053  | 0.3947368  |
| -0.381   | -211.14     | 0.792    |     | 0.1052632  | 0.6021053  | 0.0947368  |
| 0.024    | 0.022       | -0.035   |     |            |            |            |
| 5.518834 | 340944.1737 | 6.573605 | TSS | 14.689474  | 7.3429158  | 7.1294737  |

| Řepka ozimá (y3) | Srážky (y4) | Teplota (y5) |
|------------------|-------------|--------------|
| 0.225912845      | 0.130092852 | 0.058790543  |
| 0.475302898      | 0.360683867 | 0.242467611  |



| y4-y4prum  | y5-y5prum  |
|------------|------------|
| 55.736842  | 0.7368421  |
| 204.73684  | -0.5631579 |
| 102.73684  | 0.2368421  |
| -273.26316 | -0.3631579 |
| -11.263158 | -0.5631579 |
| 93.736842  | -0.5631579 |
| 6.7368421  | -0.0631579 |
| 56.736842  | 0.5368421  |
| -19.263158 | 0.3368421  |
| 22.736842  | -0.1631579 |
| 291.73684  | -1.2631579 |
| 8.7368421  | 0.0368421  |
| 17.736842  | -0.3631579 |
| 66.736842  | -0.6631579 |
| -172.26316 | 1.0368421  |
| -159.26316 | 0.7368421  |
| -87.263158 | -0.0631579 |
| 90.736842  | -0.0631579 |
| -296.26316 | 1.0368421  |

|           |           |
|-----------|-----------|
| 391931.68 | 6.9842105 |
|-----------|-----------|

| rok  | Pšenice ozimá<br>y1 | Ječmen jarní<br>y2 | Řepka ozimá<br>y3 | Srážky<br>y4 | Teplota<br>y5 | ti |
|------|---------------------|--------------------|-------------------|--------------|---------------|----|
| 2000 | 4.4                 | 3.53               | 2.62              | 674          | 8.7           | 1  |
| 2001 | 5.58                | 4.32               | 3.48              | 773          | 7.3           | 2  |
| 2002 | 5.02                | 3.43               | 2.43              | 834          | 8.3           | 3  |
| 2003 | 3.86                | 3.31               | 1.62              | 527          | 7.9           | 4  |
| 2004 | 6.78                | 4.79               | 4.28              | 682          | 7.3           | 5  |
| 2005 | 5.63                | 3.97               | 2.99              | 727          | 7.3           | 6  |
| 2006 | 5.43                | 3.59               | 3.42              | 723          | 7.8           | 7  |
| 2007 | 3.9                 | 3.05               | 3.12              | 718          | 8.6           | 8  |
| 2008 | 5.56                | 4.21               | 3.15              | 577          | 8.5           | 9  |
| 2009 | 5.42                | 3.53               | 2.74              | 791          | 8             | 10 |
| 2010 | 5.02                | 3.96               | 3.78              | 843          | 6.8           | 11 |
| 2011 | 5.86                | 5.27               | 3.36              | 578          | 8.2           | 12 |
| 2012 | 5.25                | 3.52               | 3.59              | 646          | 8             | 13 |
| 2013 | 6.38                | 3.85               | 4.13              | 692          | 7.7           | 14 |
| 2014 | 6.51                | 4.87               | 4.88              | 660          | 9             | 15 |
| 2015 | 6.59                | 5.01               | 3.33              | 552          | 9.1           | 16 |
| 2016 | 6.71                | 6.17               | 3.61              | 551          | 8.3           | 17 |
| 2017 | 4.2                 | 3.91               | 2.54              | 652          | 8.3           | 18 |
| 2018 | 4.28                | 6.95               | 4.21              | 517          | 9.3           | 19 |

|        |             |             |             |          |           |     |
|--------|-------------|-------------|-------------|----------|-----------|-----|
| suma   | 102.38      | 81.24       | 63.28       | 12717    | 154.4     | 190 |
| průměr | 5.388421053 | 4.275789474 | 3.330526316 | 669.3158 | 8.1263158 | 10  |
| n      | 19          |             |             |          |           |     |

|    |         |    |        |           |          |
|----|---------|----|--------|-----------|----------|
| a1 | 5.028   | b1 | 0.036  | smodch y1 | 0.948029 |
| a2 | 3.209   | b2 | 0.107  | smodch y2 | 1.019359 |
| a3 | 2.726   | b3 | 0.061  | smodch y3 | 0.763832 |
| a4 | 751.895 | b4 | -8.258 | smodch y4 | 100.3129 |
| a5 | 7.621   | b5 | 0.051  | smodch y5 | 0.669031 |

|      |    |     |         |
|------|----|-----|---------|
| 2000 | 1  | t   | 25      |
| 2001 | 2  | pše | 5.928   |
| 2002 | 3  | ječ | 5.884   |
| 2003 | 4  | řep | 4.251   |
| 2004 | 5  | sra | 545.445 |
| 2005 | 6  | tep | 8.896   |
| 2006 | 7  |     |         |
| 2007 | 8  |     |         |
| 2008 | 9  |     |         |
| 2009 | 10 |     |         |
| 2010 | 11 |     |         |
| 2011 | 12 |     |         |
| 2012 | 13 |     |         |
| 2013 | 14 |     |         |
| 2014 | 15 |     |         |
| 2015 | 16 |     |         |
| 2016 | 17 |     |         |
| 2017 | 18 |     |         |
| 2018 | 19 |     |         |

|      |    |
|------|----|
| 2019 | 20 |
| 2020 | 21 |
| 2021 | 22 |
| 2022 | 23 |
| 2023 | 24 |
| 2024 | 25 |

| ti2  | y1t      | y2t      | y3t      | y4t      | y5t      | y'1     | y'2    |
|------|----------|----------|----------|----------|----------|---------|--------|
| 1    | 4.4      | 3.53     | 2.62     | 674      | 8.7      | 5.064   | 3.316  |
| 4    | 11.16    | 8.64     | 6.96     | 1546     | 14.6     | 5.1     | 3.423  |
| 9    | 15.06    | 10.29    | 7.29     | 2502     | 24.9     | 5.136   | 3.53   |
| 16   | 15.44    | 13.24    | 6.48     | 2108     | 31.6     | 5.172   | 3.637  |
| 25   | 33.9     | 23.95    | 21.4     | 3410     | 36.5     | 5.208   | 3.744  |
| 36   | 33.78    | 23.82    | 17.94    | 4362     | 43.8     | 5.244   | 3.851  |
| 49   | 38.01    | 25.13    | 23.94    | 5061     | 54.6     | 5.28    | 3.958  |
| 64   | 31.2     | 24.4     | 24.96    | 5744     | 68.8     | 5.316   | 4.065  |
| 81   | 50.04    | 37.89    | 28.35    | 5193     | 76.5     | 5.352   | 4.172  |
| 100  | 54.2     | 35.3     | 27.4     | 7910     | 80       | 5.388   | 4.279  |
| 121  | 55.22    | 43.56    | 41.58    | 9273     | 74.8     | 5.424   | 4.386  |
| 144  | 70.32    | 63.24    | 40.32    | 6936     | 98.4     | 5.46    | 4.493  |
| 169  | 68.25    | 45.76    | 46.67    | 8398     | 104      | 5.496   | 4.6    |
| 196  | 89.32    | 53.9     | 57.82    | 9688     | 107.8    | 5.532   | 4.707  |
| 225  | 97.65    | 73.05    | 73.2     | 9900     | 135      | 5.568   | 4.814  |
| 256  | 105.44   | 80.16    | 53.28    | 8832     | 145.6    | 5.604   | 4.921  |
| 289  | 114.07   | 104.89   | 61.37    | 9367     | 141.1    | 5.64    | 5.028  |
| 324  | 75.6     | 70.38    | 45.72    | 11736    | 149.4    | 5.676   | 5.135  |
| 361  | 81.32    | 132.05   | 79.99    | 9823     | 176.7    | 5.712   | 5.242  |
| 2470 | 1044.38  | 873.18   | 667.29   | 122463   | 1572.8   | 102.372 | 81.301 |
| 130  | 54.96737 | 45.95684 | 35.12053 | 6445.421 | 82.77895 | 5.388   | 4.279  |

### Predikce

|           |          |           |          |
|-----------|----------|-----------|----------|
| student t | 1.714    | s' yn+1   | 1.0887   |
| s'y1      | 0.924022 | t*s'y1    | 1.583774 |
| s'y2      | 0.804433 | t*s'y2    | 1.378798 |
| s'y3      | 0.676207 | t*s'y3    | 1.159019 |
| s'y4      | 87.81623 | t*s'y4    | 150.517  |
| s'y5      | 0.599685 | t*s'y5    | 1.027861 |
| levostr 1 | 4.344226 | pravostr1 | 7.511774 |
| levostr 2 | 4.505202 | pravostr2 | 7.262798 |
| levostr 3 | 3.091981 | pravostr3 | 5.410019 |
| levostr 4 | 394.928  | pravostr4 | 695.962  |
| levostr 5 | 7.868139 | pravostr5 | 9.923861 |



| y'3    | y'4      | y'5     | e1     | e2        |           |
|--------|----------|---------|--------|-----------|-----------|
| 2.787  | 743.637  | 7.672   |        | -0.664    | 0.214     |
| 2.848  | 735.379  | 7.723   |        | 0.48      | 0.897     |
| 2.909  | 727.121  | 7.774   |        | -0.116    | -0.1      |
| 2.97   | 718.863  | 7.825   |        | -1.312    | -0.327    |
| 3.031  | 710.605  | 7.876   |        | 1.572     | 1.046     |
| 3.092  | 702.347  | 7.927   |        | 0.386     | 0.119     |
| 3.153  | 694.089  | 7.978   |        | 0.15      | -0.368    |
| 3.214  | 685.831  | 8.029   |        | -1.416    | -1.015    |
| 3.275  | 677.573  | 8.08    |        | 0.208     | 0.038     |
| 3.336  | 669.315  | 8.131   |        | 0.032     | -0.749    |
| 3.397  | 661.057  | 8.182   |        | -0.404    | -0.426    |
| 3.458  | 652.799  | 8.233   |        | 0.4       | 0.777     |
| 3.519  | 644.541  | 8.284   |        | -0.246    | -1.08     |
| 3.58   | 636.283  | 8.335   |        | 0.848     | -0.857    |
| 3.641  | 628.025  | 8.386   |        | 0.942     | 0.056     |
| 3.702  | 619.767  | 8.437   |        | 0.986     | 0.089     |
| 3.763  | 611.509  | 8.488   |        | 1.07      | 1.142     |
| 3.824  | 603.251  | 8.539   |        | -1.476    | -1.225    |
| 3.885  | 594.993  | 8.59    |        | -1.432    | 1.708     |
| 63.384 | 12716.99 | 154.489 | suma e | 0.008     | -0.061    |
| 3.336  | 669.315  | 8.131   | RSS    | 15.434616 | 12.222869 |

|    | Pšenice ozimá (y1) | Ječmen jarní (y2) |
|----|--------------------|-------------------|
| r2 | 0.045929817        | 0.346498657       |
| r  | 0.214312429        | 0.588641365       |

| zdánlivá kor. | srážky       | teplota      |
|---------------|--------------|--------------|
| pšenice       | 0.061875826  | -0.24776459  |
| ječmen        | -0.413737826 | 0.165252723  |
| řepka         | 0.222664454  | -0.179540716 |

| r2      | srážky      | teplota     |
|---------|-------------|-------------|
| pšenice | 0.003828618 | 0.061387292 |
| ječmen  | 0.171178989 | 0.027308462 |
| řepka   | 0.049579459 | 0.032234869 |





| e3       | e4          | e5       |     | y1-y1prum  | y2-y2prum  | y3-y3prum  |
|----------|-------------|----------|-----|------------|------------|------------|
| -0.167   | -69.637     | 1.028    |     | -0.9884211 | -0.7457895 | -0.7105263 |
| 0.632    | 37.621      | -0.423   |     | 0.1915789  | 0.0442105  | 0.1494737  |
| -0.479   | 106.879     | 0.526    |     | -0.3684211 | -0.8457895 | -0.9005263 |
| -1.35    | -191.863    | 0.075    |     | -1.5284211 | -0.9657895 | -1.7105263 |
| 1.249    | -28.605     | -0.576   |     | 1.3915789  | 0.5142105  | 0.9494737  |
| -0.102   | 24.653      | -0.627   |     | 0.2415789  | -0.3057895 | -0.3405263 |
| 0.267    | 28.911      | -0.178   |     | 0.0415789  | -0.6857895 | 0.0894737  |
| -0.094   | 32.169      | 0.571    |     | -1.4884211 | -1.2257895 | -0.2105263 |
| -0.125   | -100.573    | 0.42     |     | 0.1715789  | -0.0657895 | -0.1805263 |
| -0.596   | 121.685     | -0.131   |     | 0.0315789  | -0.7457895 | -0.5905263 |
| 0.383    | 181.943     | -1.382   |     | -0.3684211 | -0.3157895 | 0.4494737  |
| -0.098   | -74.799     | -0.033   |     | 0.4715789  | 0.9942105  | 0.0294737  |
| 0.071    | 1.459       | -0.284   |     | -0.1384211 | -0.7557895 | 0.2594737  |
| 0.55     | 55.717      | -0.635   |     | 0.9915789  | -0.4257895 | 0.7994737  |
| 1.239    | 31.975      | 0.614    |     | 1.1215789  | 0.5942105  | 1.5494737  |
| -0.372   | -67.767     | 0.663    |     | 1.2015789  | 0.7342105  | -0.0005263 |
| -0.153   | -60.509     | -0.188   |     | 1.3215789  | 1.8942105  | 0.2794737  |
| -1.284   | 48.749      | -0.239   |     | -1.1884211 | -0.3657895 | -0.7905263 |
| 0.325    | -77.993     | 0.71     |     | -1.1084211 | 2.6742105  | 0.8794737  |
| -0.104   | 0.015       | -0.089   |     |            |            |            |
| 8.415654 | 142258.1948 | 6.602229 | TSS | 16.177653  | 18.703663  | 10.501895  |

| Řepka ozimá (y3) | Srážky (y4) | Teplota (y5) |
|------------------|-------------|--------------|
| 0.198653747      | 0.214599001 | 0.180543827  |
| 0.445705897      | 0.463248315 | 0.424904491  |



| y4-y4prum  | y5-y5prum  |
|------------|------------|
| 4.6842105  | 0.5736842  |
| 103.68421  | -0.8263158 |
| 164.68421  | 0.1736842  |
| -142.31579 | -0.2263158 |
| 12.684211  | -0.8263158 |
| 57.684211  | -0.8263158 |
| 53.684211  | -0.3263158 |
| 48.684211  | 0.4736842  |
| -92.315789 | 0.3736842  |
| 121.68421  | -0.1263158 |
| 173.68421  | -1.3263158 |
| -91.315789 | 0.0736842  |
| -23.315789 | -0.1263158 |
| 22.684211  | -0.4263158 |
| -9.3157895 | 0.8736842  |
| -117.31579 | 0.9736842  |
| -118.31579 | 0.1736842  |
| -17.315789 | 0.1736842  |
| -152.31579 | 1.1736842  |

|           |           |
|-----------|-----------|
| 181128.11 | 8.0568421 |
|-----------|-----------|

| rok  | Pšenice ozimá<br>y1 | Ječmen jarní<br>y2 | Řepka ozimá<br>y3 | Srážky<br>y4 | Teplota<br>y5 | ti |
|------|---------------------|--------------------|-------------------|--------------|---------------|----|
| 2000 | 6.22                | 4.93               | 3.32              | 609          | 9.8           | 1  |
| 2001 | 6.06                | 4.75               | 2.97              | 729          | 8.5           | 2  |
| 2002 | 7                   | 4.86               | 3.24              | 729          | 9.4           | 3  |
| 2003 | 7.43                | 5.51               | 3.85              | 383          | 9             | 4  |
| 2004 | 7.53                | 5.24               | 3.72              | 558          | 8.6           | 5  |
| 2005 | 6.82                | 4.5                | 4.28              | 604          | 8.5           | 6  |
| 2006 | 7.11                | 4.28               | 3.82              | 627          | 9             | 7  |
| 2007 | 8.12                | 5.08               | 3.65              | 655          | 9.8           | 8  |
| 2008 | 6.19                | 4.68               | 3.37              | 584          | 9.5           | 9  |
| 2009 | 6.6                 | 5.54               | 2.49              | 637          | 9.2           | 10 |
| 2010 | 8.06                | 5.82               | 2.68              | 899          | 7.9           | 11 |
| 2011 | 7.17                | 5.8                | 3.86              | 677          | 9.3           | 12 |
| 2012 | 6.93                | 6.73               | 3.86              | 684          | 9.1           | 13 |
| 2013 | 9.1                 | 7.5                | 4.4               | 765          | 8.6           | 14 |
| 2014 | 9.69                | 7.39               | 4.61              | 555          | 10.1          | 15 |
| 2015 | 8.6                 | 6.23               | 3.63              | 557          | 10.2          | 16 |
| 2016 | 8.48                | 6.25               | 3.65              | 492          | 9.4           | 17 |
| 2017 | 8.15                | 5.48               | 3.71              | 653          | 9.3           | 18 |
| 2018 | 8.54                | 6.51               | 3.96              | 440          | 10.4          | 19 |

|        |             |             |             |          |           |     |
|--------|-------------|-------------|-------------|----------|-----------|-----|
| suma   | 143.8       | 107.08      | 69.07       | 11835.3  | 175.6     | 190 |
| průměr | 7.568421053 | 5.635789474 | 3.635263158 | 622.9105 | 9.2421053 | 10  |
| n      | 19          |             |             |          |           |     |

|    |            |  |       |           |          |
|----|------------|--|-------|-----------|----------|
| a1 | 6.26 b1    |  | 0.13  | smodch y1 | 1.032307 |
| a2 | 4.464 b2   |  | 0.117 | smodch y2 | 0.935309 |
| a3 | 3.32 b3    |  | 0.032 | smodch y3 | 0.539716 |
| a4 | 650.807 b4 |  | -2.78 | smodch y4 | 118.1423 |
| a5 | 8.811 b5   |  | 0.043 | smodch y5 | 0.650056 |

|      |    |     |         |
|------|----|-----|---------|
| 2000 | 1  | t   | 25      |
| 2001 | 2  | pše | 9.51    |
| 2002 | 3  | ječ | 7.389   |
| 2003 | 4  | řep | 4.12    |
| 2004 | 5  | sra | 581.307 |
| 2005 | 6  | tep | 9.886   |
| 2006 | 7  |     |         |
| 2007 | 8  |     |         |
| 2008 | 9  |     |         |
| 2009 | 10 |     |         |
| 2010 | 11 |     |         |
| 2011 | 12 |     |         |
| 2012 | 13 |     |         |
| 2013 | 14 |     |         |
| 2014 | 15 |     |         |
| 2015 | 16 |     |         |
| 2016 | 17 |     |         |
| 2017 | 18 |     |         |
| 2018 | 19 |     |         |

|      |    |
|------|----|
| 2019 | 20 |
| 2020 | 21 |
| 2021 | 22 |
| 2022 | 23 |
| 2023 | 24 |
| 2024 | 25 |

| ti2  | y1t      | y2t      | y3t      | y4t      | y5t      | y'1    | y'2     |
|------|----------|----------|----------|----------|----------|--------|---------|
| 1    | 6.22     | 4.93     | 3.32     | 608.7    | 9.8      | 6.39   | 4.581   |
| 4    | 12.12    | 9.5      | 5.94     | 1457.6   | 17       | 6.52   | 4.698   |
| 9    | 21       | 14.58    | 9.72     | 2187.6   | 28.2     | 6.65   | 4.815   |
| 16   | 29.72    | 22.04    | 15.4     | 1530.8   | 36       | 6.78   | 4.932   |
| 25   | 37.65    | 26.2     | 18.6     | 2788     | 43       | 6.91   | 5.049   |
| 36   | 40.92    | 27       | 25.68    | 3624.6   | 51       | 7.04   | 5.166   |
| 49   | 49.77    | 29.96    | 26.74    | 4388.3   | 63       | 7.17   | 5.283   |
| 64   | 64.96    | 40.64    | 29.2     | 5242.4   | 78.4     | 7.3    | 5.4     |
| 81   | 55.71    | 42.12    | 30.33    | 5259.6   | 85.5     | 7.43   | 5.517   |
| 100  | 66       | 55.4     | 24.9     | 6369     | 92       | 7.56   | 5.634   |
| 121  | 88.66    | 64.02    | 29.48    | 9886.8   | 86.9     | 7.69   | 5.751   |
| 144  | 86.04    | 69.6     | 46.32    | 8122.8   | 111.6    | 7.82   | 5.868   |
| 169  | 90.09    | 87.49    | 50.18    | 8889.4   | 118.3    | 7.95   | 5.985   |
| 196  | 127.4    | 105      | 61.6     | 10704.4  | 120.4    | 8.08   | 6.102   |
| 225  | 145.35   | 110.85   | 69.15    | 8325     | 151.5    | 8.21   | 6.219   |
| 256  | 137.6    | 99.68    | 58.08    | 8905.6   | 163.2    | 8.34   | 6.336   |
| 289  | 144.16   | 106.25   | 62.05    | 8358.9   | 159.8    | 8.47   | 6.453   |
| 324  | 146.7    | 98.64    | 66.78    | 11761.2  | 167.4    | 8.6    | 6.57    |
| 361  | 162.26   | 123.69   | 75.24    | 8358.1   | 197.6    | 8.73   | 6.687   |
| 2470 | 1512.33  | 1137.59  | 708.71   | 116768.8 | 1780.6   | 143.64 | 107.046 |
| 130  | 79.59632 | 59.87316 | 37.30053 | 6145.726 | 93.71579 | 7.56   | 5.634   |

**Predikce**

|           |          |           |          |
|-----------|----------|-----------|----------|
| student t | 1.714    | s' yn+1   | 1.0887   |
| s'y1      | 0.69245  | t*s'y1    | 1.186859 |
| s'y2      | 0.633606 | t*s'y2    | 1.086001 |
| s'y3      | 0.506859 | t*s'y3    | 0.868757 |
| s'y4      | 117.0099 | t*s'y4    | 200.555  |
| s'y5      | 0.598633 | t*s'y5    | 1.026057 |
| levostr 1 | 8.323141 | pravostr1 | 10.69686 |
| levostr 2 | 6.302999 | pravostr2 | 8.475001 |
| levostr 3 | 3.251243 | pravostr3 | 4.988757 |
| levostr 4 | 380.752  | pravostr4 | 781.862  |
| levostr 5 | 8.859943 | pravostr5 | 10.91206 |





| y'3   | y'4      | y'5     | e1     | e2     |          |
|-------|----------|---------|--------|--------|----------|
| 3.352 | 648.027  | 8.854   |        | -0.17  | 0.349    |
| 3.384 | 645.247  | 8.897   |        | -0.46  | 0.052    |
| 3.416 | 642.467  | 8.94    |        | 0.35   | 0.045    |
| 3.448 | 639.687  | 8.983   |        | 0.65   | 0.578    |
| 3.48  | 636.907  | 9.026   |        | 0.62   | 0.191    |
| 3.512 | 634.127  | 9.069   |        | -0.22  | -0.666   |
| 3.544 | 631.347  | 9.112   |        | -0.06  | -1.003   |
| 3.576 | 628.567  | 9.155   |        | 0.82   | -0.32    |
| 3.608 | 625.787  | 9.198   |        | -1.24  | -0.837   |
| 3.64  | 623.007  | 9.241   |        | -0.96  | -0.094   |
| 3.672 | 620.227  | 9.284   |        | 0.37   | 0.069    |
| 3.704 | 617.447  | 9.327   |        | -0.65  | -0.068   |
| 3.736 | 614.667  | 9.37    |        | -1.02  | 0.745    |
| 3.768 | 611.887  | 9.413   |        | 1.02   | 1.398    |
| 3.8   | 609.107  | 9.456   |        | 1.48   | 1.171    |
| 3.832 | 606.327  | 9.499   |        | 0.26   | -0.106   |
| 3.864 | 603.547  | 9.542   |        | 0.01   | -0.203   |
| 3.896 | 600.767  | 9.585   |        | -0.45  | -1.09    |
| 3.928 | 597.987  | 9.628   |        | -0.19  | -0.177   |
| 69.16 | 11837.13 | 175.579 | suma e | 0.16   | 0.034    |
| 3.64  | 623.007  | 9.241   | RSS    | 9.4904 | 7.920394 |

|    | Pšenice ozimá (y1) | Ječmen jarní (y2) |
|----|--------------------|-------------------|
| r2 | 0.505240699        | 0.497004888       |
| r  | 0.710802855        | 0.704985736       |

| zdánlivá kor. | srážky       | teplota      |
|---------------|--------------|--------------|
| pšenice       | -0.058098883 | 0.040927097  |
| ječmen        | 0.068285989  | -0.035292073 |
| řepka         | -0.359390877 | 0.148679114  |

| r2      | srážky      | teplota     |
|---------|-------------|-------------|
| pšenice | 0.00337548  | 0.001675027 |
| ječmen  | 0.004662976 | 0.00124553  |
| řepka   | 0.129161803 | 0.022105479 |



| e3      | e4          | e5       |     | y1-y1prum  | y2-y2prum  | y3-y3prum  |
|---------|-------------|----------|-----|------------|------------|------------|
| -0.032  | -39.327     | 0.946    |     | -1.3484211 | -0.7057895 | -0.3152632 |
| -0.414  | 83.553      | -0.397   |     | -1.5084211 | -0.8857895 | -0.6652632 |
| -0.176  | 86.733      | 0.46     |     | -0.5684211 | -0.7757895 | -0.3952632 |
| 0.402   | -256.987    | 0.017    |     | -0.1384211 | -0.1257895 | 0.2147368  |
| 0.24    | -79.307     | -0.426   |     | -0.0384211 | -0.3957895 | 0.0847368  |
| 0.768   | -30.027     | -0.569   |     | -0.7484211 | -1.1357895 | 0.6447368  |
| 0.276   | -4.447      | -0.112   |     | -0.4584211 | -1.3557895 | 0.1847368  |
| 0.074   | 26.733      | 0.645    |     | 0.5515789  | -0.5557895 | 0.0147368  |
| -0.238  | -41.387     | 0.302    |     | -1.3784211 | -0.9557895 | -0.2652632 |
| -1.15   | 13.893      | -0.041   |     | -0.9684211 | -0.0957895 | -1.1452632 |
| -0.992  | 278.573     | -1.384   |     | 0.4915789  | 0.1842105  | -0.9552632 |
| 0.156   | 59.453      | -0.027   |     | -0.3984211 | 0.1642105  | 0.2247368  |
| 0.124   | 69.133      | -0.27    |     | -0.6384211 | 1.0942105  | 0.2247368  |
| 0.632   | 152.713     | -0.813   |     | 1.5315789  | 1.8642105  | 0.7647368  |
| 0.81    | -54.107     | 0.644    |     | 2.1215789  | 1.7542105  | 0.9747368  |
| -0.202  | -49.727     | 0.701    |     | 1.0315789  | 0.5942105  | -0.0052632 |
| -0.214  | -111.847    | -0.142   |     | 0.9115789  | 0.6142105  | 0.0147368  |
| -0.186  | 52.633      | -0.285   |     | 0.5815789  | -0.1557895 | 0.0747368  |
| 0.032   | -158.087    | 0.772    |     | 0.9715789  | 0.8742105  | 0.3247368  |
| -0.09   | -1.833      | 0.021    |     |            |            |            |
| 4.67474 | 246834.2307 | 6.544669 | TSS | 19.181853  | 15.746463  | 5.2432737  |

| Řepka ozimá (y3) | Srážky (y4) | Teplota (y5) |
|------------------|-------------|--------------|
| 0.108431053      | 0.017524436 | 0.139574377  |
| 0.329288707      | 0.132379895 | 0.373596543  |



| y4-y4prum  | y5-y5prum  |
|------------|------------|
| -14.210526 | 0.5578947  |
| 105.88947  | -0.7421053 |
| 106.28947  | 0.1578947  |
| -240.21053 | -0.2421053 |
| -65.310526 | -0.6421053 |
| -18.810526 | -0.7421053 |
| 3.9894737  | -0.2421053 |
| 32.389474  | 0.5578947  |
| -38.510526 | 0.2578947  |
| 13.989474  | -0.0421053 |
| 275.88947  | -1.3421053 |
| 53.989474  | 0.0578947  |
| 60.889474  | -0.1421053 |
| 141.68947  | -0.6421053 |
| -67.910526 | 0.8578947  |
| -66.310526 | 0.9578947  |
| -131.21053 | 0.1578947  |
| 30.489474  | 0.0578947  |
| -183.01053 | 1.1578947  |
| 251237.02  | 7.6063158  |

| rok  | Pšenice ozimá<br>y1 | Ječmen jarní<br>y2 | Řepka ozimá<br>y3 | Srážky<br>y4 | Teplota<br>y5 | ti |
|------|---------------------|--------------------|-------------------|--------------|---------------|----|
| 2000 | 3.7                 | 3.1                | 2.4               | 801          | 9.1           | 1  |
| 2001 | 3.6                 | 2                  | 2.4               | 935          | 7.7           | 2  |
| 2002 | 3.4                 | 2.4                | 2.5               | 867          | 8.7           | 3  |
| 2003 | 3.6                 | 3.5                | 2.6               | 606          | 8             | 4  |
| 2004 | 3.7                 | 3.1                | 2.7               | 678          | 7.7           | 5  |
| 2005 | 4.8                 | 2.7                | 2.6               | 765          | 7.6           | 6  |
| 2006 | 3.5                 | 2.7                | 1.5               | 728          | 8.2           | 7  |
| 2007 | 4.3                 | 1.7                | 2.4               | 815          | 8.9           | 8  |
| 2008 | 4.9                 | 2.2                | 1.6               | 650          | 8.8           | 9  |
| 2009 | 3.9                 | 2.5                | 2.1               | 694          | 8.4           | 10 |
| 2010 | 4.9                 | 3.2                | 1.3               | 875          | 7.2           | 11 |
| 2011 | 4.4                 | 3.1                | 1                 | 674          | 8.4           | 12 |
| 2012 | 4.7                 | 3.4                | 2.9               | 769          | 8.1           | 13 |
| 2013 | 4.4                 | 2.9                | 3.1               | 746          | 7.9           | 14 |
| 2014 | 5.7                 | 4.2                | 3.4               | 607          | 9.4           | 15 |
| 2015 | 5.2                 | 4                  | 2.6               | 569          | 9.3           | 16 |
| 2016 | 5.2                 | 3.6                | 2.4               | 577          | 8.6           | 17 |
| 2017 | 4.8                 | 3.6                | 1.7               | 803          | 8.4           | 18 |
| 2018 | 4.3                 | 4.2                | 2.4               | 508          | 9.7           | 19 |

|        |             |             |             |          |           |     |
|--------|-------------|-------------|-------------|----------|-----------|-----|
| suma   | 83          | 58.1        | 43.6        | 13667    | 160.1     | 190 |
| průměr | 4.368421053 | 3.057894737 | 2.294736842 | 719.3158 | 8.4263158 | 10  |
| n      | 19          |             |             |          |           |     |

|    |         |    |        |           |          |
|----|---------|----|--------|-----------|----------|
| a1 | 3.502   | b1 | 0.087  | smodch y1 | 0.674992 |
| a2 | 2.246   | b2 | 0.081  | smodch y2 | 0.712831 |
| a3 | 2.289   | b3 | 0.0005 | smodch y3 | 0.621355 |
| a4 | 830.018 | b4 | -11.07 | smodch y4 | 116.1671 |
| a5 | 7.989   | b5 | 0.044  | smodch y5 | 0.671517 |

|      |    |     |         |
|------|----|-----|---------|
| 2000 | 1  | t   | 25      |
| 2001 | 2  | pše | 5.677   |
| 2002 | 3  | ječ | 4.271   |
| 2003 | 4  | řep | 2.3015  |
| 2004 | 5  | sra | 553.268 |
| 2005 | 6  | tep | 9.089   |
| 2006 | 7  |     |         |
| 2007 | 8  |     |         |
| 2008 | 9  |     |         |
| 2009 | 10 |     |         |
| 2010 | 11 |     |         |
| 2011 | 12 |     |         |
| 2012 | 13 |     |         |
| 2013 | 14 |     |         |
| 2014 | 15 |     |         |
| 2015 | 16 |     |         |
| 2016 | 17 |     |         |
| 2017 | 18 |     |         |
| 2018 | 19 |     |         |

|      |    |
|------|----|
| 2019 | 20 |
| 2020 | 21 |
| 2021 | 22 |
| 2022 | 23 |
| 2023 | 24 |
| 2024 | 25 |

| ti2  | y1t      | y2t      | y3t      | y4t      | y5t      | y'1    | y'2    |
|------|----------|----------|----------|----------|----------|--------|--------|
| 1    | 3.7      | 3.1      | 2.4      | 801      | 9.1      | 3.589  | 2.327  |
| 4    | 7.2      | 4        | 4.8      | 1870     | 15.4     | 3.676  | 2.408  |
| 9    | 10.2     | 7.2      | 7.5      | 2601     | 26.1     | 3.763  | 2.489  |
| 16   | 14.4     | 14       | 10.4     | 2424     | 32       | 3.85   | 2.57   |
| 25   | 18.5     | 15.5     | 13.5     | 3390     | 38.5     | 3.937  | 2.651  |
| 36   | 28.8     | 16.2     | 15.6     | 4590     | 45.6     | 4.024  | 2.732  |
| 49   | 24.5     | 18.9     | 10.5     | 5096     | 57.4     | 4.111  | 2.813  |
| 64   | 34.4     | 13.6     | 19.2     | 6520     | 71.2     | 4.198  | 2.894  |
| 81   | 44.1     | 19.8     | 14.4     | 5850     | 79.2     | 4.285  | 2.975  |
| 100  | 39       | 25       | 21       | 6940     | 84       | 4.372  | 3.056  |
| 121  | 53.9     | 35.2     | 14.3     | 9625     | 79.2     | 4.459  | 3.137  |
| 144  | 52.8     | 37.2     | 12       | 8088     | 100.8    | 4.546  | 3.218  |
| 169  | 61.1     | 44.2     | 37.7     | 9997     | 105.3    | 4.633  | 3.299  |
| 196  | 61.6     | 40.6     | 43.4     | 10444    | 110.6    | 4.72   | 3.38   |
| 225  | 85.5     | 63       | 51       | 9105     | 141      | 4.807  | 3.461  |
| 256  | 83.2     | 64       | 41.6     | 9104     | 148.8    | 4.894  | 3.542  |
| 289  | 88.4     | 61.2     | 40.8     | 9809     | 146.2    | 4.981  | 3.623  |
| 324  | 86.4     | 64.8     | 30.6     | 14454    | 151.2    | 5.068  | 3.704  |
| 361  | 81.7     | 79.8     | 45.6     | 9652     | 184.3    | 5.155  | 3.785  |
| 2470 | 879.4    | 627.3    | 436.3    | 130360   | 1625.9   | 83.068 | 58.064 |
| 130  | 46.28421 | 33.01579 | 22.96316 | 6861.053 | 85.57368 | 4.372  | 3.056  |

### Predikce

|           |          |           |          |
|-----------|----------|-----------|----------|
| student t | 1.714    | s' yn+1   | 1.0887   |
| s'y1      | 0.44349  | t*s'y1    | 0.760142 |
| s'y2      | 0.529778 | t*s'y2    | 0.90804  |
| s'y3      | 0.621348 | t*s'y3    | 1.06499  |
| s'y4      | 96.28008 | t*s'y4    | 165.0241 |
| s'y5      | 0.620611 | t*s'y5    | 1.063726 |
| levostr 1 | 4.916858 | pravostr1 | 6.437142 |
| levostr 2 | 3.36296  | pravostr2 | 5.17904  |
| levostr 3 | 1.23651  | pravostr3 | 3.36649  |
| levostr 4 | 388.2439 | pravostr4 | 718.2921 |
| levostr 5 | 8.025274 | pravostr5 | 10.15273 |





| y'3    | y'4      | y'5     | e1     | e2       |          |
|--------|----------|---------|--------|----------|----------|
| 2.2895 | 818.948  | 8.033   |        | 0.111    | 0.773    |
| 2.29   | 807.878  | 8.077   |        | -0.076   | -0.408   |
| 2.2905 | 796.808  | 8.121   |        | -0.363   | -0.089   |
| 2.291  | 785.738  | 8.165   |        | -0.25    | 0.93     |
| 2.2915 | 774.668  | 8.209   |        | -0.237   | 0.449    |
| 2.292  | 763.598  | 8.253   |        | 0.776    | -0.032   |
| 2.2925 | 752.528  | 8.297   |        | -0.611   | -0.113   |
| 2.293  | 741.458  | 8.341   |        | 0.102    | -1.194   |
| 2.2935 | 730.388  | 8.385   |        | 0.615    | -0.775   |
| 2.294  | 719.318  | 8.429   |        | -0.472   | -0.556   |
| 2.2945 | 708.248  | 8.473   |        | 0.441    | 0.063    |
| 2.295  | 697.178  | 8.517   |        | -0.146   | -0.118   |
| 2.2955 | 686.108  | 8.561   |        | 0.067    | 0.101    |
| 2.296  | 675.038  | 8.605   |        | -0.32    | -0.48    |
| 2.2965 | 663.968  | 8.649   |        | 0.893    | 0.739    |
| 2.297  | 652.898  | 8.693   |        | 0.306    | 0.458    |
| 2.2975 | 641.828  | 8.737   |        | 0.219    | -0.023   |
| 2.298  | 630.758  | 8.781   |        | -0.268   | -0.104   |
| 2.2985 | 619.688  | 8.825   |        | -0.855   | 0.415    |
| 43.586 | 13667.04 | 160.151 | suma e | -0.068   | 0.036    |
| 2.294  | 719.318  | 8.429   | RSS    | 3.920026 | 5.385554 |

|    | Pšenice ozimá (y1) | Ječmen jarní (y2) |
|----|--------------------|-------------------|
| r2 | 0.522009408        | 0.411177776       |
| r  | 0.722502186        | 0.641231453       |

| zdánlivá kor. | srážky       | teplota      |
|---------------|--------------|--------------|
| pšenice       | 0.042684387  | -0.036570286 |
| ječmen        | -0.463021103 | 0.173634756  |
| řepka         | -0.198651151 | 0.211681501  |

| r2      | srážky      | teplota     |
|---------|-------------|-------------|
| pšenice | 0.001821957 | 0.001337386 |
| ječmen  | 0.214388542 | 0.030149029 |
| řepka   | 0.03946228  | 0.044809058 |



| e3        | e4          | e5       |     | y1-y1prum  | y2-y2prum  | y3-y3prum  |
|-----------|-------------|----------|-----|------------|------------|------------|
| 0.1105    | -17.948     | 1.067    |     | -0.6684211 | 0.0421053  | 0.1052632  |
| 0.11      | 127.122     | -0.377   |     | -0.7684211 | -1.0578947 | 0.1052632  |
| 0.2095    | 70.192      | 0.579    |     | -0.9684211 | -0.6578947 | 0.2052632  |
| 0.309     | -179.738    | -0.165   |     | -0.7684211 | 0.4421053  | 0.3052632  |
| 0.4085    | -96.668     | -0.509   |     | -0.6684211 | 0.0421053  | 0.4052632  |
| 0.308     | 1.402       | -0.653   |     | 0.4315789  | -0.3578947 | 0.3052632  |
| -0.7925   | -24.528     | -0.097   |     | -0.8684211 | -0.3578947 | -0.7947368 |
| 0.107     | 73.542      | 0.559    |     | -0.0684211 | -1.3578947 | 0.1052632  |
| -0.6935   | -80.388     | 0.415    |     | 0.5315789  | -0.8578947 | -0.6947368 |
| -0.194    | -25.318     | -0.029   |     | -0.4684211 | -0.5578947 | -0.1947368 |
| -0.9945   | 166.752     | -1.273   |     | 0.5315789  | 0.1421053  | -0.9947368 |
| -1.295    | -23.178     | -0.117   |     | 0.0315789  | 0.0421053  | -1.2947368 |
| 0.6045    | 82.892      | -0.461   |     | 0.3315789  | 0.3421053  | 0.6052632  |
| 0.804     | 70.962      | -0.705   |     | 0.0315789  | -0.1578947 | 0.8052632  |
| 1.1035    | -56.968     | 0.751    |     | 1.3315789  | 1.1421053  | 1.1052632  |
| 0.303     | -83.898     | 0.607    |     | 0.8315789  | 0.9421053  | 0.3052632  |
| 0.1025    | -64.828     | -0.137   |     | 0.8315789  | 0.5421053  | 0.1052632  |
| -0.598    | 172.242     | -0.381   |     | 0.4315789  | 0.5421053  | -0.5947368 |
| 0.1015    | -111.688    | 0.875    |     | -0.0684211 | 1.1421053  | 0.1052632  |
| 0.014     | -0.042      | -0.051   |     |            |            |            |
| 6.9493265 | 173053.2984 | 7.029299 | TSS | 8.2010526  | 9.1463158  | 6.9494737  |

| Řepka ozimá (y3) | Srážky (y4) | Teplota (y5) |
|------------------|-------------|--------------|
| 2.11792E-05      | 0.287571228 | 0.133985988  |
| 0.004602085      | 0.536256681 | 0.366040964  |



| y4-y4prum  | y5-y5prum  |
|------------|------------|
| 81.684211  | 0.6736842  |
| 215.68421  | -0.7263158 |
| 147.68421  | 0.2736842  |
| -113.31579 | -0.4263158 |
| -41.315789 | -0.7263158 |
| 45.684211  | -0.8263158 |
| 8.6842105  | -0.2263158 |
| 95.684211  | 0.4736842  |
| -69.315789 | 0.3736842  |
| -25.315789 | -0.0263158 |
| 155.68421  | -1.2263158 |
| -45.315789 | -0.0263158 |
| 49.684211  | -0.3263158 |
| 26.684211  | -0.5263158 |
| -112.31579 | 0.9736842  |
| -150.31579 | 0.8736842  |
| -142.31579 | 0.1736842  |
| 83.684211  | -0.0263158 |
| -211.31579 | 1.2736842  |

|           |           |
|-----------|-----------|
| 242906.11 | 8.1168421 |
|-----------|-----------|

| rok  | Pšenice ozimá<br>y1 | Ječmen jarní<br>y2 | Řepka ozimá<br>y3 | Srážky<br>y4 | Teplota<br>y5 | ti |
|------|---------------------|--------------------|-------------------|--------------|---------------|----|
| 2000 | 3.5                 | 3.2                | 2.2               | 550          | 10.2          | 1  |
| 2001 | 3.4                 | 2.9                | 2.0               | 575          | 8.8           | 2  |
| 2002 | 3.7                 | 3.4                | 1.9               | 653          | 9.7           | 3  |
| 2003 | 3.8                 | 3.9                | 1.4               | 425          | 9.4           | 4  |
| 2004 | 5.1                 | 4.1                | 3.4               | 521          | 8.8           | 5  |
| 2005 | 4.8                 | 3.8                | 2.5               | 595          | 8.6           | 6  |
| 2006 | 4.5                 | 3.4                | 3.1               | 605          | 9.1           | 7  |
| 2007 | 4.7                 | 3.0                | 2.8               | 587          | 10.2          | 8  |
| 2008 | 5.6                 | 4.4                | 3.0               | 487          | 10            | 9  |
| 2009 | 4.9                 | 4.1                | 3.3               | 670          | 9.5           | 10 |
| 2010 | 4.8                 | 4.0                | 3.1               | 780          | 8.3           | 11 |
| 2011 | 4.9                 | 4.2                | 2.9               | 442          | 9.5           | 12 |
| 2012 | 3.2                 | 3.8                | 2.2               | 501          | 9.5           | 13 |
| 2013 | 5.1                 | 4.3                | 2.8               | 601          | 9.1           | 14 |
| 2014 | 5.9                 | 5.3                | 3.6               | 622          | 10.5          | 15 |
| 2015 | 6.0                 | 5.2                | 3.4               | 430          | 10.4          | 16 |
| 2016 | 5.8                 | 5.0                | 3.5               | 533          | 9.7           | 17 |
| 2017 | 5.0                 | 4.7                | 3.0               | 473          | 9.8           | 18 |
| 2018 | 4.6                 | 4.2                | 2.9               | 451          | 10.8          | 19 |

|        |             |             |             |          |           |     |
|--------|-------------|-------------|-------------|----------|-----------|-----|
| suma   | 89.2907458  | 76.86039367 | 53          | 10501    | 181.9     | 190 |
| průměr | 4.699512937 | 4.045283878 | 2.789473684 | 552.6842 | 9.5736842 | 10  |
| n      | 19          |             |             |          |           |     |

|    |         |    |       |           |          |
|----|---------|----|-------|-----------|----------|
| a1 | 3.797   | b1 | 0.09  | smodch y1 | 0.845872 |
| a2 | 3.107   | b2 | 0.094 | smodch y2 | 0.690918 |
| a3 | 2.14    | b3 | 0.065 | smodch y3 | 0.605433 |
| a4 | 592.982 | b4 | -4.03 | smodch y4 | 93.5474  |
| a5 | 9.082   | b5 | 0.049 | smodch y5 | 0.681373 |

|      |    |     |         |
|------|----|-----|---------|
| 2000 | 1  | t   | 25      |
| 2001 | 2  | pše | 6.047   |
| 2002 | 3  | ječ | 5.457   |
| 2003 | 4  | řep | 3.765   |
| 2004 | 5  | sra | 492.232 |
| 2005 | 6  | tep | 10.307  |
| 2006 | 7  |     |         |
| 2007 | 8  |     |         |
| 2008 | 9  |     |         |
| 2009 | 10 |     |         |
| 2010 | 11 |     |         |
| 2011 | 12 |     |         |
| 2012 | 13 |     |         |
| 2013 | 14 |     |         |
| 2014 | 15 |     |         |
| 2015 | 16 |     |         |
| 2016 | 17 |     |         |
| 2017 | 18 |     |         |
| 2018 | 19 |     |         |

|      |    |
|------|----|
| 2019 | 20 |
| 2020 | 21 |
| 2021 | 22 |
| 2022 | 23 |
| 2023 | 24 |
| 2024 | 25 |



| ti2  | y1t      | y2t      | y3t      | y4t      | y5t      | y'1    | y'2    |
|------|----------|----------|----------|----------|----------|--------|--------|
| 1    | 3.5      | 3.2      | 2.2      | 550      | 10.2     | 3.887  | 3.201  |
| 4    | 6.8      | 5.8      | 4        | 1150     | 17.6     | 3.977  | 3.295  |
| 9    | 11.1     | 10.2     | 5.7      | 1959     | 29.1     | 4.067  | 3.389  |
| 16   | 15.2     | 15.6     | 5.6      | 1700     | 37.6     | 4.157  | 3.483  |
| 25   | 25.5     | 20.5     | 17       | 2605     | 44       | 4.247  | 3.577  |
| 36   | 28.8     | 22.8     | 15       | 3570     | 51.6     | 4.337  | 3.671  |
| 49   | 31.50522 | 23.8     | 21.7     | 4235     | 63.7     | 4.427  | 3.765  |
| 64   | 37.6     | 24       | 22.4     | 4696     | 81.6     | 4.517  | 3.859  |
| 81   | 50.4     | 39.6     | 27       | 4383     | 90       | 4.607  | 3.953  |
| 100  | 49       | 41       | 33       | 6700     | 95       | 4.697  | 4.047  |
| 121  | 52.8     | 43.56433 | 34.1     | 8580     | 91.3     | 4.787  | 4.141  |
| 144  | 58.8     | 50.4     | 34.8     | 5304     | 114      | 4.877  | 4.235  |
| 169  | 41.6     | 49.4     | 28.6     | 6513     | 123.5    | 4.967  | 4.329  |
| 196  | 71.4     | 60.2     | 39.2     | 8414     | 127.4    | 5.057  | 4.423  |
| 225  | 88.5     | 79.5     | 54       | 9330     | 157.5    | 5.147  | 4.517  |
| 256  | 96       | 83.2     | 54.4     | 6880     | 166.4    | 5.237  | 4.611  |
| 289  | 98.6     | 85       | 59.5     | 9061     | 164.9    | 5.327  | 4.705  |
| 324  | 89.46    | 84.6     | 54       | 8514     | 176.4    | 5.417  | 4.799  |
| 361  | 87.78    | 79.8     | 55.1     | 8569     | 205.2    | 5.507  | 4.893  |
| 2470 | 944.3452 | 822.1643 | 567.3    | 102713   | 1847     | 89.243 | 76.893 |
| 130  | 49.70238 | 43.27181 | 29.85789 | 5405.947 | 97.21053 | 4.697  | 4.047  |

### Predikce

|           |          |           |          |
|-----------|----------|-----------|----------|
| student t | 1.714    | s' yn+1   | 1.0887   |
| s'y1      | 0.65936  | t*s'y1    | 1.130143 |
| s'y2      | 0.415894 | t*s'y2    | 0.712842 |
| s'y3      | 0.467895 | t*s'y3    | 0.801971 |
| s'y4      | 90.50554 | t*s'y4    | 155.1265 |
| s'y5      | 0.617318 | t*s'y5    | 1.058083 |
| levostr 1 | 4.916857 | pravostr1 | 7.177143 |
| levostr 2 | 4.744158 | pravostr2 | 6.169842 |
| levostr 3 | 2.963029 | pravostr3 | 4.566971 |
| levostr 4 | 337.1055 | pravostr4 | 647.3585 |
| levostr 5 | 9.248917 | pravostr5 | 11.36508 |



| y'3   | y'4      | y'5     |        | e1          | e2     |              |
|-------|----------|---------|--------|-------------|--------|--------------|
| 2.205 | 588.952  | 9.131   |        |             | -0.387 | -0.001       |
| 2.27  | 584.922  | 9.18    |        |             | -0.577 | -0.395       |
| 2.335 | 580.892  | 9.229   |        |             | -0.367 | 0.011        |
| 2.4   | 576.862  | 9.278   |        |             | -0.357 | 0.417        |
| 2.465 | 572.832  | 9.327   |        |             | 0.853  | 0.523        |
| 2.53  | 568.802  | 9.376   |        |             | 0.463  | 0.129        |
| 2.595 | 564.772  | 9.425   |        | 0.073745802 |        | -0.365       |
| 2.66  | 560.742  | 9.474   |        |             | 0.183  | -0.859       |
| 2.725 | 556.712  | 9.523   |        |             | 0.993  | 0.447        |
| 2.79  | 552.682  | 9.572   |        |             | 0.203  | 0.053        |
| 2.855 | 548.652  | 9.621   |        |             | 0.013  | -0.180606325 |
| 2.92  | 544.622  | 9.67    |        |             | 0.023  | -0.035       |
| 2.985 | 540.592  | 9.719   |        |             | -1.767 | -0.529       |
| 3.05  | 536.562  | 9.768   |        |             | 0.043  | -0.123       |
| 3.115 | 532.532  | 9.817   |        |             | 0.753  | 0.783        |
| 3.18  | 528.502  | 9.866   |        |             | 0.763  | 0.589        |
| 3.245 | 524.472  | 9.915   |        |             | 0.473  | 0.295        |
| 3.31  | 520.442  | 9.964   |        |             | -0.447 | -0.099       |
| 3.375 | 516.412  | 10.013  |        |             | -0.887 | -0.693       |
| 53.01 | 10500.96 | 181.868 | suma e | 0.047745802 |        | -0.032606325 |
| 2.79  | 552.682  | 9.572   | RSS    | 8.237320443 |        | 3.559828645  |

|    | Pšenice ozimá (y1) | Ječmen jarní (y2) |
|----|--------------------|-------------------|
| r2 | 0.360406717        | 0.585710278       |
| r  | 0.600338835        | 0.765317109       |

| zdánlivá kor. | srážky      | teplota      |
|---------------|-------------|--------------|
| pšenice       | 0.115535788 | -0.01572985  |
| ječmen        | -0.14463997 | 0.04674499   |
| řepka         | 0.359388265 | -0.107202123 |

| r2      | srážky      | teplota     |
|---------|-------------|-------------|
| pšenice | 0.013348518 | 0.000247428 |
| ječmen  | 0.020920721 | 0.002185094 |
| řepka   | 0.129159925 | 0.011492295 |



| e3      | e4          | e5       |     | y1-y1prum  | y2-y2prum  | y3-y3prum  |
|---------|-------------|----------|-----|------------|------------|------------|
| -0.005  | -38.952     | 1.069    |     | -1.1995129 | -0.8452839 | -0.5894737 |
| -0.27   | -9.922      | -0.38    |     | -1.2995129 | -1.1452839 | -0.7894737 |
| -0.435  | 72.108      | 0.471    |     | -0.9995129 | -0.6452839 | -0.8894737 |
| -1      | -151.862    | 0.122    |     | -0.8995129 | -0.1452839 | -1.3894737 |
| 0.935   | -51.832     | -0.527   |     | 0.4004871  | 0.0547161  | 0.6105263  |
| -0.03   | 26.198      | -0.776   |     | 0.1004871  | -0.2452839 | -0.2894737 |
| 0.505   | 40.228      | -0.325   |     | -0.1987671 | -0.6452839 | 0.3105263  |
| 0.14    | 26.258      | 0.726    |     | 0.0004871  | -1.0452839 | 0.0105263  |
| 0.275   | -69.712     | 0.477    |     | 0.9004871  | 0.3547161  | 0.2105263  |
| 0.51    | 117.318     | -0.072   |     | 0.2004871  | 0.0547161  | 0.5105263  |
| 0.245   | 231.348     | -1.321   |     | 0.1004871  | -0.0848902 | 0.3105263  |
| -0.02   | -102.622    | -0.17    |     | 0.2004871  | 0.1547161  | 0.1105263  |
| -0.785  | -39.592     | -0.219   |     | -1.4995129 | -0.2452839 | -0.5894737 |
| -0.25   | 64.438      | -0.668   |     | 0.4004871  | 0.2547161  | 0.0105263  |
| 0.485   | 89.468      | 0.683    |     | 1.2004871  | 1.2547161  | 0.8105263  |
| 0.22    | -98.502     | 0.534    |     | 1.3004871  | 1.1547161  | 0.6105263  |
| 0.255   | 8.528       | -0.215   |     | 1.1004871  | 0.9547161  | 0.7105263  |
| -0.31   | -47.442     | -0.164   |     | 0.2704871  | 0.6547161  | 0.2105263  |
| -0.475  | -65.412     | 0.787    |     | -0.0795129 | 0.1547161  | 0.1105263  |
| -0.01   | 0.042       | 0.032    |     |            |            |            |
| 4.15715 | 148263.5984 | 6.981466 | TSS | 12.878998  | 8.5926067  | 6.5978947  |

| Řepka ozimá (y3) | Srážky (y4) | Teplota (y5) |
|------------------|-------------|--------------|
| 0.369927808      | 0.058763971 | 0.164580841  |
| 0.608216909      | 0.242412811 | 0.405685644  |



| y4-y4prum  | y5-y5prum  |
|------------|------------|
| -2.6842105 | 0.6263158  |
| 22.315789  | -0.7736842 |
| 100.31579  | 0.1263158  |
| -127.68421 | -0.1736842 |
| -31.684211 | -0.7736842 |
| 42.315789  | -0.9736842 |
| 52.315789  | -0.4736842 |
| 34.315789  | 0.6263158  |
| -65.684211 | 0.4263158  |
| 117.31579  | -0.0736842 |
| 227.31579  | -1.2736842 |
| -110.68421 | -0.0736842 |
| -51.684211 | -0.0736842 |
| 48.315789  | -0.4736842 |
| 69.315789  | 0.9263158  |
| -122.68421 | 0.8263158  |
| -19.684211 | 0.1263158  |
| -79.684211 | 0.2263158  |
| -101.68421 | 1.2263158  |

|           |           |
|-----------|-----------|
| 157520.11 | 8.3568421 |
|-----------|-----------|

| rok  | Pšenice ozimá<br>y1 | Ječmen jarní<br>y2 | Řepka ozimá<br>y3 | Srážky<br>y4 | Teplota<br>y5 | ti |
|------|---------------------|--------------------|-------------------|--------------|---------------|----|
| 2000 | 3.12                | 3.15               | 2.05              | 785          | 9.5           | 1  |
| 2001 | 3.41                | 2.94               | 2.11              | 775          | 8.1           | 2  |
| 2002 | 3.84                | 3.28               | 1.87              | 789          | 9             | 3  |
| 2003 | 4.35                | 3.83               | 1.64              | 581          | 8.4           | 4  |
| 2004 | 5.93                | 4.72               | 2.96              | 717          | 8             | 5  |
| 2005 | 5.25                | 4.51               | 3.04              | 855          | 7.6           | 6  |
| 2006 | 4.88                | 4.03               | 3.09              | 800          | 8.3           | 7  |
| 2007 | 5.15                | 3.99               | 2.76              | 845          | 9.3           | 8  |
| 2008 | 6.01                | 4.84               | 3.14              | 687          | 9.3           | 9  |
| 2009 | 5.12                | 4.81               | 3.28              | 806          | 8.7           | 10 |
| 2010 | 5.35                | 4.49               | 2.74              | 995          | 7.7           | 11 |
| 2011 | 5.76                | 5.22               | 2.87              | 630          | 8.6           | 12 |
| 2012 | 4.43                | 4.13               | 2.53              | 723          | 8.7           | 13 |
| 2013 | 5.40                | 4.82               | 3.22              | 769          | 8.4           | 14 |
| 2014 | 6.66                | 5.67               | 3.81              | 758          | 9.8           | 15 |
| 2015 | 6.80                | 5.78               | 3.52              | 580          | 9.5           | 16 |
| 2016 | 6.89                | 5.51               | 3.59              | 738          | 8.9           | 17 |
| 2017 | 5.87                | 5.19               | 2.91              | 721          | 8.8           | 18 |
| 2018 | 5.25                | 4.94               | 3.31              | 563          | 10            | 19 |

|        |             |             |             |       |           |     |
|--------|-------------|-------------|-------------|-------|-----------|-----|
| suma   | 99.47       | 85.85       | 54.43721369 | 14117 | 166.6     | 190 |
| průměr | 5.235263158 | 4.518421053 | 2.86511651  | 743   | 8.7684211 | 10  |
| n      | 19          |             |             |       |           |     |

|    |         |    |        |           |          |
|----|---------|----|--------|-----------|----------|
| a1 | 3.861   | b1 | 0.137  | smodch y1 | 1.063273 |
| a2 | 3.294   | b2 | 0.123  | smodch y2 | 0.829426 |
| a3 | 2.09    | b3 | 0.077  | smodch y3 | 0.594962 |
| a4 | 800.632 | b4 | -5.763 | smodch y4 | 105.9817 |
| a5 | 8.305   | b5 | 0.046  | smodch y5 | 0.681545 |

|      |    |     |         |
|------|----|-----|---------|
| 2000 | 1  | t   | 25      |
| 2001 | 2  | pše | 7.286   |
| 2002 | 3  | ječ | 6.369   |
| 2003 | 4  | řep | 4.015   |
| 2004 | 5  | sra | 656.557 |
| 2005 | 6  | tep | 9.455   |
| 2006 | 7  |     |         |
| 2007 | 8  |     |         |
| 2008 | 9  |     |         |
| 2009 | 10 |     |         |
| 2010 | 11 |     |         |
| 2011 | 12 |     |         |
| 2012 | 13 |     |         |
| 2013 | 14 |     |         |
| 2014 | 15 |     |         |
| 2015 | 16 |     |         |
| 2016 | 17 |     |         |
| 2017 | 18 |     |         |
| 2018 | 19 |     |         |



|      |    |
|------|----|
| 2019 | 20 |
| 2020 | 21 |
| 2021 | 22 |
| 2022 | 23 |
| 2023 | 24 |
| 2024 | 25 |

| ti2  | y1t      | y2t      | y3t      | y4t      | y5t      | y'1    | y'2    |
|------|----------|----------|----------|----------|----------|--------|--------|
| 1    | 3.12     | 3.15     | 2.05     | 785      | 9.5      | 3.998  | 3.417  |
| 4    | 6.82     | 5.88     | 4.22     | 1550     | 16.2     | 4.135  | 3.54   |
| 9    | 11.52    | 9.84     | 5.61     | 2367     | 27       | 4.272  | 3.663  |
| 16   | 17.4     | 15.32    | 6.56     | 2324     | 33.6     | 4.409  | 3.786  |
| 25   | 29.65    | 23.6     | 14.8     | 3585     | 40       | 4.546  | 3.909  |
| 36   | 31.5     | 27.06    | 18.24    | 5130     | 45.6     | 4.683  | 4.032  |
| 49   | 34.16    | 28.21    | 21.63    | 5600     | 58.1     | 4.82   | 4.155  |
| 64   | 41.2     | 31.92    | 22.08    | 6760     | 74.4     | 4.957  | 4.278  |
| 81   | 54.09    | 43.56    | 28.26    | 6183     | 83.7     | 5.094  | 4.401  |
| 100  | 51.2     | 48.1     | 32.8     | 8060     | 87       | 5.231  | 4.524  |
| 121  | 58.85    | 49.39    | 30.14    | 10945    | 84.7     | 5.368  | 4.647  |
| 144  | 69.12    | 62.64    | 34.44    | 7560     | 103.2    | 5.505  | 4.77   |
| 169  | 57.59    | 53.69    | 32.89    | 9399     | 113.1    | 5.642  | 4.893  |
| 196  | 75.6     | 67.48    | 45.08    | 10766    | 117.6    | 5.779  | 5.016  |
| 225  | 99.9     | 85.05    | 57.15    | 11370    | 147      | 5.916  | 5.139  |
| 256  | 108.8    | 92.48    | 56.32    | 9280     | 152      | 6.053  | 5.262  |
| 289  | 117.13   | 93.67    | 60.98263 | 12546    | 151.3    | 6.19   | 5.385  |
| 324  | 105.66   | 93.42    | 52.38    | 12978    | 158.4    | 6.327  | 5.508  |
| 361  | 99.75    | 93.86    | 62.89    | 10697    | 190      | 6.464  | 5.631  |
| 2470 | 1073.06  | 928.32   | 588.5226 | 137885   | 1692.4   | 99.389 | 85.956 |
| 130  | 56.47684 | 48.85895 | 30.97488 | 7257.105 | 89.07368 | 5.231  | 4.524  |

**Predikce**

|           |          |           |          |
|-----------|----------|-----------|----------|
| student t | 1.714    | s' yn+1   | 1.0887   |
| s'y1      | 0.692116 | t*s'y1    | 1.186286 |
| s'y2      | 0.413181 | t*s'y2    | 0.708191 |
| s'y3      | 0.383639 | t*s'y3    | 0.657557 |
| s'y4      | 100.4343 | t*s'y4    | 172.1443 |
| s'y5      | 0.624952 | t*s'y5    | 1.071167 |
| levostr 1 | 6.099714 | pravostr1 | 8.472286 |
| levostr 2 | 5.660809 | pravostr2 | 7.077191 |
| levostr 3 | 3.357443 | pravostr3 | 4.672557 |
| levostr 4 | 484.4127 | pravostr4 | 828.7013 |
| levostr 5 | 8.383833 | pravostr5 | 10.52617 |



| y'3   | y'4      | y'5     | e1     | e2       |          |
|-------|----------|---------|--------|----------|----------|
| 2.167 | 794.869  | 8.351   |        | -0.878   | -0.267   |
| 2.244 | 789.106  | 8.397   |        | -0.725   | -0.6     |
| 2.321 | 783.343  | 8.443   |        | -0.432   | -0.383   |
| 2.398 | 777.58   | 8.489   |        | -0.059   | 0.044    |
| 2.475 | 771.817  | 8.535   |        | 1.384    | 0.811    |
| 2.552 | 766.054  | 8.581   |        | 0.567    | 0.478    |
| 2.629 | 760.291  | 8.627   |        | 0.06     | -0.125   |
| 2.706 | 754.528  | 8.673   |        | 0.193    | -0.288   |
| 2.783 | 748.765  | 8.719   |        | 0.916    | 0.439    |
| 2.86  | 743.002  | 8.765   |        | -0.111   | 0.286    |
| 2.937 | 737.239  | 8.811   |        | -0.018   | -0.157   |
| 3.014 | 731.476  | 8.857   |        | 0.255    | 0.45     |
| 3.091 | 725.713  | 8.903   |        | -1.212   | -0.763   |
| 3.168 | 719.95   | 8.949   |        | -0.379   | -0.196   |
| 3.245 | 714.187  | 8.995   |        | 0.744    | 0.531    |
| 3.322 | 708.424  | 9.041   |        | 0.747    | 0.518    |
| 3.399 | 702.661  | 9.087   |        | 0.7      | 0.125    |
| 3.476 | 696.898  | 9.133   |        | -0.457   | -0.318   |
| 3.553 | 691.135  | 9.179   |        | -1.214   | -0.691   |
| 54.34 | 14117.04 | 166.535 | suma e | 0.081    | -0.106   |
| 2.86  | 743.002  | 8.765   | RSS    | 9.577909 | 3.831454 |

|    | Pšenice ozimá (y1) | Ječmen jarní (y2) |
|----|--------------------|-------------------|
| r2 | 0.52933816         | 0.690588895       |
| r  | 0.727556293        | 0.831016784       |

| zdánlivá kor. | srážky       | teplota      |
|---------------|--------------|--------------|
| pšenice       | 0.014349899  | -0.158401134 |
| ječmen        | -0.111486542 | -0.124319355 |
| řepka         | 0.251920558  | -0.024539454 |

| r2      | srážky      | teplota     |
|---------|-------------|-------------|
| pšenice | 0.00020592  | 0.025090919 |
| ječmen  | 0.012429249 | 0.015455302 |
| řepka   | 0.063463968 | 0.000602185 |



| e3          | e4          | e5           | y1-y1prum  | y2-y2prum  | y3-y3prum  |
|-------------|-------------|--------------|------------|------------|------------|
| -0.117      | -9.869      | 1.149        | -2.1152632 | -1.3684211 | -0.8151165 |
| -0.134      | -14.106     | -0.297       | -1.8252632 | -1.5784211 | -0.7551165 |
| -0.451      | 5.657       | 0.557        | -1.3952632 | -1.2384211 | -0.9951165 |
| -0.758      | -196.58     | -0.089       | -0.8852632 | -0.6884211 | -1.2251165 |
| 0.485       | -54.817     | -0.535       | 0.6947368  | 0.2015789  | 0.0948835  |
| 0.488       | 88.946      | -0.981       | 0.0147368  | -0.0084211 | 0.1748835  |
| 0.461       | 39.709      | -0.327       | -0.3552632 | -0.4884211 | 0.2248835  |
| 0.054       | 90.472      | 0.627        | -0.0852632 | -0.5284211 | -0.1051165 |
| 0.357       | -61.765     | 0.581        | 0.7747368  | 0.3215789  | 0.2748835  |
| 0.42        | 62.998      | -0.065       | -0.1152632 | 0.2915789  | 0.4148835  |
| -0.197      | 257.761     | -1.111       | 0.1147368  | -0.0284211 | -0.1251165 |
| -0.144      | -101.476    | -0.257       | 0.5247368  | 0.7015789  | 0.0048835  |
| -0.561      | -2.713      | -0.203       | -0.8052632 | -0.3884211 | -0.3351165 |
| 0.052       | 49.05       | -0.549       | 0.1647368  | 0.3015789  | 0.3548835  |
| 0.565       | 43.813      | 0.805        | 1.4247368  | 1.1515789  | 0.9448835  |
| 0.198       | -128.424    | 0.459        | 1.5647368  | 1.2615789  | 0.6548835  |
| 0.188213689 | 35.339      | -0.187       | 1.6547368  | 0.9915789  | 0.7220972  |
| -0.566      | 24.102      | -0.333       | 0.6347368  | 0.6715789  | 0.0448835  |
| -0.243      | -128.135    | 0.821        | 0.0147368  | 0.4215789  | 0.4448835  |
| 0.097213689 | -0.038      | 0.065        |            |            |            |
| 2.952493393 | 183246.0264 | 7.138595 TSS | 20.349874  | 12.383053  | 6.3716424  |

| Řepka ozimá (y3) | Srážky (y4) | Teplota (y5) |
|------------------|-------------|--------------|
| 0.536619724      | 0.093640127 | 0.14620858   |
| 0.732543326      | 0.306006743 | 0.382372305  |



| y4-y4prum | y5-y5prum  |
|-----------|------------|
| 42        | 0.7315789  |
| 32        | -0.6684211 |
| 46        | 0.2315789  |
| -162      | -0.3684211 |
| -26       | -0.7684211 |
| 112       | -1.1684211 |
| 57        | -0.4684211 |
| 102       | 0.5315789  |
| -56       | 0.5315789  |
| 63        | -0.0684211 |
| 252       | -1.0684211 |
| -113      | -0.1684211 |
| -20       | -0.0684211 |
| 26        | -0.3684211 |
| 15        | 1.0315789  |
| -163      | 0.7315789  |
| -5        | 0.1315789  |
| -22       | 0.0315789  |
| -180      | 1.2315789  |

|        |           |
|--------|-----------|
| 202178 | 8.3610526 |
|--------|-----------|



| rok  | Pšenice ozimá<br>y1 | Ječmen jarní<br>y2 | Řepka ozimá<br>y3 | Srážky<br>y4 | Teplota<br>y5 | ti |
|------|---------------------|--------------------|-------------------|--------------|---------------|----|
| 2000 | 3.23                | 3.15               | 2.18              | 823          | 9.0           | 1  |
| 2001 | 3.86                | 2.93               | 2.21              | 995          | 7.5           | 2  |
| 2002 | 3.84                | 3.35               | 2.06              | 798          | 8.5           | 3  |
| 2003 | 4.02                | 3.96               | 1.74              | 628          | 7.9           | 4  |
| 2004 | 6.01                | 4.88               | 3.69              | 718          | 7.6           | 5  |
| 2005 | 5.12                | 4.20               | 3.05              | 871          | 7.4           | 6  |
| 2006 | 4.76                | 3.69               | 3.01              | 776          | 8.1           | 7  |
| 2007 | 4.94                | 3.36               | 3.11              | 868          | 8.8           | 8  |
| 2008 | 5.81                | 4.62               | 3.00              | 786          | 8.8           | 9  |
| 2009 | 5.34                | 4.29               | 3.26              | 871          | 8.2           | 10 |
| 2010 | 5.27                | 3.80               | 2.82              | 1163         | 7.0           | 11 |
| 2011 | 5.67                | 4.90               | 2.83              | 721          | 8.2           | 12 |
| 2012 | 4.37                | 4.42               | 2.95              | 755          | 8.1           | 13 |
| 2013 | 5.71                | 4.57               | 3.56              | 771          | 7.8           | 14 |
| 2014 | 6.61                | 5.55               | 3.91              | 814          | 9.2           | 15 |
| 2015 | 6.38                | 5.52               | 3.46              | 558          | 9.2           | 16 |
| 2016 | 6.52                | 5.38               | 3.44              | 833          | 8.5           | 17 |
| 2017 | 5.83                | 4.92               | 2.99              | 857          | 8.3           | 18 |
| 2018 | 5.24                | 4.85               | 3.51              | 641          | 9.2           | 19 |

|        |             |             |             |             |           |     |
|--------|-------------|-------------|-------------|-------------|-----------|-----|
| suma   | 98.53       | 82.34       | 56.78004729 | 15247       | 157.3     | 190 |
| průměr | 5.185789474 | 4.333684211 | 2.988423541 | 802.4736842 | 8.2789474 | 10  |
| n      | 19          |             |             |             |           |     |
| a1     | 3.925       | b1          | 0.126       | smodch y1   | 0.969715  |     |
| a2     | 3.2         | b2          | 0.112       | smodch y2   | 0.799376  |     |
| a3     | 2.28        | b3          | 0.071       | smodch y3   | 0.586655  |     |
| a4     | 851.895     | b4          | -4.942      | smodch y4   | 133.2255  |     |
| a5     | 7.882       | b5          | 0.04        | smodch y5   | 0.651135  |     |

**P**

|      |    |     |         |
|------|----|-----|---------|
| 2000 | 1  | t   | 25      |
| 2001 | 2  | pše | 7.075   |
| 2002 | 3  | ječ | 6       |
| 2003 | 4  | řep | 4.055   |
| 2004 | 5  | sra | 728.345 |
| 2005 | 6  | tep | 8.882   |
| 2006 | 7  |     |         |
| 2007 | 8  |     |         |
| 2008 | 9  |     |         |
| 2009 | 10 |     |         |
| 2010 | 11 |     |         |
| 2011 | 12 |     |         |
| 2012 | 13 |     |         |
| 2013 | 14 |     |         |
| 2014 | 15 |     |         |
| 2015 | 16 |     |         |
| 2016 | 17 |     |         |
| 2017 | 18 |     |         |
| 2018 | 19 |     |         |

|      |    |
|------|----|
| 2019 | 20 |
| 2020 | 21 |
| 2021 | 22 |
| 2022 | 23 |
| 2023 | 24 |
| 2024 | 25 |

| ti2  | y1t      | y2t      | y3t      | y4t      | y5t      | y'1    | y'2   |
|------|----------|----------|----------|----------|----------|--------|-------|
| 1    | 3.23     | 3.15     | 2.18     | 823      | 9        | 4.051  | 3.312 |
| 4    | 7.72     | 5.86     | 4.42     | 1990     | 15       | 4.177  | 3.424 |
| 9    | 11.52    | 10.05    | 6.18     | 2394     | 25.5     | 4.303  | 3.536 |
| 16   | 16.08    | 15.84    | 6.96     | 2512     | 31.6     | 4.429  | 3.648 |
| 25   | 30.05    | 24.4     | 18.45    | 3590     | 38       | 4.555  | 3.76  |
| 36   | 30.72    | 25.2     | 18.3     | 5226     | 44.4     | 4.681  | 3.872 |
| 49   | 33.32    | 25.83    | 21.06626 | 5432     | 56.7     | 4.807  | 3.984 |
| 64   | 39.52    | 26.88    | 24.88    | 6944     | 70.4     | 4.933  | 4.096 |
| 81   | 52.29    | 41.58    | 27       | 7074     | 79.2     | 5.059  | 4.208 |
| 100  | 53.4     | 42.9     | 32.6     | 8710     | 82       | 5.185  | 4.32  |
| 121  | 57.97    | 41.8     | 31.02    | 12793    | 77       | 5.311  | 4.432 |
| 144  | 68.04    | 58.8     | 33.96    | 8652     | 98.4     | 5.437  | 4.544 |
| 169  | 56.81    | 57.46    | 38.35    | 9815     | 105.3    | 5.563  | 4.656 |
| 196  | 79.94    | 63.98    | 49.84    | 10794    | 109.2    | 5.689  | 4.768 |
| 225  | 99.15    | 83.25    | 58.65    | 12210    | 138      | 5.815  | 4.88  |
| 256  | 102.08   | 88.32    | 55.36    | 8928     | 147.2    | 5.941  | 4.992 |
| 289  | 110.84   | 91.46    | 58.48989 | 14161    | 144.5    | 6.067  | 5.104 |
| 324  | 104.94   | 88.56    | 53.82    | 15426    | 149.4    | 6.193  | 5.216 |
| 361  | 99.56    | 92.15    | 66.69    | 12179    | 174.8    | 6.319  | 5.328 |
| 2470 | 1057.18  | 887.47   | 608.2162 | 149653   | 1595.6   | 98.515 | 82.08 |
| 130  | 55.64105 | 46.70895 | 32.01138 | 7876.474 | 83.97895 | 5.185  | 4.32  |

**'redikce**

|           |          |           |          |
|-----------|----------|-----------|----------|
| student t | 1.714    | s' yn+1   | 1.0887   |
| s'y1      | 0.62618  | t*s'y1    | 1.073272 |
| s'y2      | 0.451266 | t*s'y2    | 0.773469 |
| s'y3      | 0.413331 | t*s'y3    | 0.70845  |
| s'y4      | 130.0269 | t*s'y4    | 222.8661 |
| s'y5      | 0.608107 | t*s'y5    | 1.042296 |
| levostr 1 | 6.001728 | pravostr1 | 8.148272 |
| levostr 2 | 5.226531 | pravostr2 | 6.773469 |
| levostr 3 | 3.34655  | pravostr3 | 4.76345  |
| levostr 4 | 505.4789 | pravostr4 | 951.2111 |
| levostr 5 | 7.839704 | pravostr5 | 9.924296 |



| y'3   | y'4      | y'5     | e1     | e2       |        |
|-------|----------|---------|--------|----------|--------|
| 2.351 | 846.953  | 7.922   |        | -0.821   | -0.162 |
| 2.422 | 842.011  | 7.962   |        | -0.317   | -0.494 |
| 2.493 | 837.069  | 8.002   |        | -0.463   | -0.186 |
| 2.564 | 832.127  | 8.042   |        | -0.409   | 0.312  |
| 2.635 | 827.185  | 8.082   |        | 1.455    | 1.12   |
| 2.706 | 822.243  | 8.122   |        | 0.439    | 0.328  |
| 2.777 | 817.301  | 8.162   |        | -0.047   | -0.294 |
| 2.848 | 812.359  | 8.202   |        | 0.007    | -0.736 |
| 2.919 | 807.417  | 8.242   |        | 0.751    | 0.412  |
| 2.99  | 802.475  | 8.282   |        | 0.155    | -0.03  |
| 3.061 | 797.533  | 8.322   |        | -0.041   | -0.632 |
| 3.132 | 792.591  | 8.362   |        | 0.233    | 0.356  |
| 3.203 | 787.649  | 8.402   |        | -1.193   | -0.236 |
| 3.274 | 782.707  | 8.442   |        | 0.021    | -0.198 |
| 3.345 | 777.765  | 8.482   |        | 0.795    | 0.67   |
| 3.416 | 772.823  | 8.522   |        | 0.439    | 0.528  |
| 3.487 | 767.881  | 8.562   |        | 0.453    | 0.276  |
| 3.558 | 762.939  | 8.602   |        | -0.363   | -0.296 |
| 3.629 | 757.997  | 8.642   |        | -1.079   | -0.478 |
| 56.81 | 15247.03 | 157.358 | suma e | 0.015    | 0.26   |
| 2.99  | 802.475  | 8.282   | RSS    | 7.861835 | 4.304  |

|    | Pšenice ozimá (y1) | Ječmen jarní (y2) |
|----|--------------------|-------------------|
| r2 | 0.535524473        | 0.625805578       |
| r  | 0.731795376        | 0.791078743       |

| zdánlivá kor. | srážky       | teplota      |
|---------------|--------------|--------------|
| pšenice       | -0.003041182 | -0.110584703 |
| ječmen        | -0.491486191 | 0.106101058  |
| řepka         | -0.01283463  | 0.00575581   |

| r2      | srážky      | teplota     |
|---------|-------------|-------------|
| pšenice | 9.24879E-06 | 0.012228977 |
| ječmen  | 0.241558676 | 0.011257435 |
| řepka   | 0.000164728 | 3.31293E-05 |









| y4-y4prum  | y5-y5prum  |
|------------|------------|
| 20.526316  | 0.7210526  |
| 192.52632  | -0.7789474 |
| -4.4736842 | 0.2210526  |
| -174.47368 | -0.3789474 |
| -84.473684 | -0.6789474 |
| 68.526316  | -0.8789474 |
| -26.473684 | -0.1789474 |
| 65.526316  | 0.5210526  |
| -16.473684 | 0.5210526  |
| 68.526316  | -0.0789474 |
| 360.52632  | -1.2789474 |
| -81.473684 | -0.0789474 |
| -47.473684 | -0.1789474 |
| -31.473684 | -0.4789474 |
| 11.526316  | 0.9210526  |
| -244.47368 | 0.9210526  |
| 30.526316  | 0.2210526  |
| 54.526316  | 0.0210526  |
| -161.47368 | 0.9210526  |

|           |           |
|-----------|-----------|
| 319482.74 | 7.6315789 |
|-----------|-----------|

| rok  | Pšenice ozimá<br>y1 | Ječmen jarní<br>y2 | Řepka ozimá<br>y3 | Srážky<br>y4 | Teplota<br>y5 | ti |
|------|---------------------|--------------------|-------------------|--------------|---------------|----|
| 2000 | 4.50                | 4.39               | 2.24              | 698          | 9             | 1  |
| 2001 | 4.45                | 4.37               | 2.32              | 861          | 7.6           | 2  |
| 2002 | 4.01                | 4.21               | 2.13              | 733          | 8.5           | 3  |
| 2003 | 4.74                | 4.54               | 1.93              | 600          | 8             | 4  |
| 2004 | 6.55                | 5.60               | 4.01              | 642          | 7.6           | 5  |
| 2005 | 5.74                | 4.87               | 3.19              | 712          | 7.5           | 6  |
| 2006 | 5.23                | 4.27               | 3.31              | 738          | 8             | 7  |
| 2007 | 5.65                | 4.06               | 3.27              | 772          | 8.9           | 8  |
| 2008 | 6.53                | 5.49               | 3.23              | 659          | 8.9           | 9  |
| 2009 | 6.02                | 4.98               | 3.45              | 754          | 8.4           | 10 |
| 2010 | 5.59                | 4.58               | 2.94              | 955          | 7.2           | 11 |
| 2011 | 6.38                | 5.59               | 3.10              | 621          | 8.4           | 12 |
| 2012 | 4.85                | 4.81               | 3.01              | 683          | 8.3           | 13 |
| 2013 | 6.29                | 5.24               | 3.70              | 716          | 8             | 14 |
| 2014 | 7.29                | 6.24               | 4.19              | 659          | 9.4           | 15 |
| 2015 | 7.27                | 6.34               | 3.68              | 516          | 9.2           | 16 |
| 2016 | 7.21                | 6.16               | 3.72              | 684          | 8.6           | 17 |
| 2017 | 6.53                | 5.65               | 3.16              | 716          | 8.4           | 18 |
| 2018 | 5.93                | 5.32               | 3.58              | 556          | 9.5           | 19 |

|        |             |             |             |          |           |     |
|--------|-------------|-------------|-------------|----------|-----------|-----|
| suma   | 110.7660543 | 96.72460251 | 60.14495565 | 13275    | 159.4     | 190 |
| průměr | 5.829792329 | 5.090768553 | 3.165523982 | 698.6842 | 8.3894737 | 10  |
| n      | 19          |             |             |          |           |     |

|    |         |    |        |           |          |
|----|---------|----|--------|-----------|----------|
| a1 | 4.56    | b1 | 0.127  | smodch y1 | 0.993641 |
| a2 | 4.187   | b2 | 0.09   | smodch y2 | 0.717893 |
| a3 | 2.433   | b3 | 0.073  | smodch y3 | 0.63063  |
| a4 | 757.544 | b4 | -5.886 | smodch y4 | 100.0861 |
| a5 | 7.898   | b5 | 0.049  | smodch y5 | 0.657347 |

|      |    |     |         |
|------|----|-----|---------|
| 2000 | 1  | t   | 25      |
| 2001 | 2  | pše | 7.735   |
| 2002 | 3  | ječ | 6.437   |
| 2003 | 4  | řep | 4.258   |
| 2004 | 5  | sra | 610.394 |
| 2005 | 6  | tep | 9.123   |
| 2006 | 7  |     |         |
| 2007 | 8  |     |         |
| 2008 | 9  |     |         |
| 2009 | 10 |     |         |
| 2010 | 11 |     |         |
| 2011 | 12 |     |         |
| 2012 | 13 |     |         |
| 2013 | 14 |     |         |
| 2014 | 15 |     |         |
| 2015 | 16 |     |         |
| 2016 | 17 |     |         |
| 2017 | 18 |     |         |
| 2018 | 19 |     |         |

|      |    |
|------|----|
| 2019 | 20 |
| 2020 | 21 |
| 2021 | 22 |
| 2022 | 23 |
| 2023 | 24 |
| 2024 | 25 |

| ti2  | y1t      | y2t      | y3t      | y4t      | y5t      |  | y'1    | y'2    |
|------|----------|----------|----------|----------|----------|--|--------|--------|
| 1    | 4.5      | 4.39     | 2.24     | 698      | 9        |  | 4.687  | 4.277  |
| 4    | 8.9      | 8.74     | 4.64     | 1722     | 15.2     |  | 4.814  | 4.367  |
| 9    | 12.03    | 12.63    | 6.39     | 2199     | 25.5     |  | 4.941  | 4.457  |
| 16   | 18.96927 | 18.17792 | 7.718954 | 2400     | 32       |  | 5.068  | 4.547  |
| 25   | 32.72582 | 27.97599 | 20.06687 | 3210     | 38       |  | 5.195  | 4.637  |
| 36   | 34.4568  | 29.22946 | 19.12612 | 4272     | 45       |  | 5.322  | 4.727  |
| 49   | 36.59986 | 29.89997 | 23.14237 | 5166     | 56       |  | 5.449  | 4.817  |
| 64   | 45.16034 | 32.5122  | 26.1753  | 6176     | 71.2     |  | 5.576  | 4.907  |
| 81   | 58.8141  | 49.38294 | 29.03359 | 5931     | 80.1     |  | 5.703  | 4.997  |
| 100  | 60.22282 | 49.79495 | 34.45514 | 7540     | 84       |  | 5.83   | 5.087  |
| 121  | 61.48181 | 50.42435 | 32.34159 | 10505    | 79.2     |  | 5.957  | 5.177  |
| 144  | 76.53276 | 67.10147 | 37.20511 | 7452     | 100.8    |  | 6.084  | 5.267  |
| 169  | 63.02571 | 62.57905 | 39.09758 | 8879     | 107.9    |  | 6.211  | 5.357  |
| 196  | 88.09596 | 73.41765 | 51.74544 | 10024    | 112      |  | 6.338  | 5.447  |
| 225  | 109.4213 | 93.57676 | 62.89709 | 9885     | 141      |  | 6.465  | 5.537  |
| 256  | 116.3026 | 101.4653 | 58.8333  | 8256     | 147.2    |  | 6.592  | 5.627  |
| 289  | 122.5227 | 104.7175 | 63.16376 | 11628    | 146.2    |  | 6.719  | 5.717  |
| 324  | 117.6026 | 101.6316 | 56.93229 | 12888    | 151.2    |  | 6.846  | 5.807  |
| 361  | 112.726  | 101.1106 | 68.05613 | 10564    | 180.5    |  | 6.973  | 5.897  |
| 2470 | 1180.09  | 1018.758 | 643.2606 | 129395   | 1622     |  | 110.77 | 96.653 |
| 130  | 62.11003 | 53.61883 | 33.85582 | 6810.263 | 85.36842 |  | 5.83   | 5.087  |

**Predikce**

|           |          |           |          |
|-----------|----------|-----------|----------|
| student t | 1.714    | s' yn+1   | 1.0887   |
| s'y1      | 0.656242 | t*s'y1    | 1.124799 |
| s'y2      | 0.483559 | t*s'y2    | 0.82882  |
| s'y3      | 0.460658 | t*s'y3    | 0.789569 |
| s'y4      | 93.92997 | t*s'y4    | 160.996  |
| s'y5      | 0.590692 | t*s'y5    | 1.012446 |
| levostr 1 | 6.610201 | pravostr1 | 8.859799 |
| levostr 2 | 5.60818  | pravostr2 | 7.26582  |
| levostr 3 | 3.468431 | pravostr3 | 5.047569 |
| levostr 4 | 449.398  | pravostr4 | 771.39   |
| levostr 5 | 8.110554 | pravostr5 | 10.13545 |



| y'3    | y'4     | y'5     |        | e1           | e2     |              |
|--------|---------|---------|--------|--------------|--------|--------------|
| 2.506  | 751.658 | 7.947   |        |              | -0.187 | 0.113        |
| 2.579  | 745.772 | 7.996   |        |              | -0.364 | 0.003        |
| 2.652  | 739.886 | 8.045   |        |              | -0.931 | -0.247       |
| 2.725  | 734     | 8.094   |        | -0.325681743 |        | -0.002520728 |
| 2.798  | 728.114 | 8.143   |        | 1.350164371  |        | 0.958198013  |
| 2.871  | 722.228 | 8.192   |        | 0.420799476  |        | 0.144577224  |
| 2.944  | 716.342 | 8.241   |        | -0.220448858 |        | -0.545576107 |
| 3.017  | 710.456 | 8.29    |        | 0.069042387  |        | -0.842974689 |
| 3.09   | 704.57  | 8.339   |        | 0.831900524  |        | 0.489993072  |
| 3.163  | 698.684 | 8.388   |        | 0.192282366  |        | -0.107504807 |
| 3.236  | 692.798 | 8.437   |        | -0.367744468 |        | -0.592968232 |
| 3.309  | 686.912 | 8.486   |        | 0.293730218  |        | 0.324788766  |
| 3.382  | 681.026 | 8.535   |        | -1.362868296 |        | -0.543226923 |
| 3.455  | 675.14  | 8.584   |        | -0.045431464 |        | -0.202882344 |
| 3.528  | 669.254 | 8.633   |        | 0.829753815  |        | 0.701450491  |
| 3.601  | 663.368 | 8.682   |        | 0.676911861  |        | 0.714581714  |
| 3.674  | 657.482 | 8.731   |        | 0.488218153  |        | 0.442855529  |
| 3.747  | 651.596 | 8.78    |        | -0.312523466 |        | -0.160799827 |
| 3.82   | 645.71  | 8.829   |        | -1.040050616 |        | -0.57538864  |
| 60.097 | 13275   | 159.372 | suma e | -0.00394574  |        | 0.071602513  |
| 3.163  | 698.684 | 8.388   | RSS    | 8.56812784   |        | 4.62181478   |

|    | Pšenice ozimá (y1) | Ječmen jarní (y2) |
|----|--------------------|-------------------|
| r2 | 0.517880753        | 0.501780239       |
| r  | 0.719639322        | 0.708364482       |

| zdánlivá kor. | srážky       | teplota      |
|---------------|--------------|--------------|
| pšenice       | -0.232497889 | 0.028973171  |
| ječmen        | -0.493802226 | 0.138434067  |
| řepka         | -0.084206612 | -0.026189139 |

| r2      | srážky      | teplota     |
|---------|-------------|-------------|
| pšenice | 0.054055269 | 0.000839445 |
| ječmen  | 0.243840639 | 0.019163991 |
| řepka   | 0.007090754 | 0.000685871 |



| e3           | e4         | e5       |        | y1-y1prum  | y2-y2prum  | y3-y3prum  |
|--------------|------------|----------|--------|------------|------------|------------|
|              | -0.266     | -53.658  | 1.053  | -1.3297923 | -0.7007686 | -0.925524  |
|              | -0.259     | 115.228  | -0.396 | -1.3797923 | -0.7207686 | -0.845524  |
|              | -0.522     | -6.886   | 0.455  | -1.8197923 | -0.8807686 | -1.035524  |
| -0.795261443 | -134       | -0.094   |        | -1.0874741 | -0.5462893 | -1.2357854 |
| 1.215373092  | -86.114    | -0.543   |        | 0.715372   | 0.5044295  | 0.8478491  |
| 0.316687461  | -10.228    | -0.692   |        | -0.0869929 | -0.2191913 | 0.0221635  |
| 0.362053519  | 21.658     | -0.241   |        | -0.6012412 | -0.8193447 | 0.1405295  |
| 0.254912692  | 61.544     | 0.61     |        | -0.1847499 | -1.0267432 | 0.1063887  |
| 0.135954572  | -45.57     | 0.561    |        | 0.7051082  | 0.3962245  | 0.0604306  |
| 0.28251356   | 55.316     | 0.012    |        | 0.19249    | -0.1112734 | 0.2799896  |
| -0.295855085 | 262.202    | -1.237   |        | -0.2405368 | -0.5067368 | -0.2253791 |
| -0.208574101 | -65.912    | -0.086   |        | 0.5479379  | 0.5010202  | -0.0650981 |
| -0.374493971 | 1.974      | -0.235   |        | -0.9816606 | -0.2769955 | -0.158018  |
| 0.24110311   | 40.86      | -0.584   |        | 0.4627762  | 0.1533491  | 0.5305791  |
| 0.66513923   | -10.254    | 0.767    |        | 1.4649615  | 1.1476819  | 1.0276152  |
| 0.076080948  | -147.368   | 0.518    |        | 1.4391195  | 1.2508132  | 0.511557   |
| 0.041515248  | 26.518     | -0.131   |        | 1.3774258  | 1.069087   | 0.5499913  |
| -0.584094993 | 64.404     | -0.38    |        | 0.7036842  | 0.5554316  | -0.002619  |
| -0.238098185 | -89.71     | 0.671    |        | 0.1031571  | 0.2308428  | 0.4163778  |
| 0.047955654  | 0.004      | 0.028    |        |            |            |            |
| 4.091734811  | 160562.693 | 6.402506 | TSS    | 17.771802  | 9.2766589  | 7.1585022  |

| Řepka ozimá (y3) | Srážky (y4) | Teplota (y5) |
|------------------|-------------|--------------|
| 0.428409086      | 0.109519166 | 0.176833036  |
| 0.654529668      | 0.3309368   | 0.420515203  |





| y4-y4prum  | y5-y5prum  |
|------------|------------|
| -0.6842105 | 0.6105263  |
| 162.31579  | -0.7894737 |
| 34.315789  | 0.1105263  |
| -98.684211 | -0.3894737 |
| -56.684211 | -0.7894737 |
| 13.315789  | -0.8894737 |
| 39.315789  | -0.3894737 |
| 73.315789  | 0.5105263  |
| -39.684211 | 0.5105263  |
| 55.315789  | 0.0105263  |
| 256.31579  | -1.1894737 |
| -77.684211 | 0.0105263  |
| -15.684211 | -0.0894737 |
| 17.315789  | -0.3894737 |
| -39.684211 | 1.0105263  |
| -182.68421 | 0.8105263  |
| -14.684211 | 0.2105263  |
| 17.315789  | 0.0105263  |
| -142.68421 | 1.1105263  |

|           |           |
|-----------|-----------|
| 180310.11 | 7.7778947 |
|-----------|-----------|

| rok  | Pšenice ozimá<br>y1 | Ječmen jarní<br>y2 | Řepka ozimá<br>y3 | Srážky<br>y4 | Teplota<br>y5 | ti |
|------|---------------------|--------------------|-------------------|--------------|---------------|----|
| 2000 | 4.2                 | 3.9                | 1.8               | 634          | 9.4           | 1  |
| 2001 | 4.3                 | 4.4                | 2.4               | 731          | 8.1           | 2  |
| 2002 | 4.1                 | 4.0                | 2.3               | 813          | 8.8           | 3  |
| 2003 | 4.4                 | 3.6                | 2.1               | 378          | 8.4           | 4  |
| 2004 | 5.5                 | 5.3                | 2.9               | 635          | 8.1           | 5  |
| 2005 | 5.3                 | 4.9                | 2.8               | 662          | 8             | 6  |
| 2006 | 4.8                 | 3.9                | 3.0               | 560          | 8.6           | 7  |
| 2007 | 5.2                 | 4.2                | 3.3               | 715          | 9.3           | 8  |
| 2008 | 5.1                 | 4.8                | 3.3               | 610          | 8.9           | 9  |
| 2009 | 4.5                 | 4.6                | 3.2               | 687          | 8.6           | 10 |
| 2010 | 4.9                 | 4.9                | 2.9               | 879          | 7.2           | 11 |
| 2011 | 5.3                 | 5.0                | 3.1               | 618          | 8.8           | 12 |
| 2012 | 5.5                 | 5.2                | 2.3               | 678          | 8.5           | 13 |
| 2013 | 5.4                 | 4.5                | 3.2               | 745          | 7.9           | 14 |
| 2014 | 5.2                 | 4.9                | 3.0               | 606          | 9.5           | 15 |
| 2015 | 5.6                 | 4.8                | 3.3               | 591          | 9.5           | 16 |
| 2016 | 5.5                 | 5.1                | 2.7               | 655          | 8.9           | 17 |
| 2017 | 5.7                 | 5.3                | 2.5               | 667          | 8.9           | 18 |
| 2018 | 5.3                 | 4.9                | 1.7               | 438          | 9.7           | 19 |

|        |             |             |             |          |           |     |
|--------|-------------|-------------|-------------|----------|-----------|-----|
| suma   | 95.8        | 88.09739298 | 51.81248351 | 12302    | 165.1     | 190 |
| průměr | 5.042105263 | 4.636704893 | 2.726972816 | 647.4737 | 8.6894737 | 10  |
| n      | 19          |             |             |          |           |     |

|    |         |    |        |           |          |
|----|---------|----|--------|-----------|----------|
| a1 | 4.356   | b1 | 0.069  | smodch y1 | 0.510246 |
| a2 | 4.061   | b2 | 0.058  | smodch y2 | 0.513033 |
| a3 | 2.57    | b3 | 0.016  | smodch y3 | 0.505595 |
| a4 | 673.579 | b4 | -2.611 | smodch y4 | 114.7124 |
| a5 | 8.339   | b5 | 0.035  | smodch y5 | 0.646267 |

|      |    |     |         |
|------|----|-----|---------|
| 2000 | 1  | t   | 25      |
| 2001 | 2  | pše | 6.081   |
| 2002 | 3  | ječ | 5.511   |
| 2003 | 4  | řep | 2.97    |
| 2004 | 5  | sra | 608.304 |
| 2005 | 6  | tep | 9.214   |
| 2006 | 7  |     |         |
| 2007 | 8  |     |         |
| 2008 | 9  |     |         |
| 2009 | 10 |     |         |
| 2010 | 11 |     |         |
| 2011 | 12 |     |         |
| 2012 | 13 |     |         |
| 2013 | 14 |     |         |
| 2014 | 15 |     |         |
| 2015 | 16 |     |         |
| 2016 | 17 |     |         |
| 2017 | 18 |     |         |
| 2018 | 19 |     |         |

|      |    |
|------|----|
| 2019 | 20 |
| 2020 | 21 |
| 2021 | 22 |
| 2022 | 23 |
| 2023 | 24 |
| 2024 | 25 |

| ti2  | y1t      | y2t      | y3t      | y4t      | y5t      | y'1    | y'2    |
|------|----------|----------|----------|----------|----------|--------|--------|
| 1    | 4.2      | 3.9      | 1.8      | 634      | 9.4      | 4.425  | 4.119  |
| 4    | 8.6      | 8.74     | 4.8      | 1462     | 16.2     | 4.494  | 4.177  |
| 9    | 12.3     | 12       | 6.9      | 2439     | 26.4     | 4.563  | 4.235  |
| 16   | 17.6     | 14.4     | 8.4      | 1512     | 33.6     | 4.632  | 4.293  |
| 25   | 27.5     | 26.5     | 14.5     | 3175     | 40.5     | 4.701  | 4.351  |
| 36   | 31.8     | 29.4     | 16.8     | 3972     | 48       | 4.77   | 4.409  |
| 49   | 33.6     | 27.15248 | 21       | 3920     | 60.2     | 4.839  | 4.467  |
| 64   | 41.6     | 33.6     | 26.1753  | 5720     | 74.4     | 4.908  | 4.525  |
| 81   | 45.9     | 43.2     | 29.7     | 5490     | 80.1     | 4.977  | 4.583  |
| 100  | 45       | 45.83647 | 32       | 6870     | 86       | 5.046  | 4.641  |
| 121  | 53.9     | 53.9     | 32.34159 | 9669     | 79.2     | 5.115  | 4.699  |
| 144  | 63.6     | 60       | 37.20511 | 7416     | 105.6    | 5.184  | 4.757  |
| 169  | 71.5     | 67.6     | 29.9     | 8814     | 110.5    | 5.253  | 4.815  |
| 196  | 75.6     | 63       | 44.8     | 10430    | 110.6    | 5.322  | 4.873  |
| 225  | 78       | 73.5     | 45       | 9090     | 142.5    | 5.391  | 4.931  |
| 256  | 89.6     | 76.8     | 52.8     | 9456     | 152      | 5.46   | 4.989  |
| 289  | 93.5     | 86.7     | 45.9     | 11135    | 151.3    | 5.529  | 5.047  |
| 324  | 102.6    | 95.4     | 45       | 12006    | 160.2    | 5.598  | 5.105  |
| 361  | 100.7    | 92.43157 | 32.3     | 8322     | 184.3    | 5.667  | 5.163  |
| 2470 | 997.1    | 914.0605 | 527.322  | 121532   | 1671     | 95.874 | 88.179 |
| 130  | 52.47895 | 48.10845 | 27.75379 | 6396.421 | 87.94737 | 5.046  | 4.641  |

### Predikce

|           |          |           |          |
|-----------|----------|-----------|----------|
| student t | 1.714    | s' yn+1   | 1.0887   |
| s'y1      | 0.313289 | t*s'y1    | 0.536978 |
| s'y2      | 0.383486 | t*s'y2    | 0.657295 |
| s'y3      | 0.49665  | t*s'y3    | 0.851259 |
| s'y4      | 113.6837 | t*s'y4    | 194.8539 |
| s'y5      | 0.61255  | t*s'y5    | 1.04991  |
| levostr 1 | 5.544022 | pravostr1 | 6.617978 |
| levostr 2 | 4.853705 | pravostr2 | 6.168295 |
| levostr 3 | 2.118741 | pravostr3 | 3.821259 |
| levostr 4 | 413.4501 | pravostr4 | 803.1579 |
| levostr 5 | 8.16409  | pravostr5 | 10.26391 |



| y'3   | y'4      | y'5     | e1     | e2       |              |
|-------|----------|---------|--------|----------|--------------|
| 2.586 | 670.968  | 8.374   |        | -0.225   | -0.219       |
| 2.602 | 668.357  | 8.409   |        | -0.194   | 0.193        |
| 2.618 | 665.746  | 8.444   |        | -0.463   | -0.235       |
| 2.634 | 663.135  | 8.479   |        | -0.232   | -0.693       |
| 2.65  | 660.524  | 8.514   |        | 0.799    | 0.949        |
| 2.666 | 657.913  | 8.549   |        | 0.53     | 0.491        |
| 2.682 | 655.302  | 8.584   |        | -0.039   | -0.588073807 |
| 2.698 | 652.691  | 8.619   |        | 0.292    | -0.325       |
| 2.714 | 650.08   | 8.654   |        | 0.123    | 0.217        |
| 2.73  | 647.469  | 8.689   |        | -0.546   | -0.057352635 |
| 2.746 | 644.858  | 8.724   |        | -0.215   | 0.201        |
| 2.762 | 642.247  | 8.759   |        | 0.116    | 0.243        |
| 2.778 | 639.636  | 8.794   |        | 0.247    | 0.385        |
| 2.794 | 637.025  | 8.829   |        | 0.078    | -0.373       |
| 2.81  | 634.414  | 8.864   |        | -0.191   | -0.031       |
| 2.826 | 631.803  | 8.899   |        | 0.14     | -0.189       |
| 2.842 | 629.192  | 8.934   |        | -0.029   | 0.053        |
| 2.858 | 626.581  | 8.969   |        | 0.102    | 0.195        |
| 2.874 | 623.97   | 9.004   |        | -0.367   | -0.298180582 |
| 51.87 | 12301.91 | 165.091 | suma e | -0.074   | -0.081607024 |
| 2.73  | 647.469  | 8.689   | RSS    | 2.004574 | 2.817431787  |

|    | Pšenice ozimá (y1) | Ječmen jarní (y2) |
|----|--------------------|-------------------|
| r2 | 0.572249483        | 0.405309825       |
| r  | 0.756471733        | 0.636639478       |

| zdánlivá kor. | srážky      | teplota      |
|---------------|-------------|--------------|
| pšenice       | 0.010816964 | -0.209274188 |
| ječmen        | 0.339127255 | -0.357594787 |
| řepka         | 0.348294826 | -0.253090916 |

| r2      | srážky      | teplota     |
|---------|-------------|-------------|
| pšenice | 0.000117007 | 0.043795686 |
| ječmen  | 0.115007295 | 0.127874031 |
| řepka   | 0.121309286 | 0.064055012 |





| e3           | e4          | e5       |        | y1-y1prum  | y2-y2prum  | y3-y3prum  |
|--------------|-------------|----------|--------|------------|------------|------------|
|              | -0.786      | -36.968  | 1.026  | -0.8421053 | -0.7367049 | -0.9269728 |
|              | -0.202      | 62.643   | -0.309 | -0.7421053 | -0.2667049 | -0.3269728 |
|              | -0.318      | 147.254  | 0.356  | -0.9421053 | -0.6367049 | -0.4269728 |
|              | -0.534      | -285.135 | -0.079 | -0.6421053 | -1.0367049 | -0.6269728 |
|              | 0.25        | -25.524  | -0.414 | 0.4578947  | 0.6632951  | 0.1730272  |
|              | 0.134       | 4.087    | -0.549 | 0.2578947  | 0.2632951  | 0.0730272  |
|              | 0.318       | -95.302  | 0.016  | -0.2421053 | -0.7577787 | 0.2730272  |
| 0.573912692  | 62.309      | 0.681    |        | 0.1578947  | -0.4367049 | 0.5449399  |
| 0.586        | -40.08      | 0.246    |        | 0.0578947  | 0.1632951  | 0.5730272  |
| 0.47         | 39.531      | -0.089   |        | -0.5421053 | -0.0530575 | 0.4730272  |
| 0.194144915  | 234.142     | -1.524   |        | -0.1421053 | 0.2632951  | 0.2131721  |
| 0.338425899  | -24.247     | 0.041    |        | 0.2578947  | 0.3632951  | 0.3734531  |
| -0.478       | 38.364      | -0.294   |        | 0.4578947  | 0.5632951  | -0.4269728 |
| 0.406        | 107.975     | -0.929   |        | 0.3578947  | -0.1367049 | 0.4730272  |
| 0.19         | -28.414     | 0.636    |        | 0.1578947  | 0.2632951  | 0.2730272  |
| 0.474        | -40.803     | 0.601    |        | 0.5578947  | 0.1632951  | 0.5730272  |
| -0.142       | 25.808      | -0.034   |        | 0.4578947  | 0.4632951  | -0.0269728 |
| -0.358       | 40.419      | -0.069   |        | 0.6578947  | 0.6632951  | -0.2269728 |
| -1.174       | -185.97     | 0.696    |        | 0.2578947  | 0.2281145  | -1.0269728 |
| -0.057516494 | 0.089       | 0.009    |        |            |            |            |
| 4.453056116  | 232976.2742 | 6.816149 | TSS    | 4.6863158  | 4.7376464  | 4.6012715  |

| Řepka ozimá (y3) | Srážky (y4) | Teplota (y5) |
|------------------|-------------|--------------|
| 0.032211829      | 0.016399774 | 0.093343384  |
| 0.179476541      | 0.128061603 | 0.305521495  |



| y4-y4prum  | y5-y5prum  |
|------------|------------|
| -13.473684 | 0.7105263  |
| 83.526316  | -0.5894737 |
| 165.52632  | 0.1105263  |
| -269.47368 | -0.2894737 |
| -12.473684 | -0.5894737 |
| 14.526316  | -0.6894737 |
| -87.473684 | -0.0894737 |
| 67.526316  | 0.6105263  |
| -37.473684 | 0.2105263  |
| 39.526316  | -0.0894737 |
| 231.52632  | -1.4894737 |
| -29.473684 | 0.1105263  |
| 30.526316  | -0.1894737 |
| 97.526316  | -0.7894737 |
| -41.473684 | 0.8105263  |
| -56.473684 | 0.8105263  |
| 7.5263158  | 0.2105263  |
| 19.526316  | 0.2105263  |
| -209.47368 | 1.0105263  |

|           |           |
|-----------|-----------|
| 236860.74 | 7.5178947 |
|-----------|-----------|

| rok  | Pšenice ozimá<br>y1 | Ječmen jarní<br>y2 | Řepka ozimá<br>y3 | Srážky<br>y4 | Teplota<br>y5 | ti |
|------|---------------------|--------------------|-------------------|--------------|---------------|----|
| 2000 | 3.81                | 3.88               | 1.99              | 744          | 8             | 1  |
| 2001 | 4.31                | 4.01               | 2.34              | 829          | 6.9           | 2  |
| 2002 | 4.23                | 4.00               | 2.12              | 957          | 7.5           | 3  |
| 2003 | 4.11                | 3.97               | 1.05              | 513          | 7.2           | 4  |
| 2004 | 5.53                | 4.10               | 3.22              | 841          | 6.6           | 5  |
| 2005 | 4.67                | 3.72               | 2.94              | 770          | 6.8           | 6  |
| 2006 | 4.28                | 3.59               | 2.63              | 759          | 7.2           | 7  |
| 2007 | 5.02                | 3.52               | 3.07              | 931          | 7.9           | 8  |
| 2008 | 5.19                | 4.12               | 2.78              | 723          | 7.6           | 9  |
| 2009 | 4.94                | 3.65               | 3.10              | 788          | 7.3           | 10 |
| 2010 | 4.78                | 3.93               | 2.86              | 864          | 5.9           | 11 |
| 2011 | 4.81                | 4.66               | 2.70              | 694          | 7.5           | 12 |
| 2012 | 4.66                | 4.00               | 3.17              | 729          | 6.9           | 13 |
| 2013 | 5.13                | 4.41               | 3.25              | 759          | 6.6           | 14 |
| 2014 | 6.43                | 5.25               | 3.05              | 665          | 8.3           | 15 |
| 2015 | 6.10                | 5.24               | 3.37              | 640          | 8.2           | 16 |
| 2016 | 5.86                | 3.83               | 2.25              | 690          | 7.5           | 17 |
| 2017 | 5.52                | 4.67               | 3.68              | 792          | 7.5           | 18 |
| 2018 | 5.85                | 5.07               | 3.07              | 576          | 8.3           | 19 |

|        |             |             |             |           |           |     |
|--------|-------------|-------------|-------------|-----------|-----------|-----|
| suma   | 95.23167405 | 79.6188586  | 52.64       | 14264     | 139.7     | 190 |
| průměr | 5.012193371 | 4.190466242 | 2.770526316 | 750.7368  | 7.3526316 | 10  |
| n      | 19          |             |             |           |           |     |
| a1     | 4           | b1          | 0.102       | smodch y1 | 0.723661  |     |
| a2     | 3.56        | b2          | 0.06        | smodch y2 | 0.541594  |     |
| a3     | 2.129       | b3          | 0.064       | smodch y3 | 0.608025  |     |
| a4     | 825.509     | b4          | -7.477      | smodch y4 | 110.7047  |     |
| a5     | 7.04        | b5          | 0.031       | smodch y5 | 0.640632  |     |

|      |    |     |         |
|------|----|-----|---------|
| 2000 | 1  | t   | 25      |
| 2001 | 2  | pše | 6.55    |
| 2002 | 3  | ječ | 5.06    |
| 2003 | 4  | řep | 3.729   |
| 2004 | 5  | sra | 638.584 |
| 2005 | 6  | tep | 7.815   |
| 2006 | 7  |     |         |
| 2007 | 8  |     |         |
| 2008 | 9  |     |         |
| 2009 | 10 |     |         |
| 2010 | 11 |     |         |
| 2011 | 12 |     |         |
| 2012 | 13 |     |         |
| 2013 | 14 |     |         |
| 2014 | 15 |     |         |
| 2015 | 16 |     |         |
| 2016 | 17 |     |         |
| 2017 | 18 |     |         |
| 2018 | 19 |     |         |

|      |    |
|------|----|
| 2019 | 20 |
| 2020 | 21 |
| 2021 | 22 |
| 2022 | 23 |
| 2023 | 24 |

| ti2  | y1t      | y2t      | y3t      | y4t      | y5t      | y'1   | y'2   |
|------|----------|----------|----------|----------|----------|-------|-------|
| 1    | 3.81     | 3.88     | 1.99     | 744      | 8        | 4.102 | 3.62  |
| 4    | 8.62     | 8.02     | 4.68     | 1658     | 13.8     | 4.204 | 3.68  |
| 9    | 12.69    | 12       | 6.36     | 2871     | 22.5     | 4.306 | 3.74  |
| 16   | 16.44    | 15.88    | 4.2      | 2052     | 28.8     | 4.408 | 3.8   |
| 25   | 27.65    | 20.5     | 16.1     | 4205     | 33       | 4.51  | 3.86  |
| 36   | 28.02    | 22.32    | 17.64    | 4620     | 40.8     | 4.612 | 3.92  |
| 49   | 29.96    | 25.13    | 18.41    | 5313     | 50.4     | 4.714 | 3.98  |
| 64   | 40.16    | 28.16    | 24.56    | 7448     | 63.2     | 4.816 | 4.04  |
| 81   | 46.71    | 37.08    | 25.02    | 6507     | 68.4     | 4.918 | 4.1   |
| 100  | 49.4     | 36.5     | 31       | 7880     | 73       | 5.02  | 4.16  |
| 121  | 52.59841 | 43.23    | 31.46    | 9504     | 64.9     | 5.122 | 4.22  |
| 144  | 57.72    | 55.9063  | 32.4     | 8328     | 90       | 5.224 | 4.28  |
| 169  | 60.58    | 52       | 41.21    | 9477     | 89.7     | 5.326 | 4.34  |
| 196  | 71.82    | 61.74    | 45.5     | 10626    | 92.4     | 5.428 | 4.4   |
| 225  | 96.45    | 78.75    | 45.75    | 9975     | 124.5    | 5.53  | 4.46  |
| 256  | 97.6     | 83.84    | 53.92    | 10240    | 131.2    | 5.632 | 4.52  |
| 289  | 99.62    | 65.11    | 38.25    | 11730    | 127.5    | 5.734 | 4.58  |
| 324  | 99.36    | 84.06    | 66.24    | 14256    | 135      | 5.836 | 4.64  |
| 361  | 111.15   | 96.33    | 58.33    | 10944    | 157.7    | 5.938 | 4.7   |
| 2470 | 1010.358 | 830.4363 | 563.02   | 138378   | 1414.8   | 95.38 | 79.04 |
| 130  | 53.17676 | 43.70717 | 29.63263 | 7283.053 | 74.46316 | 5.02  | 4.16  |

### Predikce

|           |          |           |          |
|-----------|----------|-----------|----------|
| student t | 1.714    | s' yn+1   | 1.0887   |
| s'y1      | 0.407782 | t*s'y1    | 0.698938 |
| s'y2      | 0.412228 | t*s'y2    | 0.706559 |
| s'y3      | 0.476866 | t*s'y3    | 0.817349 |
| s'y4      | 101.6271 | t*s'y4    | 174.1888 |
| s'y5      | 0.613839 | t*s'y5    | 1.052121 |
| levostr 1 | 5.851062 | pravostr1 | 7.248938 |
| levostr 2 | 4.353441 | pravostr2 | 5.766559 |
| levostr 3 | 2.911651 | pravostr3 | 4.546349 |
| levostr 4 | 464.3952 | pravostr4 | 812.7728 |
| levostr 5 | 6.762879 | pravostr5 | 8.867121 |



| y'3    | y'4      | y'5    | e1     | e2          |             |
|--------|----------|--------|--------|-------------|-------------|
| 2.193  | 818.032  | 7.071  |        | -0.292      | 0.26        |
| 2.257  | 810.555  | 7.102  |        | 0.106       | 0.33        |
| 2.321  | 803.078  | 7.133  |        | -0.076      | 0.26        |
| 2.385  | 795.601  | 7.164  |        | -0.298      | 0.17        |
| 2.449  | 788.124  | 7.195  |        | 1.02        | 0.24        |
| 2.513  | 780.647  | 7.226  |        | 0.058       | -0.2        |
| 2.577  | 773.17   | 7.257  |        | -0.434      | -0.39       |
| 2.641  | 765.693  | 7.288  |        | 0.204       | -0.52       |
| 2.705  | 758.216  | 7.319  |        | 0.272       | 0.02        |
| 2.769  | 750.739  | 7.35   |        | -0.08       | -0.51       |
| 2.833  | 743.262  | 7.381  |        | -0.34032595 | -0.29       |
| 2.897  | 735.785  | 7.412  |        | -0.414      | 0.378858599 |
| 2.961  | 728.308  | 7.443  |        | -0.666      | -0.34       |
| 3.025  | 720.831  | 7.474  |        | -0.298      | 0.01        |
| 3.089  | 713.354  | 7.505  |        | 0.9         | 0.79        |
| 3.153  | 705.877  | 7.536  |        | 0.468       | 0.72        |
| 3.217  | 698.4    | 7.567  |        | 0.126       | -0.75       |
| 3.281  | 690.923  | 7.598  |        | -0.316      | 0.03        |
| 3.345  | 683.446  | 7.629  |        | -0.088      | 0.37        |
| 52.611 | 14264.04 | 139.65 | suma e | -0.14832595 | 0.578858599 |
| 2.769  | 750.739  | 7.35   | RSS    | 3.517277753 | 3.239733838 |

|    | Pšenice ozimá (y1) | Ječmen jarní (y2) |
|----|--------------------|-------------------|
| r2 | 0.626867135        | 0.386393622       |
| r  | 0.791749414        | 0.62160568        |

| zdánlivá kor. | srážky       | teplota      |
|---------------|--------------|--------------|
| pšenice       | 0.053021309  | 0.274692165  |
| ječmen        | -0.349457294 | 0.423919286  |
| řepka         | 0.626804655  | -0.206041992 |

| r2      | srážky      | teplota     |
|---------|-------------|-------------|
| pšenice | 0.002811259 | 0.075455786 |
| ječmen  | 0.1221204   | 0.179707561 |
| řepka   | 0.392884076 | 0.042453303 |





| e3       | e4          | e5          | y1-y1prum  | y2-y2prum  | y3-y3prum  |
|----------|-------------|-------------|------------|------------|------------|
| -0.203   | -74.032     | 0.929       | -1.2021934 | -0.3104662 | -0.7805263 |
| 0.083    | 18.445      | -0.202      | -0.7021934 | -0.1804662 | -0.4305263 |
| -0.201   | 153.922     | 0.367       | -0.7821934 | -0.1904662 | -0.6505263 |
| -1.335   | -282.601    | 0.036       | -0.9021934 | -0.2204662 | -1.7205263 |
| 0.771    | 52.876      | -0.595      | 0.5178066  | -0.0904662 | 0.4494737  |
| 0.427    | -10.647     | -0.426      | -0.3421934 | -0.4704662 | 0.1694737  |
| 0.053    | -14.17      | -0.057      | -0.7321934 | -0.6004662 | -0.1405263 |
| 0.429    | 165.307     | 0.612       | 0.0078066  | -0.6704662 | 0.2994737  |
| 0.075    | -35.216     | 0.281       | 0.1778066  | -0.0704662 | 0.0094737  |
| 0.331    | 37.261      | -0.05       | -0.0721934 | -0.5404662 | 0.3294737  |
| 0.027    | 120.738     | -1.481      | -0.2305193 | -0.2604662 | 0.0894737  |
| -0.197   | -41.785     | 0.088       | -0.2021934 | 0.4683924  | -0.0705263 |
| 0.209    | 0.692       | -0.543      | -0.3521934 | -0.1904662 | 0.3994737  |
| 0.225    | 38.169      | -0.874      | 0.1178066  | 0.2195338  | 0.4794737  |
| -0.039   | -48.354     | 0.795       | 1.4178066  | 1.0595338  | 0.2794737  |
| 0.217    | -65.877     | 0.664       | 1.0878066  | 1.0495338  | 0.5994737  |
| -0.967   | -8.4        | -0.067      | 0.8478066  | -0.3604662 | -0.5205263 |
| 0.399    | 101.077     | -0.098      | 0.5078066  | 0.4795338  | 0.9094737  |
| -0.275   | -107.446    | 0.671       | 0.8378066  | 0.8795338  | 0.2994737  |
| 0.029    | -0.041      | 0.05        |            |            |            |
| 4.301899 | 188731.8878 | 6.83167 TSS | 9.4263413  | 5.2798243  | 6.6544947  |

| Řepka ozimá (y3) | Srážky (y4) | Teplota (y5) |
|------------------|-------------|--------------|
| 0.353534841      | 0.144459846 | 0.075222784  |
| 0.594587959      | 0.380078736 | 0.274267724  |



| y4-y4prum  | y5-y5prum  |
|------------|------------|
| -6.7368421 | 0.6473684  |
| 78.263158  | -0.4526316 |
| 206.26316  | 0.1473684  |
| -237.73684 | -0.1526316 |
| 90.263158  | -0.7526316 |
| 19.263158  | -0.5526316 |
| 8.2631579  | -0.1526316 |
| 180.26316  | 0.5473684  |
| -27.736842 | 0.2473684  |
| 37.263158  | -0.0526316 |
| 113.26316  | -1.4526316 |
| -56.736842 | 0.1473684  |
| -21.736842 | -0.4526316 |
| 8.2631579  | -0.7526316 |
| -85.736842 | 0.9473684  |
| -110.73684 | 0.8473684  |
| -60.736842 | 0.1473684  |
| 41.263158  | 0.1473684  |
| -174.73684 | 0.9473684  |
| 220599.68  | 7.3873684  |

| rok  | Pšenice ozimá<br>y1 | Ječmen jarní<br>y2 | Řepka ozimá<br>y3 | Srážky<br>y4 | Teplota<br>y5 | ti |
|------|---------------------|--------------------|-------------------|--------------|---------------|----|
| 2000 | 3.21                | 3.16               | 2.14              | 681          | 8.6           | 1  |
| 2001 | 3.77                | 2.88               | 2.16              | 752          | 7.6           | 2  |
| 2002 | 3.84                | 3.31               | 2.02              | 1012         | 8.3           | 3  |
| 2003 | 3.82                | 3.74               | 1.65              | 378          | 8.4           | 4  |
| 2004 | 5.79                | 4.56               | 3.13              | 635          | 8.1           | 5  |
| 2005 | 4.81                | 3.81               | 3.01              | 662          | 8             | 6  |
| 2006 | 4.37                | 3.24               | 3.06              | 560          | 8.6           | 7  |
| 2007 | 4.90                | 3.45               | 3.00              | 715          | 9.3           | 8  |
| 2008 | 5.83                | 4.27               | 2.84              | 610          | 8.9           | 9  |
| 2009 | 4.92                | 3.80               | 3.12              | 687          | 8.6           | 10 |
| 2010 | 4.30                | 3.77               | 2.98              | 879          | 7.2           | 11 |
| 2011 | 5.55                | 4.81               | 2.96              | 618          | 8.8           | 12 |
| 2012 | 4.86                | 4.34               | 3.00              | 678          | 8.5           | 13 |
| 2013 | 5.98                | 4.35               | 3.62              | 745          | 7.9           | 14 |
| 2014 | 6.71                | 5.12               | 3.87              | 606          | 9.5           | 15 |
| 2015 | 6.26                | 4.82               | 3.56              | 591          | 9.5           | 16 |
| 2016 | 6.35                | 4.85               | 3.34              | 655          | 8.9           | 17 |
| 2017 | 5.67                | 4.59               | 3.05              | 667          | 8.9           | 18 |
| 2018 | 5.73                | 5.07               | 3.51              | 438          | 9.7           | 19 |

|        |             |             |             |          |           |     |
|--------|-------------|-------------|-------------|----------|-----------|-----|
| suma   | 96.67       | 77.94024496 | 56.02115901 | 12569    | 163.3     | 190 |
| průměr | 5.087894737 | 4.102118156 | 2.948482053 | 661.5263 | 8.5947368 | 10  |
| n      | 19          |             |             |          |           |     |

|    |         |    |        |           |          |
|----|---------|----|--------|-----------|----------|
| a1 | 3.674   | b1 | 0.141  | smodch y1 | 1.00441  |
| a2 | 3.074   | b2 | 0.103  | smodch y2 | 0.696741 |
| a3 | 2.138   | b3 | 0.081  | smodch y3 | 0.58087  |
| a4 | 722.439 | b4 | -6.091 | smodch y4 | 138.1386 |
| a5 | 7.986   | b5 | 0.061  | smodch y5 | 0.659523 |

|      |    |     |         |
|------|----|-----|---------|
| 2000 | 1  | t   | 25      |
| 2001 | 2  | pše | 7.199   |
| 2002 | 3  | ječ | 5.649   |
| 2003 | 4  | řep | 4.163   |
| 2004 | 5  | sra | 570.164 |
| 2005 | 6  | tep | 9.511   |
| 2006 | 7  |     |         |
| 2007 | 8  |     |         |
| 2008 | 9  |     |         |
| 2009 | 10 |     |         |
| 2010 | 11 |     |         |
| 2011 | 12 |     |         |
| 2012 | 13 |     |         |
| 2013 | 14 |     |         |
| 2014 | 15 |     |         |
| 2015 | 16 |     |         |
| 2016 | 17 |     |         |
| 2017 | 18 |     |         |
| 2018 | 19 |     |         |

|      |    |
|------|----|
| 2019 | 20 |
| 2020 | 21 |
| 2021 | 22 |
| 2022 | 23 |
| 2023 | 24 |
| 2024 | 25 |

| ti2  | y1t      | y2t      | y3t      | y4t      | y5t      | y'1    | y'2    |
|------|----------|----------|----------|----------|----------|--------|--------|
| 1    | 3.21     | 3.16     | 2.14     | 681      | 8.6      | 3.815  | 3.177  |
| 4    | 7.54     | 5.76     | 4.32     | 1504     | 15.2     | 3.956  | 3.28   |
| 9    | 11.52    | 9.93     | 6.06     | 3036     | 24.9     | 4.097  | 3.383  |
| 16   | 15.28    | 14.96    | 6.6      | 1512     | 33.6     | 4.238  | 3.486  |
| 25   | 28.95    | 22.8     | 15.65    | 3175     | 40.5     | 4.379  | 3.589  |
| 36   | 28.86    | 22.86    | 18.06    | 3972     | 48       | 4.52   | 3.692  |
| 49   | 30.59    | 22.68    | 21.42    | 3920     | 60.2     | 4.661  | 3.795  |
| 64   | 39.2     | 27.6     | 24.00927 | 5720     | 74.4     | 4.802  | 3.898  |
| 81   | 52.47    | 38.43    | 25.56    | 5490     | 80.1     | 4.943  | 4.001  |
| 100  | 49.2     | 38       | 31.2     | 6870     | 86       | 5.084  | 4.104  |
| 121  | 47.3     | 41.47    | 32.78    | 9669     | 79.2     | 5.225  | 4.207  |
| 144  | 66.6     | 57.72    | 35.52    | 7416     | 105.6    | 5.366  | 4.31   |
| 169  | 63.18    | 56.42    | 39       | 8814     | 110.5    | 5.507  | 4.413  |
| 196  | 83.72    | 60.9     | 50.68    | 10430    | 110.6    | 5.648  | 4.516  |
| 225  | 100.65   | 76.8     | 58.05    | 9090     | 142.5    | 5.789  | 4.619  |
| 256  | 100.16   | 77.12392 | 56.96    | 9456     | 152      | 5.93   | 4.722  |
| 289  | 107.95   | 82.45    | 56.78    | 11135    | 151.3    | 6.071  | 4.825  |
| 324  | 102.06   | 82.62    | 54.9     | 12006    | 160.2    | 6.212  | 4.928  |
| 361  | 108.87   | 96.33    | 66.69    | 8322     | 184.3    | 6.353  | 5.031  |
| 2470 | 1047.31  | 838.0139 | 606.3793 | 122218   | 1667.7   | 96.596 | 77.976 |
| 130  | 55.12158 | 44.106   | 31.9147  | 6432.526 | 87.77368 | 5.084  | 4.104  |

**Predikce**

|           |          |           |          |
|-----------|----------|-----------|----------|
| student t | 1.714    | s' yn+1   | 1.0887   |
| s'y1      | 0.565116 | t*s'y1    | 0.968609 |
| s'y2      | 0.347749 | t*s'y2    | 0.596042 |
| s'y3      | 0.333525 | t*s'y3    | 0.571662 |
| s'y4      | 133.4283 | t*s'y4    | 228.6961 |
| s'y5      | 0.554261 | t*s'y5    | 0.950004 |
| levostr 1 | 6.230391 | pravostr1 | 8.167609 |
| levostr 2 | 5.052958 | pravostr2 | 6.245042 |
| levostr 3 | 3.591338 | pravostr3 | 4.734662 |
| levostr 4 | 341.4679 | pravostr4 | 798.8601 |
| levostr 5 | 8.560996 | pravostr5 | 10.461   |





| y'3    | y'4      | y'5     | e1     | e2       |              |
|--------|----------|---------|--------|----------|--------------|
| 2.219  | 716.348  | 8.047   |        | -0.605   | -0.017       |
| 2.3    | 710.257  | 8.108   |        | -0.186   | -0.4         |
| 2.381  | 704.166  | 8.169   |        | -0.257   | -0.073       |
| 2.462  | 698.075  | 8.23    |        | -0.418   | 0.254        |
| 2.543  | 691.984  | 8.291   |        | 1.411    | 0.971        |
| 2.624  | 685.893  | 8.352   |        | 0.29     | 0.118        |
| 2.705  | 679.802  | 8.413   |        | -0.291   | -0.555       |
| 2.786  | 673.711  | 8.474   |        | 0.098    | -0.448       |
| 2.867  | 667.62   | 8.535   |        | 0.887    | 0.269        |
| 2.948  | 661.529  | 8.596   |        | -0.164   | -0.304       |
| 3.029  | 655.438  | 8.657   |        | -0.925   | -0.437       |
| 3.11   | 649.347  | 8.718   |        | 0.184    | 0.5          |
| 3.191  | 643.256  | 8.779   |        | -0.647   | -0.073       |
| 3.272  | 637.165  | 8.84    |        | 0.332    | -0.166       |
| 3.353  | 631.074  | 8.901   |        | 0.921    | 0.501        |
| 3.434  | 624.983  | 8.962   |        | 0.33     | 0.098244965  |
| 3.515  | 618.892  | 9.023   |        | 0.279    | 0.025        |
| 3.596  | 612.801  | 9.084   |        | -0.542   | -0.338       |
| 3.677  | 606.71   | 9.145   |        | -0.623   | 0.039        |
| 56.012 | 12569.05 | 163.324 | suma e | 0.074    | -0.035755035 |
| 2.948  | 661.529  | 8.596   | RSS    | 6.759554 | 2.711302073  |

|    | Pšenice ozimá (y1) | Ječmen jarní (y2) |
|----|--------------------|-------------------|
| r2 | 0.627759739        | 0.689713766       |
| r  | 0.792312905        | 0.830490076       |

| zdánlivá kor. | srážky       | teplota     |
|---------------|--------------|-------------|
| pšenice       | -0.124081998 | 0.211269369 |
| ječmen        | -0.349760217 | 0.231487394 |
| řepka         | 0.086464     | 0.005773341 |

| r2      | srážky      | teplota     |
|---------|-------------|-------------|
| pšenice | 0.015396342 | 0.044634746 |
| ječmen  | 0.122332209 | 0.053586414 |
| řepka   | 0.007476023 | 3.33315E-05 |



| e3          | e4          | e5       |     | y1-y1prum  | y2-y2prum  | y3-y3prum  |
|-------------|-------------|----------|-----|------------|------------|------------|
| -0.079      | -35.348     | 0.553    |     | -1.8778947 | -0.9421182 | -0.8084821 |
| -0.14       | 41.743      | -0.508   |     | -1.3178947 | -1.2221182 | -0.7884821 |
| -0.361      | 307.834     | 0.131    |     | -1.2478947 | -0.7921182 | -0.9284821 |
| -0.812      | -320.075    | 0.17     |     | -1.2678947 | -0.3621182 | -1.2984821 |
| 0.587       | -56.984     | -0.191   |     | 0.7021053  | 0.4578818  | 0.1815179  |
| 0.386       | -23.893     | -0.352   |     | -0.2778947 | -0.2921182 | 0.0615179  |
| 0.355       | -119.802    | 0.187    |     | -0.7178947 | -0.8621182 | 0.1115179  |
| 0.215159006 | 41.289      | 0.826    |     | -0.1878947 | -0.6521182 | 0.052677   |
| -0.027      | -57.62      | 0.365    |     | 0.7421053  | 0.1678818  | -0.1084821 |
| 0.172       | 25.471      | 0.004    |     | -0.1678947 | -0.3021182 | 0.1715179  |
| -0.049      | 223.562     | -1.457   |     | -0.7878947 | -0.3321182 | 0.0315179  |
| -0.15       | -31.347     | 0.082    |     | 0.4621053  | 0.7078818  | 0.0115179  |
| -0.191      | 34.744      | -0.279   |     | -0.2278947 | 0.2378818  | 0.0515179  |
| 0.348       | 107.835     | -0.94    |     | 0.8921053  | 0.2478818  | 0.6715179  |
| 0.517       | -25.074     | 0.599    |     | 1.6221053  | 1.0178818  | 0.9215179  |
| 0.126       | -33.983     | 0.538    |     | 1.1721053  | 0.7181268  | 0.6115179  |
| -0.175      | 36.108      | -0.123   |     | 1.2621053  | 0.7478818  | 0.3915179  |
| -0.546      | 54.199      | -0.184   |     | 0.5821053  | 0.4878818  | 0.1015179  |
| -0.167      | -168.71     | 0.555    |     | 0.6421053  | 0.9678818  | 0.5615179  |
| 0.009159006 | -0.051      | -0.024   |     |            |            |            |
| 2.333983398 | 322331.9931 | 5.717074 | TSS | 18.159116  | 8.7380676  | 6.0733735  |

| Řepka ozimá (y3) | Srážky (y4) | Teplota (y5) |
|------------------|-------------|--------------|
| 0.615702309      | 0.061571848 | 0.269800981  |
| 0.784667005      | 0.248136752 | 0.519423701  |



| y4-y4prum  | y5-y5prum  |
|------------|------------|
| 19.473684  | 0.0052632  |
| 90.473684  | -0.9947368 |
| 350.47368  | -0.2947368 |
| -283.52632 | -0.1947368 |
| -26.526316 | -0.4947368 |
| 0.4736842  | -0.5947368 |
| -101.52632 | 0.0052632  |
| 53.473684  | 0.7052632  |
| -51.526316 | 0.3052632  |
| 25.473684  | 0.0052632  |
| 217.47368  | -1.3947368 |
| -43.526316 | 0.2052632  |
| 16.473684  | -0.0947368 |
| 83.473684  | -0.6947368 |
| -55.526316 | 0.9052632  |
| -70.526316 | 0.9052632  |
| -6.5263158 | 0.3052632  |
| 5.4736842  | 0.3052632  |
| -223.52632 | 1.1052632  |

|           |           |
|-----------|-----------|
| 343480.74 | 7.8294737 |
|-----------|-----------|

| rok  | Pšenice ozimá<br>y1 | Ječmen jarní<br>y2 | Řepka ozimá<br>y3 | Srážky<br>y4 | Teplota<br>y5 | ti |
|------|---------------------|--------------------|-------------------|--------------|---------------|----|
| 2001 | 5.44                | 3.81               | 3.20              | 752          | 7.4           | 1  |
| 2002 | 5.18                | 1.95               | 2.95              | 1059         | 8.2           | 2  |
| 2003 | 4.81                | 3.86               | 4.15              | 517          | 7.8           | 3  |
| 2004 | 6.20                | 5.41               | 3.60              | 725          | 7.2           | 4  |
| 2005 | 4.28                | 1.94               | 3.28              | 770          | 7.2           | 5  |
| 2006 | 3.59                | 3.51               | 2.71              | 764          | 7.7           | 6  |
| 2007 | 4.90                | 4.67               | 3.25              | 741          | 8.6           | 7  |
| 2008 | 5.57                | 5.07               | 2.61              | 596          | 8.3           | 8  |
| 2009 | 4.74                | 3.48               | 3.62              | 828          | 8             | 9  |
| 2010 | 4.36                | 2.02               | 2.98              | 792          | 6.8           | 10 |
| 2011 | 5.77                | 4.20               | 3.75              | 641          | 8.1           | 11 |
| 2012 | 4.33                | 5.10               | 3.27              | 765          | 7.8           | 12 |
| 2013 | 3.50                | 3.47               | 1.14              | 760          | 7.5           | 13 |
| 2014 | 6.95                | 4.93               | 3.77              | 676          | 8.9           | 14 |
| 2015 | 6.59                | 6.00               | 3.76              | 531          | 9             | 15 |
| 2016 | 6.73                | 4.80               | 3.57              | 681          | 8.2           | 16 |
| 2017 | 6.51                | 6.04               | 3.00              | 649          | 8.3           | 17 |
| 2018 | 6.65                | 6.65               | 4.15              | 616          | 9.1           | 18 |
| 2019 | 6.64                | 6.94               | 3.12              | 614          | 7.4           | 19 |

|        |             |             |             |          |           |     |
|--------|-------------|-------------|-------------|----------|-----------|-----|
| suma   | 102.74      | 83.85       | 61.88       | 13477    | 151.5     | 190 |
| průměr | 5.407368421 | 4.413157895 | 3.256842105 | 709.3158 | 7.9736842 | 10  |
| n      | 19          |             |             |          |           |     |

|    |         |    |        |           |          |
|----|---------|----|--------|-----------|----------|
| a1 | 4.408   | b1 | 0.1    | smodch y1 | 1.109934 |
| a2 | 2.649   | b2 | 0.177  | smodch y2 | 1.493222 |
| a3 | 3.215   | b3 | 0.004  | smodch y3 | 0.673334 |
| a4 | 805.193 | b4 | -9.588 | smodch y4 | 122.0765 |
| a5 | 7.512   | b5 | 0.046  | smodch y5 | 0.645361 |

|      |    |     |         |
|------|----|-----|---------|
| 2000 | 1  | t   | 25      |
| 2001 | 2  | pše | 6.908   |
| 2002 | 3  | ječ | 7.074   |
| 2003 | 4  | řep | 3.315   |
| 2004 | 5  | sra | 565.493 |
| 2005 | 6  | tep | 8.662   |
| 2006 | 7  |     |         |
| 2007 | 8  |     |         |
| 2008 | 9  |     |         |
| 2009 | 10 |     |         |
| 2010 | 11 |     |         |
| 2011 | 12 |     |         |
| 2012 | 13 |     |         |
| 2013 | 14 |     |         |
| 2014 | 15 |     |         |
| 2015 | 16 |     |         |
| 2016 | 17 |     |         |
| 2017 | 18 |     |         |
| 2018 | 19 |     |         |

|      |    |
|------|----|
| 2019 | 20 |
| 2020 | 21 |
| 2021 | 22 |
| 2022 | 23 |
| 2023 | 24 |
| 2024 | 25 |

| ti2  | y1t      | y2t      | y3t      | y4t      | y5t      | y'1     | y'2    |
|------|----------|----------|----------|----------|----------|---------|--------|
| 1    | 5.44     | 3.81     | 3.2      | 752      | 7.4      | 4.508   | 2.826  |
| 4    | 10.36    | 3.9      | 5.9      | 2118     | 16.4     | 4.608   | 3.003  |
| 9    | 14.43    | 11.58    | 12.45    | 1551     | 23.4     | 4.708   | 3.18   |
| 16   | 24.8     | 21.64    | 14.4     | 2900     | 28.8     | 4.808   | 3.357  |
| 25   | 21.4     | 9.7      | 16.4     | 3850     | 36       | 4.908   | 3.534  |
| 36   | 21.54    | 21.06    | 16.26    | 4584     | 46.2     | 5.008   | 3.711  |
| 49   | 34.3     | 32.69    | 22.75    | 5187     | 60.2     | 5.108   | 3.888  |
| 64   | 44.56    | 40.56    | 20.88    | 4768     | 66.4     | 5.208   | 4.065  |
| 81   | 42.66    | 31.32    | 32.58    | 7452     | 72       | 5.308   | 4.242  |
| 100  | 43.6     | 20.2     | 29.8     | 7920     | 68       | 5.408   | 4.419  |
| 121  | 63.47    | 46.2     | 41.25    | 7051     | 89.1     | 5.508   | 4.596  |
| 144  | 51.96    | 61.2     | 39.24    | 9180     | 93.6     | 5.608   | 4.773  |
| 169  | 45.5     | 45.11    | 14.82    | 9880     | 97.5     | 5.708   | 4.95   |
| 196  | 97.3     | 69.02    | 52.78    | 9464     | 124.6    | 5.808   | 5.127  |
| 225  | 98.85    | 90       | 56.4     | 7965     | 135      | 5.908   | 5.304  |
| 256  | 107.68   | 76.8     | 57.12    | 10896    | 131.2    | 6.008   | 5.481  |
| 289  | 110.67   | 102.68   | 51       | 11033    | 141.1    | 6.108   | 5.658  |
| 324  | 119.7    | 119.7    | 74.7     | 11088    | 163.8    | 6.208   | 5.835  |
| 361  | 126.16   | 131.86   | 59.28    | 11666    | 140.6    | 6.308   | 6.012  |
| 2470 | 1084.38  | 939.03   | 621.21   | 129305   | 1541.3   | 102.752 | 83.961 |
| 130  | 57.07263 | 49.42263 | 32.69526 | 6805.526 | 81.12105 | 5.408   | 4.419  |

**Predikce**

|           |          |           |          |
|-----------|----------|-----------|----------|
| student t | 1.714    | s' yn+1   | 1.0887   |
| s'y1      | 0.942041 | t*s'y1    | 1.614658 |
| s'y2      | 1.075814 | t*s'y2    | 1.843945 |
| s'y3      | 0.67288  | t*s'y3    | 1.153317 |
| s'y4      | 108.3214 | t*s'y4    | 185.6629 |
| s'y5      | 0.585747 | t*s'y5    | 1.00397  |
| levostr 1 | 5.293342 | pravostr1 | 8.522658 |
| levostr 2 | 5.230055 | pravostr2 | 8.917945 |
| levostr 3 | 2.161683 | pravostr3 | 4.468317 |
| levostr 4 | 379.8301 | pravostr4 | 751.1559 |
| levostr 5 | 7.65803  | pravostr5 | 9.66597  |





| y'3    | y'4      | y'5     | e1     | e2        |           |
|--------|----------|---------|--------|-----------|-----------|
| 3.219  | 795.605  | 7.558   |        | 0.932     | 0.984     |
| 3.223  | 786.017  | 7.604   |        | 0.572     | -1.053    |
| 3.227  | 776.429  | 7.65    |        | 0.102     | 0.68      |
| 3.231  | 766.841  | 7.696   |        | 1.392     | 2.053     |
| 3.235  | 757.253  | 7.742   |        | -0.628    | -1.594    |
| 3.239  | 747.665  | 7.788   |        | -1.418    | -0.201    |
| 3.243  | 738.077  | 7.834   |        | -0.208    | 0.782     |
| 3.247  | 728.489  | 7.88    |        | 0.362     | 1.005     |
| 3.251  | 718.901  | 7.926   |        | -0.568    | -0.762    |
| 3.255  | 709.313  | 7.972   |        | -1.048    | -2.399    |
| 3.259  | 699.725  | 8.018   |        | 0.262     | -0.396    |
| 3.263  | 690.137  | 8.064   |        | -1.278    | 0.327     |
| 3.267  | 680.549  | 8.11    |        | -2.208    | -1.48     |
| 3.271  | 670.961  | 8.156   |        | 1.142     | -0.197    |
| 3.275  | 661.373  | 8.202   |        | 0.682     | 0.696     |
| 3.279  | 651.785  | 8.248   |        | 0.722     | -0.681    |
| 3.283  | 642.197  | 8.294   |        | 0.402     | 0.382     |
| 3.287  | 632.609  | 8.34    |        | 0.442     | 0.815     |
| 3.291  | 623.021  | 8.386   |        | 0.332     | 0.928     |
| 61.845 | 13476.95 | 151.468 | suma e | -0.012    | -0.111    |
| 3.255  | 709.313  | 7.972   | RSS    | 16.479176 | 22.405369 |

|    | Pšenice ozimá (y1) | Ječmen jarní (y2) |
|----|--------------------|-------------------|
| r2 | 0.256863547        | 0.441747234       |
| r  | 0.506817075        | 0.66464068        |

| zdánlivá kor. | srážky       | teplota     |
|---------------|--------------|-------------|
| pšenice       | -0.293590553 | 0.416538493 |
| ječmen        | -0.55904796  | 0.327922151 |
| řepka         | -0.376171466 | 0.392416933 |

| r2      | srážky      | teplota     |
|---------|-------------|-------------|
| pšenice | 0.086195413 | 0.173504316 |
| ječmen  | 0.312534622 | 0.107532937 |
| řepka   | 0.141504972 | 0.153991049 |



| e3       | e4          | e5       |     | y1-y1prum  | y2-y2prum  | y3-y3prum  |
|----------|-------------|----------|-----|------------|------------|------------|
| -0.019   | -43.605     | -0.158   |     | 0.0326316  | -0.6031579 | -0.0568421 |
| -0.273   | 272.983     | 0.596    |     | -0.2273684 | -2.4631579 | -0.3068421 |
| 0.923    | -259.429    | 0.15     |     | -0.5973684 | -0.5531579 | 0.8931579  |
| 0.369    | -41.841     | -0.496   |     | 0.7926316  | 0.9968421  | 0.3431579  |
| 0.045    | 12.747      | -0.542   |     | -1.1273684 | -2.4731579 | 0.0231579  |
| -0.529   | 16.335      | -0.088   |     | -1.8173684 | -0.9031579 | -0.5468421 |
| 0.007    | 2.923       | 0.766    |     | -0.5073684 | 0.2568421  | -0.0068421 |
| -0.637   | -132.489    | 0.42     |     | 0.1626316  | 0.6568421  | -0.6468421 |
| 0.369    | 109.099     | 0.074    |     | -0.6673684 | -0.9331579 | 0.3631579  |
| -0.275   | 82.687      | -1.172   |     | -1.0473684 | -2.3931579 | -0.2768421 |
| 0.491    | -58.725     | 0.082    |     | 0.3626316  | -0.2131579 | 0.4931579  |
| 0.007    | 74.863      | -0.264   |     | -1.0773684 | 0.6868421  | 0.0131579  |
| -2.127   | 79.451      | -0.61    |     | -1.9073684 | -0.9431579 | -2.1168421 |
| 0.499    | 5.039       | 0.744    |     | 1.5426316  | 0.5168421  | 0.5131579  |
| 0.485    | -130.373    | 0.798    |     | 1.1826316  | 1.5868421  | 0.5031579  |
| 0.291    | 29.215      | -0.048   |     | 1.3226316  | 0.3868421  | 0.3131579  |
| -0.283   | 6.803       | 0.006    |     | 1.1026316  | 1.6268421  | -0.2568421 |
| 0.863    | -16.609     | 0.76     |     | 1.2426316  | 2.2368421  | 0.8931579  |
| -0.171   | -9.021      | -0.986   |     | 1.2326316  | 2.5268421  | -0.1368421 |
| 0.035    | 0.053       | 0.032    |     |            |            |            |
| 8.150715 | 215851.2195 | 6.283416 | TSS | 22.175168  | 40.134811  | 8.1608105  |

| Řepka ozimá (y3) | Srážky (y4) | Teplota (y5) |
|------------------|-------------|--------------|
| 0.001237074      | 0.195329938 | 0.161858298  |
| 0.035172062      | 0.441961467 | 0.402316167  |



| y4-y4prum  | y5-y5prum  |
|------------|------------|
| 42.684211  | -0.5736842 |
| 349.68421  | 0.2263158  |
| -192.31579 | -0.1736842 |
| 15.684211  | -0.7736842 |
| 60.684211  | -0.7736842 |
| 54.684211  | -0.2736842 |
| 31.684211  | 0.6263158  |
| -113.31579 | 0.3263158  |
| 118.68421  | 0.0263158  |
| 82.684211  | -1.1736842 |
| -68.315789 | 0.1263158  |
| 55.684211  | -0.1736842 |
| 50.684211  | -0.4736842 |
| -33.315789 | 0.9263158  |
| -178.31579 | 1.0263158  |
| -28.315789 | 0.2263158  |
| -60.315789 | 0.3263158  |
| -93.315789 | 1.1263158  |
| -95.315789 | -0.5736842 |

|           |           |
|-----------|-----------|
| 268248.11 | 7.4968421 |
|-----------|-----------|