

Trial report

Variety testing of

***Poa pratensis, Festuca rubra,
Lolium perenne, Dactylis glomerata and
Festuca arundinacea***

Second year harvest

AGRONOVA



LC Field Trials

2007

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1. Introduction

This report contains the results of five variety testing trials in *Poa pratensis*, *Festuca rubra*, *Dactylis glomerata*, *Lolium perenne* and *Festuca arundinacea*. The location of the trials was near Koge, Denmark.

Trial number by Agronova	Species
2005.541.00	<i>Poa pratensis</i>
2005.543.00	<i>Dactylis glomerata</i>
2005.544.00	<i>Festuca arundinacea</i>

The trials have been carried out by the GEP-unit at LandboCentrum, Agronova, in 2007 for Barenbrug, Holland.

11 January 2008

Morten Lind
Agronova Field Trials
LandboCentrum

2. Trial 2005.541.00 *Poa pratensis* (Engrapgræs)

2.1 Varieties

No.	Name
1	Baron
2	Bartender

2.2 Plot map

Replicate	1	2	3	4	5
	101 1	201 2	301 1	401 2	501 1
	102 2	202 1	302 2	402 1	502 2

2.3 Site description

Basic information for trial 2005.541.00 *Poa pratensis* (Engrapgræs)

Trial host	Bakkegaarden LandboCentrum		
Soil analysis	Coarsesand: 26,5 % Silt: 14,0 % Humus: 1,5 % Finesand: 49,6 % Clay: 12,5 %	Rt: 6,7 Pt: 2,9 Kt: 11,9 Mgt: 6,4	
Previous crop	Spring Barley		
Drilling date	06-04-2005	Seed rate	5 kg/ha
Fertilizer date type rate	06-10-2006 NS 21-24 80 N		15-03-2007 NPK 22-3-10 75N
Herbicides	13-09-2006 2,5 Ariane FG + 1,0 Boxer 24-04-2007 0.1 Primus + 0.05 Diflufenican		

2.4 Results

Two weeks before estimated harvest it was decided that the risk of shattering was to big why swathing was needed and performed 29th of June. The trial was harvested at 18th of July after a period of very variable weather conditions including lots of rain.

In the following table results from harvest, seed analysis and analysis of variance is given. Analysis was done by Student-Newman-Keuls test where different letters indicate statistical significant difference at 95% level.

Location: Bakkegaarden			
Study Director: Morten Lind			
Crop Code	POAPR	POAPR	POAPR
BBCH Scale	BGRM	BGRM	BGRM
Crop Name	Kentucky bluegrass	Kentucky bluegrass	Kentucky bluegrass
Rating Date	18Jul07	18Jul07	18Jul07
Rating Data Type	YIELD	MOICON	YIELD
Rating Unit	KG/PLOT	%	KG/HA
Sample Size	1	1	1
Sample Size Unit	plot	plot	plot
ARM Action Codes	+	+	T4
Number of Decimals	2	1	1
Trt Treatment			
No. Name			
1 Baron	4,27 a	12,7	1269,9 a
2 Bartender	4,16 a	18,1	1082,0 b
LSD (P=.05)	0,504	.	137,79
Standard Deviation	0,287	.	78,48
CV	6,81	.	6,67
Bartlett's X2	0,265	.	0,065
P(Bartlett's X2)	0,607	.	0,799
Replicate F	1,528		1,546
Replicate Prob(F)	0,3456		0,3416
Treatment F	0,329		14,333
Treatment Prob(F)	0,5971		0,0193

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)

Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

ARM Action Codes

T4 = [C9]-([C9]*@MVAVGREP([C8])/100)

3. Trial 2005.543.00 *Dactylis glomerata* (Hundegræs)

3.1 Varieties

No.	Name
1	Barula
2	Barexcel
3	Barmoral

3.2 Plot map

Replicate	1	2	3	4	5				
101	2	201	3	301	1	401	2	501	1
102	3	202	1	302	2	402	3	502	2
103	1	203	2	303	3	403	1	503	3

3.3 Site description

Basic information for trial 2005.543.00 *Dactylis glomerata* (Hundegræs)

Trial host	Bakkegaarden LandboCentrum		
Soil analysis	Coarsesand: 26,5 % Silt: 14,0 % Humus: 1,5 % Finesand: 49,6 % Clay: 12,5 %	Rt: 6,7 Pt: 2,9 Kt: 11,9 Mgt: 6,4	
Previous crop	Spring Barley		
Drilling date	06-04-2005	Seed rate	6 kg/ha
Fertilizer date type rate	06-10-2006 NS 21-24 60 N	15-03-2007 NPK 18-4-14 60N	01-04-2007 N34 60N
Herbicides, Fungicides and Growthregulators	13-09-2006 2,5 Ariane FG + 1,0 Boxer 24-04-2007 0.1 Primus + 0.05 Diflufenican 14-05-2007 0,25 Zenit+ 0,15 Amistar + 0,4 Moddus + 1,5 CCC		

3.4 Results

To ensure full maturity at harvest all plots were swathed at the 2nd of July. In the start of July, there was a long rainy period which delayed harvest. The trial was harvested on the 17th of July under slightly wet conditions.

In the following table results from harvest, seed analysis and analysis of variance is given. Analysis was done by Student-Newman-Keuls test where different letters indicate statistical significant difference at 95% level.

Location: Bakkegaarden Study Director: Morten Lind			
Crop Code	DACGL	DACGL	DACGL
BBCH Scale	BGRM	BGRM	BGRM
Crop Name	Orchard grass	Orchard grass	Orchard grass
Rating Date	19Jul07	19Jul07	19Jul07
Rating Data Type	YIELD	MOICON	YIELD
Rating Unit	KG/PLOT	%	KG/HA
Sample Size	1	1	1
Sample Size Unit	plot	plot	plot
ARM Action Codes	+	+	T4
Number of Decimals	2	2	1
Trt No.	Treatment Name		
1	Barula	5,10 a	15,40
2	Barexcel	3,77 b	19,70
3	Barmoral	4,02 b	15,70
	LSD (P=.05)	0,386	.
	Standard Deviation	0,265	.
	CV	6,15	.
	Bartlett's X2	3,685	.
	P(Bartlett's X2)	0,158	.
	Replicate F	0,569	0,580
	Replicate Prob(F)	0,6926	0,6861
	Treatment F	35,818	34,196
	Treatment Prob(F)	0,0001	0,0001

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)

Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

ARM Action Codes

T4 = [C9]-([C9]*@MVAVGREP([C8])/100)

4. Trial 2005.544.00 *Festuca arundinacae* (Strandsvingel)

4.1 Varieties

No.	Name
1	Barfelix
2	Barleduc
3	Barleroy
4	Barlexas II
5	Labarinth

4.2 Plot map

Replicate	1	2	3	4	5				
101	2	201	4	301	1	401	2	501	5
102	5	202	3	302	5	402	1	502	2
103	1	203	5	303	2	403	5	503	1
104	4	204	1	304	4	404	3	504	4
105	3	205	2	305	3	405	4	505	3

4.3 Site description

Basic information for trial 2005.544.00 *Festuca arundinacae* (Strandsvingel)

Trial host	Bakkegaarden LandboCentrum		
Soil analysis	Coarsesand: 26,5 % Silt: 14,0 % Humus: 1,5 % Finesand: 49,6 % Clay: 12,5 %	Rt: 6,7 Pt: 2,9 Kt: 11,9 Mgt: 6,4	
Previous crop	Spring Barley		
Drilling date	06-04-2005	Seed rate	6 kg/ha
Fertilizer date type rate	06-10-2006 NS 21-24 60 N	15-03-2007 NPK 18-4-14 60N	01-04-2007 N34 60N
Herbicides, Fungicides and Growthregulators	13-09-2006 2,5 Ariane FG + 1,0 Boxer 24-04-2007 0.1 Primus + 0.05 Diflufenican 14-05-2007 0,25 Zenit+ 0,15 Amistar + 0,4 Moddus + 1,5 CCC		

4.4 Results

To ensure full maturity at harvest all plots were swathed at the 2nd of July. In the start of July, there was a long rainy period which delayed harvest. The trial was harvested on the 17th of July under slightly wet conditions.

In the following table results from harvest seed analysis and analysis of variance is given. Analysis was done by Student-Newman-Keuls test where different letters indicate statistical significant difference at 95% level.

Location: Bakkegaarden Study Director: Morten Lind				
Crop Code	FESAR	FESAR	FESAR	
BBCH Scale	BGRM	BGRM	BGRM	
Crop Name	Tall fescue	Tall fescue	Tall fescue	
Rating Date	17Jul07	17Jul07	17Jul07	
Rating Data Type	YIELD	MOICON	YIELD	
Rating Unit	KG/PLOT	%	KG/HA	
Sample Size	1	1	1	
Sample Size Unit	plot	plot	plot	
ARM Action Codes	+	+	T4	
Number of Decimals	2	1	1	
Trt No.	Treatment Name			
1	Barfelix	3,24 d	15,4	934,0 c
2	Barleduc	3,70 c	13,7	1023,7 c
3	Barleroy	4,33 b	13,9	1227,8 b
4	Barlexas II	4,97 a	11,6	1492,1 a
5	Labarinth	3,36 d	15,9	922,8 c
LSD (P=.05)	0,339	.	.	96,91
Standard Deviation	0,253	.	.	72,28
CV	6,46	.	.	6,45
Bartlett's X2	2,474	.	.	2,5
P(Bartlett's X2)	0,649	.	.	0,645
Replicate F	4,870			4,826
Replicate Prob(F)	0,0092			0,0096
Treatment F	41,031			55,700
Treatment Prob(F)	0,0001			0,0001

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)

Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

ARM Action Codes

T4 = [C9]-([C9]*@MVAVGREP([C8])/100)

5. Trial comments

Weather conditions for production of grass for seed in Denmark, 2006-2007

Generally autumn was warm and sunny with less than normal precipitation and grasses continued growing longer than normal. Compared to normal, winter was rather warm with average temperatures above 0 °C. Spring was cold and growth started late. Generally spring was favourable for grass for seed production. June gave fine conditions for flowering but from the start of July there was a long rainy period and there was even a thunderstorm just at the end of June. The bad weather conditions delayed and made harvest rather difficult.

All together, conditions were favourable for grass for seed production just until harvest.

Poa pratensis (Engrapgræs)

Differences between varieties in yield were from (average) 1082-1270 kg/ha with, Bartender as lowest yielding and Baron as highest yielding.

There was statistical significant difference on yield between the two tested varieties.

Dactylis glomerata (Hundegræs)

Differences between varieties in yield were from (average) 1071-1468 kg/ha, with Barexcel as lowest yielding and Barula as highest yielding.

There was statistical significant difference on yield between all the tested varieties.

Festuca arundinacea (Strandsvingel)

Differences between varieties in yield were from (average) 923-1492 kg/ha, with Labarinth as lowest yielding and Barlexas II as highest yielding.

Barleroy and Barlexas II yielded significantly more than the other tested varieties. Barlexas II had significantly higher yield compared to Barleroy.

Yield in the trials compared to predicted average yields in Denmark

In the table below average yields from Barenbrug varieties at LandboCentrum trials is given.

Species	Average yields Barenbrug 2006 (kg/ha)*	Average yields Barenbrug 2007 (kg/ha)**
<i>Poa pratensis</i> (Engrapgræs)	962	1176
<i>Dactylis glomerata</i> (Hundegræs)	1434	1260
<i>Festuca arundinacae</i> (Strandsvingel)	1757	1120

* Data from LandboCentrum Barenbrug trials 2006

** Data from LandboCentrum Barenbrug trials 2007

6. Appendix 1. Single plot data

Trial ID: 2005.541.00				
Location: Bakkegarden				
Study Director: Morten Lind				
Crop Code	POAPR	POAPR	POAPR	
BBCH Scale	BGRM	BGRM	BGRM	
Crop Name	Kentucky bluegrass	Kentucky bluegrass	Kentucky bluegrass	
Rating Date	18Jul07	18Jul07	18Jul07	
Rating Data Type	YIELD	MOICON	YIELD	
Rating Unit	KG/PLOT	%	KG/HA	
Sample Size	1	1	1	
Sample Size Unit	plot	plot	plot	
ARM Action Codes	+	+	T4	
Number of Decimals	2	1	1	
Trt Treatment				
No. Name Plot				
1 Baron 101	4,49	12,7	1336,6	
202	4,28		1274,1	
301	4,35		1295,0	
402	4,42		1315,8	
501	3,79		1128,2	
Mean =	4,27	12,7	1269,9	
2 Bartender 102	4,59	18,1	1193,3	
201	4,29		1115,3	
302	4,28		1112,7	
401	3,62		941,1	
502	4,03		1047,7	
Mean =	4,16	18,1	1082,0	

ARM Action Codes

T4 = [C9]-([C9]*@MVAVGREP([C8])/100)

Trial ID: 2005.546.00 Location: Bakkegaarden Study Director: Morten Lind				
Crop Code		DACGL	DACGL	DACGL
BBCH Scale		BGRM	BGRM	BGRM
Crop Name		Orchard grass	Orchard grass	Orchard grass
Rating Date		19Jul07	19Jul07	19Jul07
Rating Data Type		YIELD	MOICON	YIELD
Rating Unit		KG/PLOT	%	KG/HA
Sample Size		1	1	1
Sample Size Unit		plot	plot	plot
ARM Action Codes		+	+	T4
Number of Decimals		2	2	1
Trt No.	Treatment Name			
1	Barula			
	103	5,07	15,40	1458,5
	202	5,25		1510,3
	301	4,88		1403,8
	403	5,10		1467,1
	501	5,22		1501,7
	Mean =	5,10	15,40	1468,3
2	Barexcel			
	101	4,19	19,70	1189,8
	203	3,49		991,1
	302	3,86		1096,1
	401	4,00		1135,9
	502	3,32		942,8
	Mean =	3,77	19,70	1071,1
3	Barmoral			
	102	3,87	15,70	1195,4
	201	4,22		1303,6
	303	3,94		1217,1
	402	4,19		1294,3
	503	3,89		1201,6
	Mean =	4,02	15,70	1242,4

ARM Action Codes
 T4 = [C9]-([C9]*@MVAVGREP([C8])/100)

Trial ID: 2005.544.00				
Location: Bakkegaarden				
Study Director: Morten Lind				
Crop Code	FESAR	FESAR	FESAR	
BBCH Scale	BGRM	BGRM	BGRM	
Crop Name	Tall fescue	Tall fescue	Tall fescue	
Rating Date	17Jul07	17Jul07	17Jul07	
Rating Data Type	YIELD	MOICON	YIELD	
Rating Unit	KG/PLOT	%	KG/HA	
Sample Size	1	1	1	
Sample Size Unit	plot	plot	plot	
ARM Action Codes	+	+	T4	
Number of Decimals	2	1	1	
Trt Treatment				
No. Name Plot				
1 Barfelix	103	2,92	15,4	842,3
	204	2,98		859,6
	301	3,57		1029,7
	402	3,05		879,7
	503	3,67		1058,6
	Mean =	3,24	15,4	934,0
2 Barleduc	101	3,34	13,7	924,6
	205	3,43		949,6
	303	4,33		1198,7
	401	3,87		1071,4
	502	3,52		974,5
	Mean =	3,70	13,7	1023,7
3 Barleroy	105	4,19	13,9	1187,0
	202	3,98		1127,5
	305	4,65		1317,3
	404	4,00		1133,2
	505	4,85		1374,0
	Mean =	4,33	13,9	1227,8
4 Barlexas II	104	4,83	11,6	1450,0
	201	5,01		1504,1
	304	5,45		1636,2
	405	4,90		1471,0
	504	4,66		1399,0
	Mean =	4,97	11,6	1492,1
5 Labarinth	102	3,22	15,9	884,9
	203	3,13		860,2
	302	3,41		937,1
	403	3,43		942,6
	501	3,60		989,3
	Mean =	3,36	15,9	922,8

ARM Action Codes

$$T4 = [C9] - ([C9] * @MVAVGREP([C8]) / 100)$$

7. Appendix 2 – Climate data

Date	Temp	Min Temp	Max Temp	Rain (mm)
01.07.2006	17.9	12.4	22.5	0.0
02.07.2006	18.9	12.7	23.9	0.0
03.07.2006	19.6	13.4	24.3	0.0
04.07.2006	20.3	13.6	25.6	0.0
05.07.2006	21.8	15.8	26.8	0.0
06.07.2006	23.3	17.0	28.8	0.3
07.07.2006	21.8	17.2	26.4	0.2
08.07.2006	18.9	14.7	22.9	0.1
09.07.2006	20.8	18.7	24.1	1.5
10.07.2006	19.1	13.6	22.8	0.0
11.07.2006	18.6	10.8	24.9	1.9
12.07.2006	16.5	9.6	21.9	0.0
13.07.2006	18.8	11.4	24.3	0.0
14.07.2006	16.8	12.0	20.2	0.0
15.07.2006	17.8	10.5	23.3	0.0
16.07.2006	19.8	12.9	25.7	0.0
17.07.2006	21.5	14.8	26.5	0.0
18.07.2006	20.8	14.1	26.0	0.0
19.07.2006	21.4	14.3	27.0	0.1
20.07.2006	23.6	20.1	28.2	0.5
21.07.2006	21.5	17.2	25.0	2.6
22.07.2006	20.8	16.1	25.0	0.1
23.07.2006	22.1	18.9	26.8	5.2
24.07.2006	20.5	14.3	25.2	0.0
25.07.2006	20.9	13.3	26.7	0.1
26.07.2006	22.6	15.6	29.0	0.0
27.07.2006	23.5	20.1	27.3	4.1
28.07.2006	20.1	17.5	23.3	4.0
29.07.2006	21.5	16.2	26.8	0.3
30.07.2006	22.9	19.0	27.1	13.6
31.07.2006	20.0	14.7	23.6	0.2
01.08.2006	20.3	15.8	24.9	11.4
02.08.2006	16.4	12.7	19.3	1.6
03.08.2006	17.1	11.7	21.8	0.5
04.08.2006	19.3	15.3	24.7	1.1
05.08.2006	20.3	14.8	25.0	0.0
06.08.2006	20.5	13.9	26.3	1.5
07.08.2006	20.5	13.5	25.4	0.0
08.08.2006	19.2	14.0	25.3	0.0
09.08.2006	17.9	14.6	21.1	1.4
10.08.2006	16.5	11.8	20.7	2.1
11.08.2006	16.4	14.9	19.7	24.2
12.08.2006	15.5	13.1	17.7	7.9
13.08.2006	16.4	14.8	18.7	24.3
14.08.2006	16.3	14.9	18.6	5.4
15.08.2006	16.3	14.7	18.1	9.4
16.08.2006	17.5	14.3	21.0	1.3
17.08.2006	16.8	13.5	19.8	3.5
18.08.2006	19.4	17.2	22.7	2.3
19.08.2006	19.3	16.2	23.6	1.6
20.08.2006	17.6	14.5	20.9	3.5

21.08.2006	17.0	14.7	20.3	2.9
22.08.2006	17.5	15.7	20.1	7.9
23.08.2006	16.3	12.1	19.2	0.8
24.08.2006	16.2	11.3	21.0	0.0
25.08.2006	17.4	14.1	20.5	1.7
26.08.2006	16.8	13.6	20.0	2.5
27.08.2006	15.5	13.9	18.6	16.9
28.08.2006	15.0	12.2	18.1	2.4
29.08.2006	13.2	12.0	15.1	18.4
30.08.2006	15.0	13.3	17.2	3.5
31.08.2006	16.6	14.2	18.9	3.0
01.09.2006	16.5	14.4	19.0	5.4
02.09.2006	18.0	15.8	20.8	5.6
03.09.2006	16.4	14.5	18.9	4.5
04.09.2006	15.5	14.3	17.3	0.9
05.09.2006	15.0	11.9	18.1	0.1
06.09.2006	17.2	13.3	19.2	0.6
07.09.2006	15.3	12.8	17.9	3.4
08.09.2006	14.2	11.3	17.6	0.5
09.09.2006	13.9	9.3	17.6	0.0
10.09.2006	12.5	8.4	18.5	0.2
11.09.2006	15.0	10.8	20.4	0.0
12.09.2006	16.4	11.6	22.0	0.0
13.09.2006	16.1	10.4	21.6	0.0
14.09.2006	17.0	11.9	21.1	0.0
15.09.2006	17.2	15.2	21.4	0.0
16.09.2006	17.0	15.4	19.3	0.0
17.09.2006	16.6	14.5	19.6	0.1
18.09.2006	16.4	15.0	18.2	0.7
19.09.2006	15.7	12.2	18.6	0.4
20.09.2006	14.2	10.0	17.8	0.0
21.09.2006	15.9	11.9	21.2	0.0
22.09.2006	17.5	15.0	20.6	0.0
23.09.2006	16.4	14.0	18.9	0.0
24.09.2006	17.2	14.8	20.6	0.0
25.09.2006	18.0	15.6	21.6	0.0
26.09.2006	17.4	15.6	21.1	4.3
27.09.2006	15.1	13.5	17.3	6.3
28.09.2006	15.6	13.7	17.7	0.7
29.09.2006	17.0	15.3	20.0	0.2
30.09.2006	16.0	11.1	19.7	1.2
01.10.2006	14.9	10.0	18.3	4.8
02.10.2006	14.7	13.7	16.0	7.8
03.10.2006	13.5	9.9	15.6	1.6
04.10.2006	12.5	9.8	16.3	1.2
05.10.2006	12.5	10.4	14.9	5.5
06.10.2006	14.8	12.0	16.4	4.2
07.10.2006	13.4	11.5	15.5	3.7
08.10.2006	13.8	11.5	15.1	3.9
09.10.2006	12.9	10.2	15.7	0.0
10.10.2006	12.9	10.5	15.9	0.0
11.10.2006	13.5	12.6	14.5	0.0
12.10.2006	13.8	12.3	15.1	0.0
13.10.2006	12.3	10.0	14.6	0.0
14.10.2006	10.3	6.1	13.3	0.0
15.10.2006	9.7	6.0	14.1	0.0

16.10.2006	10.2	8.0	12.2	0.0
17.10.2006	9.2	5.6	14.0	0.0
18.10.2006	11.1	5.7	13.4	0.0
19.10.2006	12.4	11.3	14.3	1.0
20.10.2006	12.2	10.9	13.4	2.0
21.10.2006	13.3	12.2	14.6	0.7
22.10.2006	13.3	12.5	14.5	5.7
23.10.2006	13.8	11.6	15.7	11.3
24.10.2006	12.1	9.4	14.7	7.6
25.10.2006	10.6	7.6	13.4	0.9
26.10.2006	14.2	12.3	16.7	3.1
27.10.2006	10.7	7.2	12.8	0.2
28.10.2006	11.1	7.5	12.5	5.7
29.10.2006	6.0	3.3	9.6	2.1
30.10.2006	9.8	5.8	12.1	2.9
31.10.2006	10.4	6.9	12.7	7.5
01.11.2006	1.0	-0.7	5.0	2.6
02.11.2006	-0.6	-3.5	1.6	3.2
03.11.2006	2.0	-3.3	4.9	1.0
04.11.2006	9.1	7.0	10.2	0.2
05.11.2006	10.4	9.1	11.1	5.5
06.11.2006	11.3	9.6	12.7	0.0
07.11.2006	10.6	9.5	11.7	2.0
08.11.2006	9.4	8.5	10.5	9.8
09.11.2006	6.4	4.1	8.7	2.2
10.11.2006	5.9	3.4	7.2	1.8
11.11.2006	6.1	4.9	8.1	7.8
12.11.2006	6.0	3.9	8.3	3.3
13.11.2006	7.5	5.1	9.3	7.1
14.11.2006	9.2	8.0	10.8	0.8
15.11.2006	10.3	9.3	11.2	0.9
16.11.2006	11.4	9.0	13.5	0.2
17.11.2006	10.0	7.3	11.5	2.1
18.11.2006	8.3	5.2	11.5	0.5
19.11.2006	5.2	2.4	8.2	6.9
20.11.2006	6.1	4.3	6.7	2.7
21.11.2006	6.0	3.7	7.1	3.7
22.11.2006	5.5	3.0	6.7	0.5
23.11.2006	7.2	5.1	9.2	4.9
24.11.2006	8.7	7.4	9.5	0.2
25.11.2006	10.8	9.1	13.2	0.9
26.11.2006	9.2	7.5	10.3	0.3
27.11.2006	7.8	6.6	8.7	0.1
28.11.2006	8.0	6.9	10.8	0.1
29.11.2006	8.6	7.5	10.3	0.2
30.11.2006	7.3	5.1	8.6	0.0
01.12.2006	7.1	5.3	8.1	0.2
02.12.2006	7.9	7.3	8.4	2.8
03.12.2006	8.2	7.1	9.1	3.6
04.12.2006	7.9	7.6	8.1	5.2
05.12.2006	11.2	10.0	12.5	2.0
06.12.2006	8.9	7.7	10.2	2.5
07.12.2006	7.6	6.6	9.0	6.9
08.12.2006	9.1	7.7	10.5	1.5
09.12.2006	7.0	4.2	8.4	0.1
10.12.2006	5.1	3.7	7.3	0.5

11.12.2006	5.9	4.7	7.8	4.3
12.12.2006	6.6	4.9	7.4	2.1
13.12.2006	8.3	7.0	9.9	6.4
14.12.2006	10.1	9.8	10.5	1.6
15.12.2006	8.6	7.4	10.3	2.4
16.12.2006	5.3	3.9	7.1	3.2
17.12.2006	4.0	1.5	5.4	3.3
18.12.2006	2.1	1.0	4.1	0.1
19.12.2006	6.0	4.6	7.0	0.0
20.12.2006	5.7	2.8	8.5	0.1
21.12.2006	6.4	5.7	6.9	0.0
22.12.2006	6.6	5.8	7.2	0.0
23.12.2006	6.7	6.6	6.8	0.1
24.12.2006	7.0	5.9	7.8	0.0
25.12.2006	5.4	5.1	5.9	0.0
26.12.2006	5.4	5.0	5.9	0.0
27.12.2006	5.4	4.1	5.9	0.2
28.12.2006	4.0	3.6	4.7	0.9
29.12.2006	4.5	3.4	5.7	0.1
30.12.2006	6.8	5.1	8.4	14.3
31.12.2006	7.4	6.7	8.1	3.8

Date	Temp	Min Temp	Max Temp	Rain (mm)
01.01.2007	6.8	5.0	8.2	5.6
02.01.2007	4.9	4.2	5.9	0.3
03.01.2007	6.1	4.8	7.2	2.3
04.01.2007	7.6	7.0	8.1	3.2
05.01.2007	6.9	6.2	8.0	0.7
06.01.2007	6.1	5.6	6.7	0.7
07.01.2007	6.8	5.7	7.8	1.2
08.01.2007	6.3	5.6	7.4	3.5
09.01.2007	9.9	8.4	10.8	2.3
10.01.2007	8.2	5.2	9.8	6.5
11.01.2007	5.8	4.2	7.3	11.0
12.01.2007	8.4	7.0	10.5	2.3
13.01.2007	8.4	6.8	9.3	1.6
14.01.2007	6.7	6.3	7.0	1.0
15.01.2007	6.6	4.6	7.4	0.0
16.01.2007	5.6	4.4	7.0	5.0
17.01.2007	6.9	4.8	8.3	7.0
18.01.2007	5.0	2.6	7.2	9.5
19.01.2007	5.0	3.4	6.9	6.4
20.01.2007	6.2	4.5	9.4	13.9
21.01.2007	3.3	1.3	4.5	5.5
22.01.2007	-3.4	-7.4	0.8	1.4
23.01.2007	-3.0	-6.8	0.3	0.3
24.01.2007	-3.6	-6.5	-1.2	0.0
25.01.2007	-4.5	-7.1	-1.4	0.1
26.01.2007	1.5	-0.9	3.6	4.2
27.01.2007	-1.5	-4.5	1.0	2.7
28.01.2007	4.6	2.5	6.5	2.9
29.01.2007	2.5	0.6	5.9	0.7
30.01.2007	6.3	5.2	7.8	0.3
31.01.2007	5.8	4.0	7.8	3.9
01.02.2007	4.8	3.2	5.8	0.3
02.02.2007	6.0	4.9	6.9	3.1
03.02.2007	5.6	3.3	8.4	0.1
04.02.2007	4.9	3.5	6.2	0.0
05.02.2007	2.8	0.9	4.5	0.4
06.02.2007	1.0	-0.1	2.5	1.2
07.02.2007	0.4	-1.1	1.9	1.1
08.02.2007	0.6	-1.7	1.7	1.4
09.02.2007	-1.6	-2.6	-0.6	0.2
10.02.2007	-1.5	-2.6	-0.7	0.0
11.02.2007	-0.4	-1.6	0.3	0.6
12.02.2007	1.6	0.3	2.6	2.8
13.02.2007	2.1	1.9	2.4	2.5
14.02.2007	3.1	1.9	3.8	2.9
15.02.2007	2.6	2.1	3.8	0.7
16.02.2007	3.1	2.6	3.9	0.0
17.02.2007	2.9	0.8	4.0	0.0
18.02.2007	2.9	-0.3	4.5	0.0
19.02.2007	2.3	1.7	3.0	0.0
20.02.2007	2.8	0.4	5.1	3.6
21.02.2007	-0.4	-1.0	0.2	14.0
22.02.2007	-1.7	-2.1	-1.1	1.2
23.02.2007	-1.6	-1.9	-1.2	1.4

24.02.2007	-0.2	-1.4	1.2	5.3
25.02.2007	2.3	1.5	2.8	10.0
26.02.2007	2.4	0.7	3.3	2.1
27.02.2007	1.7	0.2	3.5	5.1
28.02.2007	4.9	0.8	7.0	2.6
01.03.2007	5.2	3.5	7.3	0.8
02.03.2007	3.6	2.7	4.7	0.2
03.03.2007	3.2	2.0	4.1	0.0
04.03.2007	3.2	-0.1	6.9	0.0
05.03.2007	4.4	2.8	6.1	2.5
06.03.2007	6.2	4.0	8.0	3.1
07.03.2007	6.4	4.5	8.2	3.8
08.03.2007	5.7	3.7	7.3	0.4
09.03.2007	5.3	2.8	7.7	1.3
10.03.2007	6.5	2.3	8.5	0.0
11.03.2007	8.3	4.0	12.3	0.0
12.03.2007	8.4	3.0	13.8	0.0
13.03.2007	5.9	2.3	9.4	0.0
14.03.2007	7.2	4.5	10.8	0.0
15.03.2007	7.8	5.2	10.0	0.0
16.03.2007	6.7	4.3	9.0	3.0
17.03.2007	6.8	4.8	8.1	4.0
18.03.2007	5.8	3.6	8.0	2.4
19.03.2007	3.4	0.4	5.5	2.1
20.03.2007	3.6	0.4	6.8	0.4
21.03.2007	3.9	2.3	5.2	2.2
22.03.2007	5.2	3.2	7.8	0.1
23.03.2007	6.7	3.6	8.8	2.0
24.03.2007	7.5	4.3	10.6	0.0
25.03.2007	7.2	4.1	11.8	0.0
26.03.2007	7.0	2.4	11.8	0.0
27.03.2007	6.4	1.9	11.2	0.0
28.03.2007	8.0	2.8	12.8	0.0
29.03.2007	8.0	4.2	12.4	0.0
30.03.2007	6.6	3.1	11.5	0.0
31.03.2007	7.5	2.9	13.4	0.0
01.04.2007	6.2	0.1	12.6	0.0
02.04.2007	8.1	1.3	13.6	0.0
03.04.2007	4.5	-1.3	8.4	0.2
04.04.2007	7.0	1.3	9.8	0.0
05.04.2007	8.9	5.1	12.5	0.0
06.04.2007	5.4	1.9	8.0	0.0
07.04.2007	6.1	3.3	8.5	0.0
08.04.2007	6.0	4.3	7.5	3.0
09.04.2007	8.4	7.4	10.0	2.5
10.04.2007	9.6	8.1	11.5	0.0
11.04.2007	10.6	5.8	15.3	0.0
12.04.2007	8.8	2.8	14.8	0.0
13.04.2007	9.4	3.2	15.1	0.0
14.04.2007	10.4	4.3	16.4	0.0
15.04.2007	10.1	4.7	15.5	0.0
16.04.2007	13.8	8.6	20.0	0.0
17.04.2007	9.3	5.6	12.6	0.0
18.04.2007	7.6	5.0	10.6	0.1
19.04.2007	6.6	3.1	9.6	2.6
20.04.2007	4.2	0.1	7.8	0.0

21.04.2007	5.7	1.3	10.1	0.0
22.04.2007	8.4	6.0	11.1	0.0
23.04.2007	12.1	7.6	16.7	0.0
24.04.2007	12.5	7.7	17.1	0.0
25.04.2007	9.1	6.2	12.4	0.0
26.04.2007	13.2	6.9	20.2	0.0
27.04.2007	14.9	8.7	21.5	0.0
28.04.2007	10.5	5.0	16.0	0.1
29.04.2007	8.8	5.1	12.7	0.0
30.04.2007	7.7	2.3	12.5	0.0
01.05.2007	9.7	4.3	15.7	0.0
02.05.2007	11.9	5.9	17.6	0.0
03.05.2007	7.8	1.5	12.2	0.0
04.05.2007	10.6	3.4	17.1	0.0
05.05.2007	10.0	3.3	16.0	0.0
06.05.2007	13.5	8.3	19.3	3.8
07.05.2007	10.8	8.2	13.5	4.1
08.05.2007	10.4	8.4	12.3	8.2
09.05.2007	8.2	2.9	11.1	1.2
10.05.2007	10.3	7.8	13.4	2.2
11.05.2007	9.8	6.9	11.7	2.5
12.05.2007	10.5	8.4	12.1	4.2
13.05.2007	14.0	11.5	17.2	0.3
14.05.2007	13.7	6.4	18.2	0.0
15.05.2007	9.4	3.5	13.6	0.0
16.05.2007	9.2	7.9	10.0	34.4
17.05.2007	8.3	7.1	9.3	6.9
18.05.2007	12.7	9.6	15.0	0.4
19.05.2007	12.4	6.6	16.7	1.7
20.05.2007	14.2	11.0	17.5	0.0
21.05.2007	15.6	11.4	21.2	0.0
22.05.2007	13.6	8.6	18.2	0.0
23.05.2007	12.1	8.4	15.8	0.0
24.05.2007	15.3	13.1	18.6	0.0
25.05.2007	16.5	12.1	20.1	0.0
26.05.2007	11.0	8.2	13.7	5.3
27.05.2007	13.4	10.9	15.1	2.0
28.05.2007	15.2	13.5	17.6	3.5
29.05.2007	17.1	13.6	22.1	7.0
30.05.2007	11.6	6.1	15.7	0.0
31.05.2007	13.7	8.5	17.9	0.0
01.06.2007	16.9	13.5	19.9	0.0
02.06.2007	12.5	10.2	14.5	0.5
03.06.2007	15.2	12.3	19.0	0.0
04.06.2007	15.2	14.4	16.6	2.4
05.06.2007	17.4	14.5	21.8	4.7
06.06.2007	17.7	14.9	21.3	0.2
07.06.2007	19.5	14.6	24.0	0.0
08.06.2007	18.3	10.7	23.6	0.0
09.06.2007	19.1	11.7	24.3	0.0
10.06.2007	21.0	14.5	26.5	0.0
11.06.2007	22.7	15.3	28.6	0.0
12.06.2007	20.0	14.2	24.4	0.0
13.06.2007	16.4	14.5	18.4	0.5
14.06.2007	13.3	8.5	16.4	0.1
15.06.2007	12.3	11.1	13.2	1.3

16.06.2007	13.8	12.2	15.3	35.6
17.06.2007	15.7	11.4	19.4	2.9
18.06.2007	15.8	12.7	19.2	0.0
19.06.2007	16.3	10.9	20.9	0.0
20.06.2007	18.2	15.8	21.1	1.0
21.06.2007	16.7	13.3	19.2	20.2
22.06.2007	15.7	12.4	19.6	6.8
23.06.2007	15.5	12.2	18.8	6.3
24.06.2007	16.7	14.1	19.0	0.1
25.06.2007	17.4	15.0	19.4	1.4
26.06.2007	14.3	12.0	18.7	3.8
27.06.2007	12.2	10.1	14.3	31.2
28.06.2007	12.8	9.5	15.9	0.0
29.06.2007	15.0	12.5	17.4	6.0
30.06.2007	12.9	9.4	16.3	1.6
01.07.2007	14.9	12.6	17.4	2.5
02.07.2007	16.2	15.0	18.6	12.4
03.07.2007	16.8	13.3	20.1	2.4
04.07.2007	15.6	13.6	18.9	23.1
05.07.2007	14.3	14.1	14.5	29.2
06.07.2007	15.0	13.3	17.3	0.0
07.07.2007	15.3	12.5	18.5	0.3
08.07.2007	15.3	10.9	18.9	0.1
09.07.2007	15.3	10.1	19.2	0.0
10.07.2007	15.0	11.0	19.3	1.6
11.07.2007	14.1	13.3	15.1	7.2
12.07.2007	14.9	13.3	17.2	0.6
13.07.2007	16.2	14.4	18.8	0.4
14.07.2007	19.8	14.1	26.9	2.1
15.07.2007	19.2	15.8	22.4	2.1
16.07.2007	19.6	16.3	24.3	0.0
17.07.2007	19.1	13.8	23.3	0.1
18.07.2007	18.9	13.8	23.0	0.0
19.07.2007	16.4	10.6	20.3	0.0
20.07.2007	17.6	14.8	20.5	2.2
21.07.2007	18.7	14.3	22.9	0.1
22.07.2007	14.2	12.5	16.0	27.5
23.07.2007	16.0	12.9	20.2	0.4
24.07.2007	15.0	13.6	17.1	10.4
25.07.2007	16.4	13.4	20.0	0.1
26.07.2007	18.0	15.8	20.4	7.3
27.07.2007	16.4	14.2	19.1	5.7
28.07.2007	15.4	12.9	19.4	4.2
29.07.2007	13.5	9.7	16.6	1.7
30.07.2007	13.6	12.5	15.3	5.7
31.07.2007	13.4	10.2	15.9	0.0