

1 In all tables, **Pred date** = predicted date of operation, **Med date** = median observed date of
 2 operation

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4 Table S1 Sowing dates for all crop in Julian days for the growing season 2007/2008

Location	Crop	Pred date	Med Date	Range	n*	Default**
Spring crops						
Denmark	Spring barley	114	96	90-122	31	
	Forage maize	124	92	122-129	6	Y
	Oats	114	96	91-113	61	
France	Spring barley	65	96	90-122	31	
	Fodder beet	108	153	153-182	13	
	Potatoes	110	106	92-106	7	
	Forage maize	125	122	121-153	154	
Poland	Spring barley	101	80	67-119	26	
	Sugar beet	116	95	88-114	6	
	Forage maize	119	121	98-195	22	
	Fodder beet	116	103	80-135	16	
	Potatoes	113	103	89-121	18	
Winter crops						
Denmark	Triticale	260	268	253-270	9	Y
	Winter barley	260	260	253-275	22	
	Winter wheat	260	258	253-268	33	
	Winter rape	243	224	222-232	10	Y
France	Winter barley	297	298	298-319	19	

	Winter wheat	297	305	274-335	98	
Poland	Triticale	279	265	235-283	61	Y
	Winter barley	279	253	237-271	12	Y
	Winter wheat	279	270	263-283	21	Y
	Winter rye	279	263	250-283	41	Y

1 * number of operations recorded

2 ** Y = model used default date for location, not varying with year

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2 Table S2 Harvesting dates for all crop in Julian days for the growing season 2007/2008

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Location	Crop	Predicted Date	Median date	Range	n*	Default **
Spring crops						
Denmark	Spring barley	249	213	202-259	22	
	Forage maize	282	284	284-303	6	
	Oats	249	233	202-233	61	
France	Spring barley	219	223	183-244	31	
	Fodder beet	297	259	167-259	13	
	Potatoes	251	247	244-259	9	
	Maize	284	306	259-306	153	
Poland	Spring barley	234	204	189-270	26	
	Sugar beet	364	298	289-306	6	
	Forage maize	304	264	240-302	22	
	Fodder beet	364	294	167-303	16	
	Potatoes	279	264	245-270	18	
Winter crops						
Denmark	Triticale	228	223	212-233	8	Y
	Winter barley	228	213	202-259	22	Y
	Winter wheat	228	223	167-245	30	Y
	Winter rape	184	210	202-259	9	Y
France	Winter barley	219	197	183-197	19	Y
	Winter wheat	219	213	197-228	97	Y

Poland	Triticale	222	208	189-342	61	Y
	Winter barley	222	192	237-271	12	Y
	Winter wheat	222	209	189-282	21	Y
	Winter rye	222	207	135-282	41	Y

1 * number of operations recorded

2 ** Y = model used default date for location, not varying with year

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1 Table S3 Ploughing dates for all crop in Julian days for the growing season 2007/2008

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Location	Crop	Predicted date	Median date	Range ***	n*	Note **
Spring crops						
Denmark	Spring barley	111	91	75-107	31	Aut (1)
	Forage maize	124	92	92-127	6	
	Oats	111	96	90-106	61	
France	Spring barley	64	90	75-102	32	Aut (1)
	Fodder beet	100	153	167-259	13	
	Potatoes	107	61	61	7	Aut (3)
	Maize	122	122	61-182	154	
Poland	Spring barley	98	319	217-334	25	Spr (4)
	Sugar beet	113	305	283-320	6	
	Forage maize	143	298	232-324	20	Spr (4)
	Fodder beet	113	324	309-332	6	Spr(4)
	Potatoes	110	324	283-329	16	Spr(4)
Winter crops						
Denmark	Triticale	257	268	253-270	9	Y
	Winter barley	257	258	225-269	22	Y
	Winter wheat	257	258	244-268	32	Y
	Winter rape	240	227	222-258	9	Y
France	Winter barley	240	305	288-335	7	Y
	Winter wheat	240	305	274-335	52	Y
Poland	Triticale	276	245	217-269	60	

	Winter barley	276	245	227-254	10	
	Winter wheat	276	253	223-319	19	
	Winter rye	276	247	193-273	36	

1 * number of operations recorded

2 ** Y = model used default date for location, not varying with year. Spr() and Aut () indicates
3 the number of operations that occurred in the spring, rather than autumn, or vice versa

4 *** note that negative values can occur as a result of ploughing occurring in the previous
5 autumn

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1 Table S4 Fertilisation dates for all crop in Julian days for the growing season 2007/2008

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Location	Crop	First application				Second application				Notes
		Pred date	Med date	Range	n	Pred date	Med date	Range	n	
Spring crops										
Denmark	Spring barley	109	96	214-91	32	141	-	-		Aut (1)
	Forage maize	119	122	122-131	6	146	-	-		
	Oats	109	106	228-92	61	141	-			
France	Spring barley	62	61	56-65	7	96	105	92-122	17	Aut (5)
	Fodder beet	97	153	136-153	23	141	182	182	7	
	Potatoes	105	105	91-106	15	138	-	-		
	Maize	120	122	90-153	159	157	-	-		
Poland	Spring barley	96	75	56-86	13	127	121	101-136	21	Aut (1)
	Sugar beet	111	71	52-89	26	165	101	92-155	24	
	Forage maize	114	121	87-166	33	156	-	-		Aut (1)

	Fodder beet	111	75	63-98	6	165	133	112-172	20	
	Potatoes	108	123	101-131	19	146	150	148-157	9	
Winter crops										
Denmark	Triticale	85	87	87	3	114	121	116-126	8	Y
	Winter barley	85	61	56-65	7	114	105	92-122	17	Aut (5) Y
	Winter wheat	85	86	70-92	19	114	106	101-126	28	Y
	Winter rape	85	61	51-96	9	104	-	-		Y
France	Winter barley	85	15	15-59	13	111	106	91-136	37	Y
	Winter wheat	85	46	15-75	101	111	106	91-136	104	Y
Poland	Triticale	101	75	49-96	60	125	115	101-148	28	Y
	Winter barley	101	70	63-98	10	125	127	119-157	4	Autumn (6) Y
	Winter wheat	101	69	53-88	24	125	110	94-157	14	Y
	Winter rye	101	75	52-96	32	125	106	96-155	19	

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2 * number of operations recorded

3 ** Y = model used default date for location, not varying with year. Spr() and Aut () indicates

4 the number of operations that occurred in the spring, rather than autumn, or vice versa

- 1 *** note that negative values can occur as a result of ploughing occurring in the previous
- 2 autumn
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1 Table S5 Slurry application dates for all crop in Julian days for the growing season
 2 2007/2008
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Location	Crop	Pred Date	Med date	Range	n*	Note**
Spring crops						
Denmark	Forage maize	119	92	92-131	6	Y
France	Spring barley	62	101	92-106	7	Autumn (1)
	Fodder beet	97	161	152-182	10	
	Potatoes	105	101	75-101	6	
	Maize	119	100	32-136	152	
Winter crops						
Denmark	Winter barley	85	101	92-106	7	Autumn (1) Y
	Winter wheat	85	116	65-131	20	Autumn (1) Y
	Winter rape	85	92	80-106	5	Autumn (4) Y
France	Winter barley	86	75	46-75	13	
	Winter wheat	86	75	59-122	56	

4 * number of operations recorded

5 ** Y = model used default date for location, not varying with year. Spr() and Aut () indicates
 6 the number of operations that occurred in the spring, rather than autumn, or vice versa

7 *** note that negative values can occur as a result of ploughing occurring in the previous
 8 autumn

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1 Table S6 Solid manure application dates for all crop in Julian days for the growing
 2 season 2007/2008

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Location	Crop	Pred Date	Med Date	Range	n*	Note**
Spring crops						
Denmark	Spring barley	109	91	75-110	12	
France	Spring barley	64	75	75-110	7	
	Maize	119	106	46-121	62	
Poland	Spring barley	128	305	283-332	6	
	Fodder beet	139	316	282-331	8	
Winter crops						
Denmark	Winter wheat	255	102	92-146	7	
France	Winter wheat	292	274	274	5	Spr(2)

4 * number of operations recorded

5 ** note that negative values can occur as a result of ploughing occurring in the previous
 6 autumn

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