1999-2000 HANGZHOU, CHINA FUSARIUM HEAD BLIGHT NURSERY REPORT (ABRIDGED)

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INTRODUCTION

A cooperative Fusarium head blight (FHB) nursery has been grown at Zhejiang University (formerly Zhejiang Agricultural University) in Hangzhou, China since fall 1994. Professor Zhang Bingxin, a plant pathologist in the Department of Plant Protection, has managed the nursery since its inception. Participants in the nursery primarily have been barley improvement and pathology projects in the Midwest U.S. These projects are located at the University of Minnesota (U of M), North Dakota State University (NDSU), and Busch Agricultural Resources, Inc. (BARI).

The 1999-2000 Hangzhou Nursery included breeding lines from the barley improvement project at the U of M, and the six- and two-rowed barley improvement projects at NDSU. The NDSU barley pathology project included three trials within this year's nursery. These trials included the "Rescreening Nursery", a final screening of entries previously evaluated for FHB in the U.S. and China to determine if they warrant further evaluation; the "Elite Nursery", a nursery with entries previously identified to have higher levels of FHB resistance; and the "World Collection Nursery", a nursery with selected entries from the USDA-ARS National Small Grains Collection (NSGC). Half of the USDA-ARS NSGC's six-rowed spring barley collection was evaluated in North Dakota last summer for FHB resistance. Based on the results of that screening, about 90 accessions were selected for evaluation in the Hangzhou nursery. The second half of the spring six-rowed collection will be screened this summer in North Dakota.

The 1999-2000 Hangzhou FHB nursery was sown in early-November. The nursery was irrigated with overhead sprinklers and inoculum was applied about two weeks before heading using the grain spawn method. Inoculum was applied weekly until the latest entries in the nursery were in the early-milk growth stage. Drs. Brian Steffenson, Rich Horsley, and Jerry Franckowiak of NDSU; and Dr. Kevin Smith of the U of M collected data on FHB severity from 2-17 May 2000. Most entries in the nursery were scored twice for FHB severity during this period. When we began collecting data on 2 May, the incidence and severity of FHB was quite low. However, by the time the second set of readings were made, the FHB infection had increased to levels that allowed for easy differentiation of resistant and susceptible lines. A scale of 1-5 was used to score most of the materials in the nursery. The scale was as follows: 1 = very low incidence (<2%) and very low severity (<2%), 2 = low incidence (2-10%) and low severity (2-10%), 3 = moderate incidence (11-25%) and moderate severity (6-12%), 4 = high incidence (26-60%) and high severity (13-20%), and 5 = very high incidence (>60%) and very high severity (>20%). In general, entries with a mean FHB resistance of 1.5 or lower when averaged across the two readings are worthy of further evaluation. Lines with higher levels of infection (>2.0) probably are too susceptible to consider as candidates for further evaluation, use as parents for the next cycle of crossing, or advancement as a line for cultivar release with resistance to FHB.

This report is an abridged version of the "**1999-2000 Hangzhou, China Fusarium Head Blight Nursery Report"** that includes only tables of means. Individuals interested in obtaining the complete report can contact Rich Horsley at the mailing or e-mail address listed in the following section. Individuals interested in obtaining additional information or seed of entries can contact the individual that oversaw each nursery. Secondary distribution of seed that was not developed by the individual overseeing a specific nursery will not be done. However, we will provide the

name of the individual that developed the line(s) of interest.

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Table 1. Mean FHB severity for the Elite Nursery grown in the 2000 Hangzhou, China FHB Nursery.

Entry	Origin	1st reading[1]				2nd reading[1]				Overall
		Rep 1	Rep 2	Rep 3	Mean	Rep 1	Rep 2	Rep 3	Mean	Mean[1,2]
C97-21-38	Spec Nurs	3	3	3	3.0	3	3	3	3.0	3.0
FEG 4-67	Spec Nurs	3	3	3	3.0	3	3	3	3.0	3.0
6B94-8253	Spec Nurs	4	3	3	3.3	3	3	3	3.0	3.2
6B95-2482	Spec Nurs	3	3	3	3.0	3	4	3	3.3	3.2
Comp 351	Spec Nurs	1	1	1	1.0	1	2	2	1.7	1.3
Comp 355	Spec Nurs	1	2	1	1.3	2	1	2	1.7	1.5
CS21	Spec Nurs	1	2	1	1.3	1	1	1	1.0	1.2
CDC Sisler	Spec Nurs	3	3	3	3.0	3	3	3	3.0	3.0
CI 918	Spec Nurs	3	3	3	3.0	3	3	3	3.0	3.0
CI 2492	Spec Nurs	3	1	3	2.3	3	2	3	2.7	2.5
CI 4233	Spec Nurs	2	2	2	2.0	3	2	1	2.0	2.0
PFC 82210	Spec Nurs	1	1	1	1.0	1	2	1	1.3	1.2
PFC 82211	Spec Nurs	1	1	1	1.0	1	1	2	1.3	1.2
Manker	Spec Nurs	4	3	3	3.3	3	3	3	3.0	3.2
Larker	Spec Nurs	4	3	4	3.7	4	3	4	3.7	3.7
Glenn	Spec Nurs	3	3	3	3.0	4	3	3	3.3	3.2
Oderbrucker	Spec Nurs	3	2	1	2.0	2	2	2	2.0	2.0
Russia	Spec Nurs	2	2	1	1.7	3	2	2	2.3	2.0
CI 1907	Spec Nurs	1	2	2	1.7	2	2	1	1.7	1.7
Xiashan	Spec Nurs	1	1	1	1.0	1	1	1	1.0	1.0
Harbin	Spec Nurs	2	2	2	2.0	2	2	2	2.0	2.0
CI 2488	Spec Nurs	1	1	2	1.3	1	2	1	1.3	1.3
Primus	Spec Nurs	2	3	3	2.7	3	3	3	3.0	2.8
Kyoto Nakate	Spec Nurs	2	1	2	1.7	2	2	3	2.3	2.0
M 87-218	Spec Nurs	1	1	2	1.3	1	2	2	1.7	1.5
Beacon	Spec Nurs	4	4	4	4.0	3	3	3	3.0	3.5
PFC 9213	Brazil	2	2	2	2.0	3	2	3	2.7	2.3
PFC 9216	Brazil	3	2	3	2.7	3	3	4	3.3	3.0
PFC 9210	Brazil	3	3	3	3.0	3	3	4	3.3	3.2
Chevron	Spec Nurs	1	1	2	1.3	1	1	2	1.3	1.3
Foster	Spec Nurs	4	4	4	4.0	4	3	3	3.3	3.7
CI 4196	Spec Nurs	1	1	2	1.3	1	1	2	1.3	1.3
CI 5415	Spec Nurs	2	4	4	3.3	3	4	3	3.3	3.3
C97-21-63	from Horsley	1	2	2	1.7	2	2	2	2.0	1.8
PI 328029	from Horsley	2	4	3	3.0	3	4	3	3.3	3.2
F104-250-9	from Horsley	1	1	1	1.0	1	1	2	1.3	1.2
ND 15477	from Horsley	2	2	2	2.0	3	2	3	2.7	2.3
6B93-2978	from Horsley	3	3	3	3.0	4	3	3	3.3	3.2
PFC 9215	Brazil	2	2	2	2.0	2	2	2	2.0	2.0

[1]Rating scale 1 = very low incidence (<2%) and very low severity (<2%), 2 = low incidence (2-10%) and low severity (2-10%), 3 = moderate incidence (11-25%) and moderate severity (6-12%), 4 = high incidence (26-60%) and high severity (13-20%), and 5 = very high incidence (>60%) and very high severity (>20%).
[2]Mean of 1st and 2nd readings. 2nd reading was done approximately one week after the first reading.

Table 2. Mean FHB severity for the World Collection Nursery entries grown in the 2000 Hangzhou, China FHB Nursery.

CIho No.	Origin	1st Reading[5]			2nd Reading[5]			Overall mean[6]
		Rep 1	Rep 2	Mean	Rep 1	Rep 2	Mean	
4086	DBS[1]	4	3	3.5	4	3	3.5	3.5
4438	DBS	2	2	2.0	1	1	1.0	1.5
6503	DBS	2	2	2.0	3	2	2.5	2.3
588	DBS	1	1	1.0	1	1	1.0	1.0
1701	DBS	4	4	4.0	5	4	4.5	4.3
2368	DBS	3	2	2.5	3	2	2.5	2.5
2525	DBS	2	1	1.5	3	2	2.5	2.0
2549	DBS	2	1	1.5	3	2	2.5	2.0
2678	DBS	1	1	1.0	2	2	2.0	1.5
2700	DBS	1	1	1.0	2	2	2.0	1.5
3498	DBS	1	1	1.0	1	2	1.5	1.3
4022	DBS	2	1	1.5	2	1	1.5	1.5
4078	DBS	4	4	4.0	4	4	4.0	4.0
4086	DBS	4	3	3.5	5	3	4.0	3.8
4475	DBS	2	2	2.0	3	2	2.5	2.3
4528	DBS	3	3	3.0	3	3	3.0	3.0
4981	DBS	4	3	3.5	4	3	3.5	3.5
5003	DBS	4	1	2.5	1	2	1.5	2.0
6163	DBS	1	1	1.0	1	1	1.0	1.0
6276	DBS	1	1	1.0	2	1	1.5	1.3
6310	DBS	2	2	2.0	3	2	2.5	2.3
6443	DBS	3	2	2.5	3	2	2.5	2.5
6454	DBS	4	3	3.5	4	1	2.5	3.0
6503	DBS	2	2	2.0	3	3	3.0	2.5
6504	DBS	2	2	2.0	3	2	2.5	2.3
6523	DBS	2	1	1.5	2	2	2.0	1.8
9044	DBS	1	1	1.0	1	1	1.0	1.0
9563	DBS	3	3	3.0	4	3	3.5	3.3
15590	DBS	3	2	2.5	3	3	3.0	2.8
1142	DBS	1	1	1.0	2	1	1.5	1.3
3942	LANSEL[2]	2	3	2.5	3	3	3.0	2.8
5195	LANSEL	3	3	3.0	3	3	3.0	3.0
5202	LANSEL	3	1	2.0	3	2	2.5	2.3
6550	LANSEL	2	2	2.0	2	2	2.0	2.0
11342	LANSEL	1	2	1.5	2	1	1.5	1.5
13766	LANSEL	2	2	2.0	3	3	3.0	2.5
176	OSNASEL[3]	2	2	2.0	2	2	2.0	2.0
220	OSNASEL	1	1	1.0	1	1	1.0	1.0
475	OSNASEL	4	4	4.0	5	4	4.5	4.3
746	OSNASEL	3	2	2.5	3	3	3.0	2.8
923	OSNASEL	3	2	2.5	3	2	2.5	2.5
1216	OSNASEL	3	3	3.0	3	3	3.0	3.0
1242	OSNASEL	3	3	3.0	3	3	3.0	3.0
1336	OSNASEL	2	2	2.0	2	2	2.0	2.0
2146	OSNASEL	1	1	1.0	1	1	1.0	1.0
2334	OSNASEL	3	2	2.5	3	2	2.5	2.5
2492	OSNASEL	2	2	2.0	3	1	2.0	2.0
3430	OSNASEL	4	3	3.5	4	3	3.5	3.5
4442	OSNASEL	1	2	1.5	2	2	2.0	1.8
4825	OSNASEL	2	2	2.0	2	2	2.0	2.0
5109	OSNASEL	3	3	3.0	4	3	3.5	3.3

CIho No.	Origin	1st Reading[5]			2nd Reading[5]			Overall mean[6]
		Rep 1	Rep 2	Mean	Rep 1	Rep 2	Mean	
6364	OSNASEL	4	4	4.0	4	4	4.0	4.0
6437	OSNASEL	3	3	3.0	4	3	3.5	3.3
7122	OSNASEL	2	1	1.5	3	1	2.0	1.8
7162	OSNASEL	2	1	1.5	3	1	2.0	1.8
7206	OSNASEL	4	4	4.0	5	3	4.0	4.0
7249	OSNASEL	1	2	1.5	2	1	1.5	1.5
9056	OSNASEL	1	1	1.0	1	1	1.0	1.0
9185	OSNASEL	2	1	1.5	3	1	2.0	1.8
9586	OSNASEL	3	2	2.5	5	3	4.0	3.3
13357	OSNASEL	3	2	2.5	3	3	3.0	2.8
13736	OSNASEL	2	1	1.5	3	2	2.5	2.0
14043	OSNASEL	3	2	2.5	4	2	3.0	2.8
14158	OSNASEL	3	3	3.0	4	2	3.0	3.0
14819	OSNASEL	3	2	2.5	3	3	3.0	2.8
14943	OSNASEL	3	2	2.5	3	2	2.5	2.5
16128	OSNASEL	1	1	1.0	1	1	1.0	1.0
2236	UMS[4]	1	1	1.0	1	2	1.5	1.3
4095	UMS	1	1	1.0	1	1	1.0	1.0
4339	UMS	3	4	3.5	3	3	3.0	3.3
4530	UMS	1	2	1.5	1	4	2.5	2.0
5809	UMS	3	3	3.0	2	3	2.5	2.8
6610	UMS	1	1	1.0	1	2	1.5	1.3
6611	UMS	1	1	1.0	1	2	1.5	1.3
6613	UMS	1	1	1.0	1	1	1.0	1.0
7163	UMS	1	1	1.0	1	1	1.0	1.0
9114	UMS	1	3	2.0	2	2	2.0	2.0
11526	UMS	1	1	1.0	1	1	1.0	1.0
15258	UMS	1	1	1.0	1	1	1.0	1.0
Chevron		1	1	1.0	1	1	1.0	1.0
Foster		4	3	3.5	3	3	3.0	3.3
CIho 4196		1	1	1.0	1	1	1.0	1.0
CIho 5415		3	3	3.0	3	2	2.5	2.8

[1]DBS = Database selection, based on cluster analysis, using accessions from the USDA-ARS National Small Grains Collection (NSGC) screened in Osnabrock and Langdon, ND with mean FHB severity less than or equal to 30%. Selection was done to maximize diversity of origin and to maintain accessions with earlier maturity for further screening.

[2]LANSEL = Accession from the 1999 screening of the USDA-ARS NSGC identified as resistant in the Langdon, ND nursery.

[3]OSNASEL = Accession from the 1999 screening of the USDA-ARS NSGC identified as resistant in the Osnabrock, ND nursery.

[4]UMS = Accessions from the 1999 screening of the USDA-ARS NSGC identified as resistant in the Osnabrock and Langdon, ND by Uwe M. Scholz and Brian Steffenson.

[5]Rating scale 1 = very low incidence (<2%) and very low severity (<2%), 2 = low incidence (2-10%) and low severity (2-10%), 3 = moderate incidence (11-25%) and moderate severity (6-12%), 4 = high incidence (26-60%) and high severity (13-20%), and 5 = very high incidence (>60%) and very high severity (>20%).

[6]Mean of 1st and 2nd readings. 2nd reading was done approximately one week after the first reading.

Table 3. Mean FHB severity for entries in the Rescreen Nursery grown in the 2000 Hangzhou, China FHB Nursery.

| | FHB Severity[1] | | | | | | |
| | 1st read | 2nd read | Mean | 1st read | 2nd read | Mean | Overall |
Entry		Rep 1			Rep 2		Mean[2]
H 3104	3			3			
H 3180	2	3	2.5	3			
H 3183	2	2	2.0	3			
H 4035	5			5			
H 4164	3			2	3	2.5	
H 4172	3			2	3	2.5	
H 7230	2	2	2.0	2	3	2.5	2.3
H 7315	2	2	2.0	2	3	2.5	2.3
H 7514	3			2	3	2.5	
H 7515	2	3	2.5	2	2	2.0	2.3
H 7519	2	3	2.5	3			
H 7828	5			5			
H 7828	5			5			
H 8109	2	2	2.0	2	2	2.0	2.0
H 8110	3			3			
H 8122	2	2	2.0	2	3	2.5	2.3
H 8123	4			4			
H 8131	2	2	2.0	3			
H 8132	2	2	2.0	3			
H 8157	2	2	2.0	2	2	2.0	2.0
H 8179	1	1	1.0	2	2	2.0	1.5
H 8207	1	2	1.5	2			
H 8248	3			4			
H 8253	2	3	2.5	3			
H 8254	2	2	2.0	3			
H 8255	2	2	2.0	3			
H 8259	3			2	3	2.5	
H 8260	3			3			
H 8263	4			5			
H 8273	2	2	2.0	3			
H 8277	2	3	2.5	3			
H 8290	Missing			5			
H 8293	3			5			
H 8297	3			4			
H 8306	3			3			
H 8307	3			3			
H 8308	2	3	2.5	3			
H 8314	4			5			
H 8315	4			4			
H 8324	3			3			
H 8325	3			2	3	2.5	
H 8348	1	2	1.5	1	2	1.5	1.5
H 8392	5			5			
H 8799	5			5			
ICB 102833	3			3			
ICB 102835	3			2	3	2.5	
ICB 102836	1	1	1.0	1	1	1.0	1.0
ICB 102837	1	2	1.5	2	3	2.5	2.0
Chevron	2	1	1.5	1	2	1.5	1.5
Foster	4			4			

	FHB severity[1]						Overall
	1st read	2nd read	Mean	1st read	2nd read	Mean	
Entry	Rep 1			Rep 2			Mean[2]
CI 4196	1	1	1.0	1	1	1.0	1.0
CI 5415	2	3	2.5	3			
ICB 102838	1	1	1.0	1	2	1.5	1.3
ICB 102839	1	1	1.0	1	2	1.5	1.3
ICB 102845	1	1	1.0	2	2	2.0	1.5
ICB 102876	1	1	1.0	1	2	1.5	1.3
ICB 103043	2	2	2.0	1	3	2.0	2.0
ICB 103054	2	2	2.0	1	2	1.5	1.8
ICB 103063	3			4			
ICB 103097	1	2	1.5	1	1	1.0	1.3
ICB 103126	1	2	1.5	1	1	1.0	1.3
ICB 103136	2	3	2.5	1	2	1.5	2.0
ICB 103170	2	2	2.0	1	2	1.5	1.8
ICB 104023	2	3	2.5	1	3	2.0	2.3
ICB 104025	4			3			
ICB 104031	3			2	3	2.5	
ICB 104033	3			2	3	2.5	
ICB 104036	3			1	3	2.0	
ICB 104042	5			5			
ICB 104052	5			5			
ICB 104055	2	2	2.0	1	3	2.0	2.0
ICB 104056	4			3			
ICB 104058	4			3			
ICB 104061	3			2	3	2.5	
ICB 104062	3			2	3	2.5	
ICB 104065	4			3			
ICB 104171	4			3			
ICB 108140	2	2	2.0	1	1	1.0	1.5
ICB 109022	5			4			
ICB 109025	5			5			
ICB 109444	4			3			
ICB 109892	2	2	2.0	1	1	1.0	1.5
ICB 110318	4			3			
ICB 110322	3			4			
ICB 110323	4			4			
ICB 110380	2	1	1.5	1	1	1.0	1.3
ICB 110385	2	1	1.5	1	2	1.5	1.5
ICB 110386	3			3			
ICB 110387	3			2	3	2.5	
ICB 110402	1	2	1.5	1	1	1.0	1.3
ICB 110775	3			2	3	2.5	
ICB 110784	3			2	3	2.5	
ICB 110907	3			2	2	2.0	
ICB 110915	2	2	2.0	2	2	2.0	2.0
ICB 110921	2	2	2.0	2	2	2.0	2.0
ICB 111026	1	2	1.5	2	2	2.0	1.8
ICB 111028	2	2	2.0	2	3	2.5	2.3
ICB 111040	1	2	1.5	2	2	2.0	1.8
Chevron	2	1	1.5	1	2	1.5	1.5
Foster	3			2	4	3.0	
CI 4196	1	1	1.0	1	1	1.0	1.0

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Entry	FHB Severity[1]						Overall Mean[2]
	1st read	2nd read	Mean	1st read	2nd read	Mean	
	Rep 1			Rep 2			
CI 5415	3			3			
ICB 111046	3			4			
ICB 111671	2	1	1.5	2	3	2.5	2.0
ICB 111677	3			3			
ICB 111699	4			4			
ICB 111709	3			3			
ICB 111748	2	1	1.5	1	1	1.0	1.3
ICB 111809	5			4			
ICB 111810	1	1	1.0	1	2	1.5	1.3
ICB 111818	1	1	1.0	2	2	2.0	1.5
ICB 111838	1	1	1.0	1	2	1.5	1.3
ICB 111840	1	1	1.0	2	2	2.0	1.5
ICB 111862	1	2	1.5	1	2	1.5	1.5
ICB 111868	5			4			
ICB 111877	2	2	2.0	1	2	1.5	1.8
ICB 111897	4			3			
ICB 111931	2	2	2.0	1	2	1.5	1.8
ICB 111937	2	1	1.5	1	2	1.5	1.5
ICB 111943	5			4			
ICB 111949	2	3	2.5	2	3	2.5	2.5
ICB 111951	3			2	3	2.5	
ICB 111952	2	2	2.0	1	2	1.5	1.8
ICB 111993	3			2	2	2.0	
ICB 111994	1	2	1.5	1	1	1.0	1.3
ICB 115748	1	2	1.5	1	1	1.0	1.3
ICB 115749	3			4			
ICB 115750	4			4			
ICB 115753	4			3			
ICB 115754	4			3			
ICB 115755	4			3			
ICB 115813	2	1	1.5	1	2	1.5	1.5
ICB 115817	1	2	1.5	1	2	1.5	1.5
ICB 115818	2	2	2.0	1	2	1.5	1.8
ICB 116129	3			2	3	2.5	
ICB 116130	4			4			
ICB 116132	3			2	3	2.5	
ICB 116135	3			3	3	3.0	
Chevron	2	1	1.5	2	1	1.5	1.5
Foster	3			3	4	3.5	
CI 4196	1	1	1.0	1	1	1.0	1.0
CI 5415	3			2	3	2.5	
ICB 116137	3			3			
ICB 116139	2	3	2.5	3			
ICB 116144	2	4	3.0	3			
ICB 116145	3			2	3	2.5	
ICB 116148	2	3	2.5	3			
ICB 116214	4			3			
ICB 116215	3			3			
ICB 118662	4			3			
ICB 118664	1	1	1.0	1	1	1.0	1.0
ICB 118686	2	2	2.0	1	2	1.5	1.8
ICB 118688	4			3			
ICB 118755	1	1	1.0	1	1	1.0	1.0

Entry	1st read	2nd read	Mean	1st read	2nd read	Mean	Overall Mean[2]
	Rep 1			Rep 2			
ICB 118770	1	2	1.5	1	2	1.5	1.5
ICB 118814	3			3			
ICB 119356	2	3	2.5	2	2	2.0	2.3
ICB 121417	2	2	2.0	2	3	2.5	2.3
ICB 121420	4			4			
Sn92-1201	4			4			
Sn92-1205	2	3	2.5	3			
Sn92-1212	3			3			
Sn92-1218	3			4			
Sn92-1219	3			4			
Sn92-1221	3			4			
Sn92-1242	2	3	2.5	3			
Sn92-1246	3			3			
Sn92-1247	3			3			
Chevron	1	1	1.0	1	2	1.5	1.3
Foster	3			3			
Sn92-1265	2	2	2.0	3			
CI 4196	1	1	1.0	1	1	1.0	1.0
Cul94-249	3			3			
Pl-066	3			2	2	2.0	
PL-101	2	1	1.5	2	2	2.0	1.8
2207	2	1	1.5	1	1	1.0	1.3
Pi 566203	1	1	1.0	1	1	1.0	1.0
Guan 78-101	2	1	1.5	1	1	1.0	1.3
Dai shan er long	1	1	1.0	1	1	1.0	1.0
Mimai 114	1	1	1.0	1	1	1.0	1.0
Zhe Nong da 5011	2	1	1.5	1	1	1.0	1.3
Zhe Nong da 5115	2	1	1.5	1	1	1.0	1.3
Chevron	1	1	1.0	1	1	1.0	1.0
Foster	2	3	2.5	3	3	3.0	2.8
CI 4196	1	1	1.0	1	1	1.0	1.0
CI 5415	3			3			
Chouri 19	1	1	1.0	1	1	1.0	1.0
Mimai 114	2	1	1.5	1	1	1.0	1.3
Munda 4	1	1	1.0	1	2	1.5	1.3
Munda 5	1	1	1.0	1	1	1.0	1.0
Zaoshu 3	2	1	1.5	1	2	1.5	1.5
Foster	3	3	3.0	3			
Zhenun 12	1	2	1.5	1	1	1.0	1.3
Nitakei 48	2	1	1.5	1	1	1.0	1.3
Nitakei49	2	2	2.0	2	2	2.0	2.0
Mokkei9308	2	1	1.5	1	1	1.0	1.3
Mokkei9305	3	3	3.0	2	2	2.0	2.5
Mokkei9301	3			3	3	3.0	
Mokkei9378	2	3	2.5	2	1	1.5	2.0
Aishi wase golden	1	2	1.5	2	1	1.5	1.5
Horny peseky 2	2	2	2.0	2	2	2.0	2.0
Asahi 5	2	1	1.5	2	2	2.0	1.8
Asahi 21	1	3	2.0	2	3	2.5	2.3
Fuji Nijo	2	3	2.5	2	3	2.5	2.5
CI 5415	3			3			
Harbin	2	2	2.0	2	2	2.0	2.0
Chevron	1	1	1.0	2	1	1.5	1.3

	FHB Severity[1]						
	1st read	2nd read	Mean	1st read	2nd read	Mean	Overall
Entry	Rep 1			Rep 2			Mean[2]
Foster	4			4	4	4.0	
CI 4196	1	1	1.0	1	1	1.0	1.0
CI 5415	3			3			
Imperial	2	2	2.0	3			
Kombaneisis	3			3			
Maja	3			3			
Niedzica	2	3	2.5	3			
Revivum 18-4	2	2	2.0	2	2	2.0	2.0
Russia	1	2	1.5	1	2	1.5	1.5
Sanalta	2	2	2.0	1	3	2.0	2.0
Seijo II	3			3			
Sirius o-525	2	2	2.0	1	3	2.0	2.0
Svansota	2	2	2.0	2	2	2.0	2.0
Svanhals	3			1	2	1.5	
CI 4196	1	2	1.5	2	2	2.0	1.8
CI 8826	3			3			
Ant 18-159	3			3			
Gula	3			3			
Cougbar	3			3			
Ant18-162	3			3			
Ant18-617	2	3	2.5	2	3	2.5	2.5
Ant18-660	2	3	2.5	2	3	2.5	2.5
Ant18-623	2	3	2.5	2	3	2.5	2.5
Ant18-164	3			2	3	2.5	
CI 5415	3			3			
Advance	3			2	3	2.5	
Klages	3			2	2	2.0	
Ant18-161	3			3			
Ant-610				Missing			
Kindred	2	2	2.0	2	2	2.0	2.0
Trail	3			2	4	3.0	
Trophy	3			3			
Dickson	4			3	3	3.0	
Beacon	2	2	2.0	2	2	2.0	2.0
Morex	3			2	3	2.5	
Azure	3			3			
Robust	3			3			
Excel	4			3			
Peatland	1	1	1.0	1	1	1.0	1.0
Bonanza	3			2	3	2.5	
Titan	1	2	1.5	1	2	1.5	1.5
Manscheuri	3			2	3	2.5	
Lion	3			1	2	1.5	
Hietpas 5	2	1	1.5	1	1	1.0	1.3
C93-3230 (#30)	1	2	1.5	1	1	1.0	1.3
Atlas	2	3	2.5	2	3	2.5	2.5
Moore	2	3	2.5	1	2	1.5	2.0
Chevron	1	1	1.0	1	1	1.0	1.0
Foster	3			3			
CI 4196	1	1	1.0	1	1	1.0	1.0
CI 5415	3			2	3	2.5	
Montcalm	3			2	3	2.5	
Champlain	1	2	1.5	2	2	2.0	1.8

	FHB Severity[1]						
	1st read	2nd read	Mean	1st read	2nd read	Mean	Overall
Entry	Rep 1			Rep 2			Mean[2]
Olli	3			2	2	2.0	
Barbless	3			3			
Newal	3			3			
Nordic	3			2	3	2.5	
Cree	4			3			
Korsbyg	3			2	2	2.0	
Ciho 4233-1	2	1	1.5	2	1	1.5	1.5
Ciho 5430	2	3	2.5	2	2	2.0	2.3
Ciho 5409	1	2	1.5	1	2	1.5	1.5
Ciho 5414	3			3			
Ciho 5419	2	3	2.5	2	2	2.0	2.3
Ciho 1295	3			3			
Ciho 1296	3			2	2	2.0	
Ciho 1255	3			2	2	2.0	
Ciho 160	1	2	1.5	1	2	1.5	1.5
Ciho 175	2	2	2.0	1	1	1.0	1.5
Peatland 787	1	2	1.5	1	1	1.0	1.3
Proskowetz 149	1	2	1.5	3			
Shuni North 1-16[3]	2			3	3	3.0	
Shuni North 1-32	1			2	3	2.5	
Irbid 2-9	2			3	3	3.0	
Irbid 2-47	3			3	3	3.0	
Irbid East (Technion) 3-4	2			3	3	3.0	
Irbid East (Technion) 3-31	2			3	3	3.0	
Mafrak West 4-7	2			4	3	3.5	
Mafrak West 4-15	4			3	3	3.0	
Mafrak 5-34	1			2	2	2.0	
Zarka 6-5	3			2	2	2.0	
Zarka 6-29	2			3	2	2.5	
Amman 7-33	3			3	2	2.5	
Madaba 8-16	3			2	2	2.0	
Madaba 8-32	2			1	1	1.0	
Mount Nevo 9-7	4			3	3	3.0	
Mount Nevo 9-25	4			4	4	4.0	
Wadi Wala 0-18	4			4	3	3.5	
Wadi Wala 0-5	5			2	2	2.0	
Wadi Arnon Mujeib 11-9	5			3	3	3.0	
Wadi Arnon Mujeib 11-34	4			3	3	3.0	
Talal 12-1	3			2	2	2.0	
Talal 12-13	3			4			
Karak 13-10	3			3			
Karak 13-43	3			3			
Wadi Hassa 14-2	2			2	2	2.0	
Wadi Hassa 14-22	2			2	2	2.0	
Chevron	1			1			
Foster	4			3			
CI 4196	1			1			
CI 5415	2			3			
Wadi Hassa South 15-9	4			4			
Wadi Hassa South 15-39	3			3			
Tafila 16-4	4			3			
Tafila 16-33	4			3			
Dana, Edom 17-24	4			2	2	2.0	

	FHB Severity[1]						
	1st read	2nd read	Mean	1st read	2nd read	Mean	Overall
Entry	Rep 1			Rep 2			Mean[2]
Dana, Edom 17-43	4			2	2	2.0	
Wadi Mussa North 18-21	5			2	2	2.0	
Wadi Mussa North 18-42	4			3			
Karak-Dead Sea 19-6	2			2	2	2.0	
Karak-Dead Sea 19-16	2			1	2	1.5	
Shuna South 20-14	3			1	2	1.5	
Shuna South 20-26	4			1	1	1.0	
Eria 21-13	4			2	2	2.0	
Eria 21-37	3			2	1	1.5	
Salt 22-10	2			2	2	2.0	
Salt 22-15	3			3	4	3.5	
Jarash 23-18	3			2	3	2.5	
Jarash 23-30	3			2	3	2.5	
Sakep 24-2	2			2	3	2.5	
Sakep 24-17	3			3	3	3.0	
Qalat Ajlun25-20	2			2	3	2.5	
Qalat Ajlun 25-35	3			3			
Irbid South 26-15	3			2	1	1.5	
Irbid South 26-35	3			2	3	2.5	
Hamma North 27-1	2			2	2	2.0	
Hamma North 27-10	2			1	2	1.5	
Afiq 3-7	2			2	2	2.0	
Afiq 3-23	1			2	2	2.0	
Akhziv 24-15	1			2	2	2.0	
Akhziv 24-39	1			1	1	1.0	
Ashqvelon 28-3	1			2	2	2.0	
Ashqvelon 28-15	3			3			
Atlit 25-8	3			3			
Atlit 25-20	3			3			
Bar Giyyora 13-23	2			3			
Bar Giyyora 13-56	3			3			
Bet Shean 21-12	2			3			
Bet Shean 21-28	2			2	2	2.0	
Bor Mashash 17-5	2			2	2	2.0	
Caesarea 26-38	1			2	2	2.0	
Caesarea 26-58	2			2	3	2.5	
Damon 11-2	1			1	2	1.5	
Damon 11-11	1			2	2	2.0	
Ein Zukim 32-5	2			2	1	1.5	
Ein Zukim 32-24	2			2	3	2.5	
Eyzaria 15-29	3			2	2	2.0	
Chevron	1			1			
Foster	3			4			
CI 4196	1			1			
CI 5415	3			3			
Eyzaria 15-51	3			2	2	2.0	
Gadot 6-45	2			2	2	2.0	
Gadot 6-53	2			3	3	3.0	
Hermon 1-8	2			1	2	1.5	
Hermon 1-13	2			2	3	2.5	
Herzeliyya 27-18	3			3			
Herzeliyya 27-59	1			1	1	1.0	
Maalot 10-8	1			2	2	2.0	

Entry	FHB Severity[1]						
	1st read	2nd read	Mean	1st read	2nd read	Mean	Overall
	Rep 1			Rep 2			Mean[2]
Maalot 10-49	1			2	2	2.0	
Machtesh-Gadol 31-13	3			2	3	2.5	
Machtesh-Gadol 31-22	3			2	4	3.0	
Mehola 22-16	2			2	3	2.5	
Mt Meron 9-9	3			3			
Mt Meron 9-53	3			3			
Ovdat 33-28	2			3			
Ovdat 33-54	4			2	2	2.0	
Revivum 18-26	2			1	2	1.5	
Rosh Pinna 5-23	3			2	3	2.5	
Rosh Pinna 5-58	3			2	3	2.5	
Schechem 12-21	2			2	1	1.5	
Schechem 12-37	3			3			
Sede Boger 20-22	1			1	1	1.0	
Sede Boger 20-45	1			1	1	1.0	
Tabiga 7-23	2			2	3	2.5	
Tabiga 7-32	1			2	3	2.5	
Talpiyyot 14-5	2			2	2	2.0	
Talpiyyot 14-20	1			2	2	2.0	
Tel Hay 4-48	2			2	2	2.0	
Tel Hay 4-53	3			2	3	2.5	
tel Shoket 16-5	1			2	2	2.0	
Tel Shoket 16-9	1			1	2	1.5	
Wadi-Quilt 23-67	1			2	2	2.0	
Wadi-Quilt 23-72	3			3			
Yerochan 19-3	3			2	2	2.0	
Yerochan 19-47	2			2	3	2.5	
Zefat 8-49	2			2	2	2.0	
Zefat 8-58	2			3			
Ciho 1698	1	1	1.0	1	1	1.0	1.0
Ciho 2418	1	2	1.5	2	3	2.5	2.0
PI 328762	2	3	2.5	3			
PI 350722	2	1	1.5	3			
PI 371101	3			2	3	2.5	
C97-21-22-1	1	2	1.5	2	3	2.5	2.0
C97-24-24-5	2	1	1.5	2	3	2.5	2.0
C97-24-48-1	1	1	1.0	2	3	2.5	1.8
F104-230-1-2	1	1	1.0	1	1	1.0	1.0
F104-250-4-1	1	1	1.0	1	1	1.0	1.0
F104-250-11-2	1	1	1.0	1	1	1.0	1.0
F104-2431-2-1	1	1	1.0	2	1	1.5	1.3
Chevron	1	1	1.0	1	1	1.0	1.0
Foster	4	4	4.0	3	4	3.5	3.8
CI 4196	1	1	1.0	1	1	1.0	1.0
CI 5415	2	3	2.5	3			

[1]Rating scale 1 = very low incidence (<2%) and very low severity (<2%), 2 = low incidence (2-10%) and low severity (2-10%), 3 = moderate incidence (11-25%) and moderate severity (6-12%), 4 = high incidence (26-60%) and high severity (13-20%), and 5 = very high incidence (>60%) and very high severity (>20%).

[2]Mean of 1st and 2nd readings. 2nd reading was done approximately one week after the first reading and only for those entries that had a score of 2 or less in the 1st reading and selected checks. Means calculated only for entries in which data were collected for both readings.

[3]Italicized entries are *Hordeum spontaneum.*

Table 4. Mean percent FHB severity for entries in the University of Minnesota Nursery grown in the 2000 Hangzhou, China FHB Nursery. Data are from the first reading.

Variety/Line	Trt No.	Percent FHB severity[1]			
		Rep 1	Rep 2	Rep 3	Mean
Robust	1	1.2	1.5	1.3	1.4
Stander	2	0.3	1.1	1.1	0.8
Foster	3	0.6	0.6	0.2	0.5
Chevron	4	0.0	0.5	0.0	0.2
MNBrite	5	2.0	1.1	0.7	1.2
Excel	6	0.9	1.4	2.1	1.5
M81	7	1.5	1.7	2.6	2.0
M98	8	0.8	0.9	1.6	1.1
M100	9	1.1	0.7	2.3	1.4
M103	10	1.2	0.5	0.9	0.9
M104	11	0.6	1.7	5.5	2.6
Harrington	12	0.4	0.2	0.5	0.4
6B93-2978	13	2.3	0.9	1.1	1.4
Zhedar1	14	0.2	0.0	0.0	0.1
Kitchin	15	0.9	0.7	0.0	0.5
Atahualpa	16	3.3	0.5	2.8	2.2
Fredrickson	17	0.0	0.0	0.0	0.0
AC Oxbow	18	0.0	0.8	1.3	0.7
M95-4	19	0.3	0.6	0.4	0.4
M93-220	20	1.0	0.3	0.8	0.7
SI4-29	21	0.0	0.0	0.2	0.1
SI3-2	22	0.0	0.2	1.1	0.4
FB3-21	23	1.8	1.1	1.5	1.5
FB3-83	24	1.3	0.5	1.0	0.9
FB4-35	25	1.2	1.8	2.0	1.7
FB4-38	26	3.0	3.0	2.4	2.8
FB4-52	27	1.5	0.4	2.7	1.5
FEG3-09	28	0.7	0.5	1.4	0.9
FEG3-22	29	1.0	0.7	0.3	0.7
FEG3-26	30	0.7	0.3	0.6	0.5
Winter wheat	31				
FEG2-26	32	0.2	0.9	1.8	1.0
FEG2-31	33	0.2	0.1	1.0	0.4
FEG2-88	34	0.1	0.2	0.3	0.2
GD2-18	35	1.4	0.3	1.1	0.9
GD2-27	36	0.4	0.3	1.3	0.7
Winter wheat	37				

Variety/Line	Trt No.	Percent FHB severity[1]			
		Rep 1	Rep 2	Rep 3	Mean
M93-215	38	0.1	0.5	0.7	0.4
Winter wheat	39				
FEG10-09	40	2.3	0.9	0.3	1.2
FEG10-12	41	0.1	0.3	0.4	0.3
FEG10-16	42	1.1	0.8	1.1	1.0
FEG6-28	43	0.7	0.1	1.0	0.6
FEG4-56	44	0.6	1.3	1.1	1.0
FEG4-63	45	0.6	0.2	0.3	0.3
FEG4-66	46	1.5	0.8	0.9	1.1
FEG4-67	47	0.6	0.3	0.5	0.4
FEG4-98	48	1.5	0.8	0.7	1.0
MAS2-05	49	0.0	0.0		0.0
MAS2-13	50	0.1	0.1	3.8	1.3
MAS2-52	51	0.1	0.0	0.0	0.0
MAS2-54	52	0.2	0.0	0.4	0.2
MAS2-94	53	1.0	2.4	6.7	3.4
FEG13-10	54	0.9	2.1	1.5	1.5
FEG13-24	55	1.7	1.4	0.8	1.3
FEG13-54	56	1.5	0.0	1.5	1.0
FEG13-58	57	1.4	1.0	0.5	1.0
FEG13-109	58	0.3	0.3	1.0	0.6
FEG14-22	59	0.4	2.2		1.3
FEG14-52	60	2.3	0.5	0.7	1.2
FEG14-113	61	0.7	0.8	1.1	0.9
FEG14-119	62	0.4	0.5	0.5	0.5
FEG14-137	63	0.3	0.1		0.2
FEG15-02	64	1.1	0.7	1.6	1.1
FEG15-07	65	0.2	1.0	0.5	0.6
FEG15-31	66	0.5	0.4	0.8	0.6
FEG15-57	67	0.1	0.1	0.6	0.2
FEG15-120	68	0.8	0.3	1.1	0.7
FEG16-17	69	0.5	0.2	0.6	0.5
FEG16-30	70	1.2	0.4	0.5	0.7
FEG16-45	71	0.1	0.4	1.1	0.5
FEG16-54	72	0.0	0.3	0.1	0.1
FEG16-88	73	0.8	0.7	0.7	0.7
FEG17-02	74	0.5	0.5	1.2	0.8
FEG17-09	75	1.1	1.5		1.3

Variety/Line	Trt No.	Percent FHB severity[1]			
		Rep 1	Rep 2	Rep 3	Mean
FEG17-25	76	1.2	0.5	1.4	1.1
FEG17-34	77	1.8	0.4	0.9	1.0
FEG17-67	78	1.9	0.4	1.2	1.2
FEG18-01	79	0.5	0.6		0.6
FEG18-20	80	0.0	0.2	0.0	0.1
FEG18-27	81	0.2	0.2	0.9	0.4
FEG18-75	82	0.5	0.6	1.4	0.8
FEG18-78	83	0.5	0.2	0.2	0.3
FEG19-43	84	0.4	0.5	0.9	0.6
FEG19-55	85	0.6		1.3	0.9
FEG19-88	86	0.6	0.3	0.4	0.4
FEG19-89	87	0.2	0.1	0.1	0.1
FEG19-92	88	0.7	0.3	0.0	0.3
Robust-2	89	1.1	0.6	0.9	0.9
Stander-2	90	0.9	0.9	1.0	0.9
Foster-2	91	0.7	0.3	1.7	0.9
Chevron-2	92	0.0	0.1	0.2	0.1
MNBrite-2	93	1.8	0.6	0.8	1.1
Excel-2	94	1.1	1.5	1.9	1.5
M81-2	95	0.8	2.1	2.5	1.8
M98-2	96	1.1	0.8	1.5	1.2
M100-2	97	1.2	1.8	1.1	1.4
M103-2	98	2.1	0.5	0.8	1.1
M104-2	99	0.3	1.6	3.1	1.7
Harrington-2	100	1.4	0.6	0.9	1.0
6B93-2978-2	101	0.9	1.3	5.0	2.4
Zhedar1-2	102	0.3	0.0	0.0	0.1
Kitchin-2	103	0.7	0.0	0.7	0.5
Atahualpa-2	104	0.6	3.0	0.9	1.5
Fredrickson-2	105	0.0	0.0	0.0	0.0
AC Oxbow-2	106	1.0	0.2	0.7	0.6
M95-4-2	107	0.7	0.1	1.0	0.6
M93-220-2	108	0.4	0.1	0.8	0.5

Variety/Line	Trt No.	Percent FHB severity[1]			
		Rep 1	Rep 2	Rep 3	Mean
SI4-29-2	109	0.1	0.0	0.0	0.0
SI3-2-2	110	0.5	0.6	0.6	0.5

[1]FHB severity = (total number of infected kernels on 20 spikes / total number of kernels on 20 spikes) * 100.

Table 5. Mean FHB severity of selected entries in the University of Minnesota Nursery grown in the 2000 Hangzhou, China FHB Nursery. Data are from the second reading.

Variety/Line	Trt No.	FHB severity			
		Rep 1	Rep 2	Rep 3	Mean[1]
Chevron	7	1	1	1	1.0
Chevron-2	8	1	1	1	1.0
FEG10-12	17	2	2	2	2.0
FEG14-137	26	3	2	3	2.7
FEG15-57	33	3	2	3	2.7
FEG16-54	37	3	3	3	3.0
FEG18-20	45	2	2	2	2.0
FEG18-27	46	3	2	2	2.3
FEG18-78	48	2	2	2	2.0
FEG19-88	51	3	2	2	2.3
FEG19-89	52	2	3	2	2.3
FEG19-92	53	2	2	2	2.0
FEG2-31	55	2	1	3	2.0
FEG2-88	56	2	2	2	2.0
FEG4-63	61	3	2	2	2.3
FEG4-67	63	2	1	2	1.7
Harrington	72	3	1	3	2.3
MAS2-52	93	2	1	2	1.7
MAS2-54	94	3	2	1	2.0
Robust-2	99	4	3	3	3.3
SI3-2	100	2	2	2	2.0
SI4-29	102	2	3	2	2.3
SI4-29-2	103	2	2	2	2.0
Stander	104	3	3	2	2.7

[1]Rating scale 1 = very low incidence (<2%) and very low severity (<2%), 2 = low incidence (2-10%) and low severity (2-10%), 3 = moderate incidence (11-25%) and moderate severity (6-12%), 4= high incidence (26-60%) and high severity (13-20%), and 5 = very high incidence (>60%) and very high severity (>20%).

Table 6. Mean FHB severity for the North Dakota State University Two-rowed Barley Nursery in the 2000 Hangzhou, China FHB Nursery.

LABEL[1]	PEDIGREE	FHB severity[2]		
		Rep 1	Rep 2	Mean
BOWMAN	ND2685/ND1156//HECTOR	3	3	3.0
LOGAN*	ND7085/ND4994-15//ND7556	1	1	1.0
CONLON	BOWMAN*2/DWS1008//ND10232	2	2	2.0
ND13111	ND9034/AC OXBOW	2	2	2.0
ND15403-4	ND11231-1/ND13297	3	3	3.0
ND16092	ND13297/ND14701	2	2	2.0
ND16453	ND13162-2//ND11231-12/PC84	2	2	2.0
ND16461*	ND13296/ND14760	2	1	1.5
STANDER	EXCEL//ROBUST/BUMPER	3	2	2.5
ND15477	ND9712//STANDER/ND12200	2	2	2.0
CIMMYT 18		1	1	1.0
PFC201		3	1	2.0
PFC210	EMBRAPA 128	3	1	2.0
ND11993	ND8968/ND9163	2	1	1.5
ND17264	ND15080/CONLON	3	1	2.0
ND17266	ND15080/CONLON	2	2	2.0
ND17267	ND15080/CONLON	2	1	1.5
ND17268*	ND15080/CONLON	2	2	2.0
ND17273	CONLON/ND15238	3	2	2.5
ND17274*	CONLON/ND15238	2	2	2.0
ND17275*	CONLON/ND15238	3	2	2.5
ND17276	CONLON/ND15238	3	2	2.5
ND17293	ND14651/ND15062	3	3	3.0
ND17314	ND15146/ND14701	2	2	2.0
ND17318*	ND15204/ND15098	2	2	2.0
ND17373	CONLON/ND15378	2	2	2.0
ND17374	CONLON/ND15378	2	1	1.5
ND17377	CONLON/ND15378	2	2	2.0
ND17380*	LOGAN/ND15053	1	1	1.0
ND17383	LOGAN/ND15053	3	1	2.0
ND17389*	LOGAN/ND15562	3	2	2.5
ND17401*	ND14636/ND15295	2	1	1.5
ND17424*	ND15098/TR247	3	2	2.5
ND17427	ND15300/ND15062	3	3	3.0
ND17433	ND15480//ND14701/ND15098	2	2	2.0
ND17437*	ND15537/ND15062 Eam1	3	3	3.0
ND17444	ND15562/CONLON	2	2	2.0
ND17445*	ND15562/CONLON	3	2	2.5
ND17459*	M80/ND14599//ND15538	3	2	2.5
ND17467*	ND15471/ND15509	2	2	2.0
ND17470*	ND15471/ND15509	3	2	2.5
ND17477	ND15471/ND15509	2	2	2.0
ND17481	ND15475/ND15562	3	2	2.5
ND17491*	ND15486/ND15509	2	2	2.0
ND17526	ND11853//CMB85-533/13300/3/ND15562	3	2	2.5
ND17562*	ND14695/3/Rph3/ZHEDAR 1//ND15359	3	3	3.0
ND17569	ND14913//F101-2/ND14695	2	2	2.0
ND17602*	ND15562/CONLON	3	3	3.0
ND18071*	F103-61/ND15484	4	2	3.0
ND18074	ND15443/ND15079	2	2	2.0
ND18076*	ND15443/ND15079	2	3	2.5

LABEL[1]	PEDIGREE	FHB severity[2]		
		Rep 1	Rep 2	Mean
ND18077	ND15443/ND15079	2	2	2.0
ND18078	ND15443/ND15079	2	2	2.0
ND18079*	ND15443/ND15079	2	3	2.5
ND18080*	ND15480//ND14695/ND14599	2	2	2.0
ND18086*	ND14712/3/11853/Q//B*7/MR/4/CONLON	1	2	1.5
ND18093*	LOGAN//B1202/ND15062	2	2	2.0
ND18096*	LOGAN/3/ND14900//RUTH/LAUREL	2	2	2.0
ND18099*	LOGAN/3/ND14900//RUTH/LAUREL	2	2	2.0
ND18100	LOGAN/3/ND14900//RUTH/LAUREL	3	3	3.0
ND18104*	CONLON//ND14636/IMPERIAL	2	2	2.0
ND18106	CONLON//ND14636/IMPERIAL	2	3	2.5
ND18111*	CONLON//MIMAI 114/ND15053	1	2	1.5
ND18113*	CONLON//ZHENUN 12/ND15062	2	3	2.5
ND18126*	ND14636//MIMAI 114/ND15053	2	2	2.0
ND18127	ND14636//MIMAI 114/ND15053	1	1	1.0
ND18128	ND14636//MIMAI 114/ND15053	1	1	1.0
ND18135	ND14636//CONLON/DAISEN GOLD	2	1	1.5
ND18136	ND14636//CONLON/DAISEN GOLD	2	2	2.0
ND18139	ND14636//CONLON/DAISEN GOLD	2	3	2.5
ND18142*	ND14891//ND15562/F101-78	2	2	2.0
ND18145	ND14891//CONLON/DAISEN GOLD	2	2	2.0
ND18149*	ND14913//HUHEHOT-1/LOGAN	1	2	1.5
ND18151	ND14913//HUHEHOT-1/LOGAN	2	2	2.0
ND18152*	ND14913//HUHEHOT-1/LOGAN	2	2	2.0
ND18153	ND14913//HUHEHOT-1/LOGAN	2	2	2.0
ND18154	ND14913//HUHEHOT-1/LOGAN	2	3	2.5
ND18156	ND14913//ND15537/ND15062	2	3	2.5
ND18159	ND15030//TR247/LOGAN	2	2	2.0
ND18160*	ND15030//TR247/LOGAN	2	2	2.0
ND18162*	ND15098/ND15373	2	2	2.0
ND18165	ND15098/ND15373	3	3	3.0
ND18168*	ND15128//CONLON/F101-78	1	2	1.5
ND18172*	ND15147//F103-105/ND14636	1	2	1.5
ND18173*	ND15147//F103-105/ND14636	1	2	1.5
ND18179*	ND15213//ZAU 2/ND15062	2	2	2.0
ND18180	ND15291/3/ND14900//RUTH/LAUREL	1	2	1.5
ND18181	ND15291/3/ND14900//RUTH/LAUREL	2	3	2.5
ND18183	ND15291/3/ND14900//RUTH/LAUREL	2	2	2.0
ND18184*	ND15291/3/ND14900//RUTH/LAUREL	2	2	2.0
ND18185*	ND15291/3/ND14900//RUTH/LAUREL	2	2	2.0
ND18186	ND15291/3/ND14900//RUTH/LAUREL	2	3	2.5
ND18187	ND15291/3/ND14900//RUTH/LAUREL	2	2	2.0
ND18189	ND15291/3/ND14900//RUTH/LAUREL	2	3	2.5
ND18190	ND15291//DH6/ND15062	3	3	3.0
ND18191*	ND15291//DH6/ND15062	3	3	3.0
ND18196	ND15441//ND15475/ND15562	3	2	2.5
ND18200	ND15468//ND15537/ND15062	2	3	2.5
ND18201	ND15468//ND15537/ND15062	2	3	2.5
ND18202		2	3	2.5
ND18203*	ND15468//ND15537/ND15062	3	2	2.5
ND18204*	ND15468//ND15537/ND15062	3	3	3.0
ND18205*	ND15468//ND15537/ND15062	2	2	2.0
ND18207	ND15468//ND15537/ND15062	4	3	3.5

LABEL[1]	PEDIGREE	FHB severity[2]		
		Rep 1	Rep 2	Mean
ND18208*	ND15468//ND15537/ND15062	2	3	2.5
ND18209	ND15468//ND15537/ND15062	2	3	2.5
ND18210	ND15468/3/ZHEDAR 2/BOWMAN//CONLON	2	2	2.0
ND18212	ND15468/3/ZHEDAR 2/BOWMAN//CONLON	2	3	2.5
ND18213	ND15481/3/BOWMAN/BRB2//ND15571	3	3	3.0
ND18214*	ND15481/3/BOWMAN/BRB2//ND15571	2	3	2.5
ND18216*	ND15481/3/BOWMAN/BRB2//ND15571	3	2	2.5
ND18217	ND15481//CONLON/ZHENUN 12	3	2	2.5
ND18220*	ND15491//LOGAN/ND15079	2	2	2.0
ND18222	ND15491//LOGAN/ND15079	2	1	1.5
ND18229*	ND15538/ND15291	3	1	2.0
ND18231	ND15562//CONLON/ND15378	2	2	2.0
ND18234*	ND15562//CONLON/ND15378	4	3	3.5
ND18236	ND15562//CONLON/ND15378	3	2	2.5
ND18239	ND15570//ZHEDAR 1/ND14636	3	2	2.5
ND18242	ND15562/F101-78//ND15484/LOGAN	3	3	3.0
ND18243*	ND15562/F101-78//ND15484/LOGAN	3	2	2.5
ND18248	ND15562//ND13297/ND14822	2	2	2.0
ND18249	ND15053/ND15062	2	2	2.0
STANDER	EXCEL//ROBUST/BUMPER	3	2	2.5
CONLON	BOWMAN*2/DWS1008//ND10232	3	2	2.5
ND15477	ND9712//STANDER/ND12200	2	2	2.0
ND16461	ND13296/ND14760	3	2	2.5
ND18428	14636/14763/7/Hs/6/11231/5/Blp Gle	1	1	1.0
ND18252	ND15053/ND15062	2	1	1.5
ND18253*	ND15053/ND15062	2	2	2.0
ND18260	ND14962/ND15452	2	2	2.0
ND18261	ND14962/ND15452	2	3	2.5
ND18265	ND15341//SVANHALS/LOGAN	3	1	2.0
ND18271*	ND15403//ZAU 2/ND15062	3	3	3.0
ND18272*	ND15403//ZAU 2/ND15062	4	3	3.5
ND18273	ND15403//ZAU 2/ND15062	2	3	2.5
ND18280*	ND15443/ND15289	3	2	2.5
ND18281*	ND15443/ND15289	2	3	2.5
ND18282*	ND15443/ND15289	4	2	3.0
ND18284	ND15462/3/CIho4196//PI355447/3*BOW	2	2	2.0
ND18285*	ND15462/3/CIho4196//PI355447/3*BOW	3	2	2.5
ND18286	ND15540/3/SHYRI//ND11177/ND11465	2	2	2.0
ND18297*	ZAU 2/ND15062//ND15468	3	3	3.0
ND18299	ZAU 2/ND15062//ND15468	3	2	2.5
ND18301	HORNI PESEKY/ND14636//ZAU 2/ND15062	3	3	3.0
ND18305*	HORNI PESEKY/ND14636//ZAU 2/ND15062	2	3	2.5
ND18312	ND14636/IMPERIAL//ND15403	4	2	3.0
ND18315*	IMPERIAL/ND14715//ND15462	2	3	2.5
ND18316	IMPERIAL/ND14715//ND15462	3	2	2.5
ND18317*	IMPERIAL/ND14715//ND15462	3	3	3.0
ND18318*	IMPERIAL/ND14715//ND15462	2	2	2.0
ND18324*	CIho13796/ND15062//ND16111	2	2	2.0
ND18327	CIho13796/ND15062//ND16111	1	2	1.5
ND18330	CIho13796/ND15062//ND16111	2	3	2.5
ND18333	ND15403/F101-78//ND15562	2	2	2.0
ND18334	ND15403/F101-78//ND15562	2	1	1.5
ND18337*	ND15403/F101-78//ND15562	2	2	2.0

		FHB severity[2]		
LABEL[1]	PEDIGREE	Rep 1	Rep 2	Mean
ND18338*	ND15403/F101-78//ND15562	2	2	2.0
ND18341*	ND15403/F101-78//HORNI PES/ND14636	3	2	2.5
ND18348*	ISARIA/ND15403	2	2	2.0
ND18349	ISARIA/ND15403	2	2	2.0
ND18352	ZHEDAR 2/BOWMAN//ND15537	2	2	2.0
ND18353	ZHEDAR 2/BOWMAN//ND15537	2	2	2.0
ND18358	EARLY RUSSIAN/BOWMAN//ND15373	2	2	2.0
ND18363*	BARONESSE//ND14636/ND13300-1	2	2	2.0
ND18364*	BARONESSE//ND14636/ND13300-1	3	3	3.0
ND18365*	2B91-4947/ND15403	3	2	2.5
ND18366*	2B91-4947/ND15403	2	2	2.0
ND18367	2B91-4947/ND15403	3	2	2.5
ND18369	2B91-4947/ND15403	3	2	2.5
ND18370*	2B91-4947/ND15403	4	2	3.0
ND18373*	13082/3/13076/Q//11853/4/13890/Q-CH	2	2	2.0
ND18376*	ND13296//ND14550/ND14822/3/ND16106	3	2	2.5
ND18378	ND13296//ND14550/ND14822/3/ND16106	2	3	2.5
ND18380*	15183//STAN/13897/4/13890/3/Q//CHEV	2	1	1.5
ND18381	9870/3/10232/4/11835/5/14764/6/89-3	3	2	2.5
ND18382	9870/3/10232/4/11835/5/14764/6/89-3	2	2	2.0
ND18384	14636/14763/7/Hs/6/11231/5/Blp Gle	2	2	2.0
ND18387*	ND14636//MIMAI 114/ND15053	2	1	1.5
ND18389	ND14636//MIMAI 114/ND15053	2	1	1.5
ND18390	ND14891//ND15562/F101-78	3	2	2.5
ND18394	ND15491//LOGAN/ND15079	2	2	2.0
ND18400	ND15562//CONLON/ND15378	2	1	1.5
ND18403*	ND15562/F101-78//ND15484/LOGAN	2	2	2.0
ND18409	ND15403//ZAU 2/ND15062	2	2	2.0
ND18412	HORNY PESEKY/ND14636//ZAU 2/ND15062	3	2	2.5
ND18413*	HORNY PESEKY/ND14636//ZAU 2/ND15062	2	2	2.0
ND18425	14917/4/13076/Q//11853/3/PI/5/15403	2	2	2.0
ND18426*	15183//STAN/13897/4/13890/3/Q//CHEV	3	2	2.5
ND18427	14636/14763/7/Hs/6/11231/5/Blp Gle	1	1	1.0

[1]Entries followed by an asterick (*) were entered in 2000 yield trials before ratings were obtained in China.
[2]Rating scale 1 = very low incidence (<2%) and very low severity (<2%), 2 = low incidence (2-10%) and low severity (2-10%), 3 = moderate incidence (11-25%) and moderate severity (6-12%), 4 = high incidence (26-60%) and high severity (13-20%), and 5 = very high incidence (>60%) and very high severity (>20%).

Table 7. Data for selected entries in the North Dakota State University Six-rowed Barley Nursery in the 2000 Hangzhou, China FHB Nursery. Information on rows not presented corresponds to F_2 and F_3 populations for head selections only.

Row	Entry	Pedigree[1]	Source	Gen.	FHB severity[2]
106	C98-59FHB	ND15483/C97-21-38	99OSF$_2$'s Single plant selections	F$_3$	1
107	C98-59FHB	ND15483/C97-21-38	99OSF$_2$'s Single plant selections	F$_3$	2
108	C98-59FHB	ND15483/C97-21-38	99OSF$_2$'s Single plant selections	F$_3$	3
109	C98-59FHB	ND15483/C97-21-38	99OSF$_2$'s Single plant selections	F$_3$	3
110	C98-59FHB	ND15483/C97-21-38	99OSF$_2$'s Single plant selections	F$_3$	3
111	C98-59FHB	ND15483/C97-21-38	99OSF$_2$'s Single plant selections	F$_3$	2
112	C98-59FHB	ND15483/C97-21-38	99OSF$_2$'s Single plant selections	F$_3$	2
113	C98-59FHB	ND15483/C97-21-38	99OSF$_2$'s Single plant selections	F$_3$	3
114	C98-59FHB	ND15483/C97-21-38	99OSF$_2$'s Single plant selections	F$_3$	3
115	C98-59FHB	ND15483/C97-21-38	99OSF$_2$'s Single plant selections	F$_3$	2
116	C98-59FHB	ND15483/C97-21-38	99OSF$_2$'s Single plant selections	F$_3$	2
117	C98-59FHB	ND15483/C97-21-38	99OSF$_2$'s Single plant selections	F$_3$	2
118	C98-59FHB	ND15483/C97-21-38	99OSF$_2$'s Single plant selections	F$_3$	2
119	C98-59FHB	ND15483/C97-21-38	99OSF$_2$'s Single plant selections	F$_3$	2
120	C98-59FHB	ND15483/C97-21-38	99OSF$_2$'s Single plant selections	F$_3$	2
121	C98-59FHB	ND15483/C97-21-38	99OSF$_2$'s Single plant selections	F$_3$	2
122	C98-59FHB	ND15483/C97-21-38	99OSF$_2$'s Single plant selections	F$_3$	2
123	C98-59FHB	ND15483/C97-21-38	99OSF$_2$'s Single plant selections	F$_3$	2
124	C98-59FHB	ND15483/C97-21-38	99OSF$_2$'s Single plant selections	F$_3$	2
125	C98-59FHB	ND15483/C97-21-38	99OSF$_2$'s Single plant selections	F$_3$	2
126	C98-59FHB	ND15483/C97-21-38	99OSF$_2$'s Single plant selections	F$_3$	2
127	C98-59FHB	ND15483/C97-21-38	99OSF$_2$'s Single plant selections	F$_3$	2
128	C98-59FHB	ND15483/C97-21-38	99OSF$_2$'s Single plant selections	F$_3$	1
129	C98-59FHB	ND15483/C97-21-38	99OSF$_2$'s Single plant selections	F$_3$	2
130	C98-59FHB	ND15483/C97-21-38	99OSF$_2$'s Single plant selections	F$_3$	3
131	C98-59FHB	ND15483/C97-21-38	99OSF$_2$'s Single plant selections	F$_3$	3
132	Winter Wheat				
215	C98-61FHB	ND15483/C97-21-63	99OSF$_2$'s Single plant selections	F$_3$	3
216	C98-61FHB	ND15483/C97-21-63	99OSF$_2$'s Single plant selections	F$_3$	3
217	C98-61FHB	ND15483/C97-21-63	99OSF$_2$'s Single plant selections	F$_3$	3
218	C98-61FHB	ND15483/C97-21-63	99OSF$_2$'s Single plant selections	F$_3$	3
219	C98-61FHB	ND15483/C97-21-63	99OSF$_2$'s Single plant selections	F$_3$	3
220	C98-61FHB	ND15483/C97-21-63	99OSF$_2$'s Single plant selections	F$_3$	3
221	C98-61FHB	ND15483/C97-21-63	99OSF$_2$'s Single plant selections	F$_3$	2
222	C98-61FHB	ND15483/C97-21-63	99OSF$_2$'s Single plant selections	F$_3$	3
223	C98-61FHB	ND15483/C97-21-63	99OSF$_2$'s Single plant selections	F$_3$	2
224	C98-61FHB	ND15483/C97-21-63	99OSF$_2$'s Single plant selections	F$_3$	2
225	C98-61FHB	ND15483/C97-21-63	99OSF$_2$'s Single plant selections	F$_3$	3
226	C98-61FHB	ND15483/C97-21-63	99OSF$_2$'s Single plant selections	F$_3$	2
227	C98-61FHB	ND15483/C97-21-63	99OSF$_2$'s Single plant selections	F$_3$	3
228	C98-61FHB	ND15483/C97-21-63	99OSF$_2$'s Single plant selections	F$_3$	4
229	C98-61FHB	ND15483/C97-21-63	99OSF$_2$'s Single plant selections	F$_3$	4
230	C98-61FHB	ND15483/C97-21-63	99OSF$_2$'s Single plant selections	F$_3$	2
231	C98-61FHB	ND15483/C97-21-63	99OSF$_2$'s Single plant selections	F$_3$	2
232	C98-61FHB	ND15483/C97-21-63	99OSF$_2$'s Single plant selections	F$_3$	3
233	C98-61FHB	ND15483/C97-21-63	99OSF$_2$'s Single plant selections	F$_3$	4
234	C98-61FHB	ND15483/C97-21-63	99OSF$_2$'s Single plant selections	F$_3$	3
235	C98-61FHB	ND15483/C97-21-63	99OSF$_2$'s Single plant selections	F$_3$	2
236	C98-61FHB	ND15483/C97-21-63	99OSF$_2$'s Single plant selections	F$_3$	4
237	C98-61FHB	ND15483/C97-21-63	99OSF$_2$'s Single plant selections	F$_3$	3
238	C98-61FHB	ND15483/C97-21-63	99OSF$_2$'s Single plant selections	F$_3$	4

Row	Entry	Pedigree[1]	Source	Gen.	FHB severity[2]
239	C98-61FHB	ND15483/C97-21-63	99OSF$_2$'s Single plant selections	F$_3$	4
240	C98-61FHB	ND15483/C97-21-63	99OSF$_2$'s Single plant selections	F$_3$	2
241	C98-61FHB	ND15483/C97-21-63	99OSF$_2$'s Single plant selections	F$_3$	1
242	C98-61FHB	ND15483/C97-21-63	99OSF$_2$'s Single plant selections	F$_3$	3
243	C98-61FHB	ND15483/C97-21-63	99OSF$_2$'s Single plant selections	F$_3$	3
244	C98-61FHB	ND15483/C97-21-63	99OSF$_2$'s Single plant selections	F$_3$	3
245	C98-61FHB	ND15483/C97-21-63	99OSF$_2$'s Single plant selections	F$_3$	3
246	C98-61FHB	ND15483/C97-21-63	99OSF$_2$'s Single plant selections	F$_3$	3
247	C98-61FHB	ND15483/C97-21-63	99OSF$_2$'s Single plant selections	F$_3$	1
248	C98-61FHB	ND15483/C97-21-63	99OSF$_2$'s Single plant selections	F$_3$	2
249	C98-61FHB	ND15483/C97-21-63	99OSF$_2$'s Single plant selections	F$_3$	2
250	C98-61FHB	ND15483/C97-21-63	99OSF$_2$'s Single plant selections	F$_3$	2
251	C98-61FHB	ND15483/C97-21-63	99OSF$_2$'s Single plant selections	F$_3$	2
252	C98-61FHB	ND15483/C97-21-63	99OSF$_2$'s Single plant selections	F$_3$	2
253	C98-61FHB	ND15483/C97-21-63	99OSF$_2$'s Single plant selections	F$_3$	1
254	C98-61FHB	ND15483/C97-21-63	99OSF$_2$'s Single plant selections	F$_3$	3
255	Winter Wheat				
277	C98-70FHB	ND15483/PI328029	99OSF$_2$'s Single plant selections	F$_3$	4
278	C98-70FHB	ND15483/PI328029	99OSF$_2$'s Single plant selections	F$_3$	5
279	C98-70FHB	ND15483/PI328029	99OSF$_2$'s Single plant selections	F$_3$	5
280	C98-70FHB	ND15483/PI328029	99OSF$_2$'s Single plant selections	F$_3$	4
281	C98-70FHB	ND15483/PI328029	99OSF$_2$'s Single plant selections	F$_3$	4
282	C98-70FHB	ND15483/PI328029	99OSF$_2$'s Single plant selections	F$_3$	5
283	C98-70FHB	ND15483/PI328029	99OSF$_2$'s Single plant selections	F$_3$	4
284	C98-70FHB	ND15483/PI328029	99OSF$_2$'s Single plant selections	F$_3$	3
285	C98-70FHB	ND15483/PI328029	99OSF$_2$'s Single plant selections	F$_3$	4
286	C98-70FHB	ND15483/PI328029	99OSF$_2$'s Single plant selections	F$_3$	4
287	C98-70FHB	ND15483/PI328029	99OSF$_2$'s Single plant selections	F$_3$	4
288	C98-70FHB	ND15483/PI328029	99OSF$_2$'s Single plant selections	F$_3$	4
289	C98-70FHB	ND15483/PI328029	99OSF$_2$'s Single plant selections	F$_3$	4
290	C98-70FHB	ND15483/PI328029	99OSF$_2$'s Single plant selections	F$_3$	3
291	C98-70FHB	ND15483/PI328029	99OSF$_2$'s Single plant selections	F$_3$	4
292	C98-70FHB	ND15483/PI328029	99OSF$_2$'s Single plant selections	F$_3$	4
293	C98-70FHB	ND15483/PI328029	99OSF$_2$'s Single plant selections	F$_3$	4
294	C98-70FHB	ND15483/PI328029	99OSF$_2$'s Single plant selections	F$_3$	4
295	C98-70FHB	ND15483/PI328029	99OSF$_2$'s Single plant selections	F$_3$	5
296	C98-70FHB	ND15483/PI328029	99OSF$_2$'s Single plant selections	F$_3$	4
297	C98-70FHB	ND15483/PI328029	99OSF$_2$'s Single plant selections	F$_3$	4
298	C98-70FHB	ND15483/PI328029	99OSF$_2$'s Single plant selections	F$_3$	3
299	C98-70FHB	ND15483/PI328029	99OSF$_2$'s Single plant selections	F$_3$	3
300	C98-70FHB	ND15483/PI328029	99OSF$_2$'s Single plant selections	F$_3$	3
301	C98-70FHB	ND15483/PI328029	99OSF$_2$'s Single plant selections	F$_3$	3
302	C98-70FHB	ND15483/PI328029	99OSF$_2$'s Single plant selections	F$_3$	3
303	C98-70FHB	ND15483/PI328029	99OSF$_2$'s Single plant selections	F$_3$	3
304	C98-70FHB	ND15483/PI328029	99OSF$_2$'s Single plant selections	F$_3$	4
305	C98-70FHB	ND15483/PI328029	99OSF$_2$'s Single plant selections	F$_3$	4
306	C98-70FHB	ND15483/PI328029	99OSF$_2$'s Single plant selections	F$_3$	4
307	C98-70FHB	ND15483/PI328029	99OSF$_2$'s Single plant selections	F$_3$	3
308	C98-70FHB	ND15483/PI328029	99OSF$_2$'s Single plant selections	F$_3$	4
309	C98-70FHB	ND15483/PI328029	99OSF$_2$'s Single plant selections	F$_3$	3
310	C98-70FHB	ND15483/PI328029	99OSF$_2$'s Single plant selections	F$_3$	4
311	C98-70FHB	ND15483/PI328029	99OSF$_2$'s Single plant selections	F$_3$	4
312	C98-70FHB	ND15483/PI328029	99OSF$_2$'s Single plant selections	F$_3$	4
313	C98-70FHB	ND15483/PI328029	99OSF$_2$'s Single plant selections	F$_3$	4

Row	Entry	Pedigree[1]	Source	Gen.	FHB severity[2]
314	Winter Wheat				
401	C98-3-1-1	ND12738/A250-4	99OS Hill Plot 4208-1	F_4	2
402	C98-3-1-2	ND12738/A250-4	99OS Hill Plot 4208-2	F_4	2
403	C98-3-5-1	ND12738/A250-4	99OS Hill Plot 4212-1	F_4	2
404	C98-3-5-2	ND12738/A250-4	99OS Hill Plot 4212-2	F_4	3
405	C98-3-9-1	ND12738/A250-4	99OS Hill Plot 4216-1	F_4	2
406	C98-3-9-2	ND12738/A250-4	99OS Hill Plot 4216-2	F_4	3
407	C98-3-10-1	ND12738/A250-4	99OS Hill Plot 4217-1	F_4	2
408	C98-3-13-1	ND12738/A250-4	99OS Hill Plot 4220-1	F_4	2
409	C98-3-13-2	ND12738/A250-4	99OS Hill Plot 4220-2	F_4	3
410	C98-3-14-1	ND12738/A250-4	99OS Hill Plot 4221-1	F_4	2
411	C98-3-14-2	ND12738/A250-4	99OS Hill Plot 4221-2	F_4	2
412	C98-3-14-3	ND12738/A250-4	99OS Hill Plot 4221-3	F_4	2
413	C98-3-14-4	ND12738/A250-4	99OS Hill Plot 4221-4	F_4	2
414	C98-3-14-5	ND12738/A250-4	99OS Hill Plot 4221-5	F_4	1
415	C98-3-15-1	ND12738/A250-4	99OS Hill Plot 4222-1	F_4	2
416	C98-3-15-2	ND12738/A250-4	99OS Hill Plot 4222-2	F_4	1
417	C98-3-17-1	ND12738/A250-4	99OS Hill Plot 4224-1	F_4	2
418	C98-3-17-2	ND12738/A250-4	99OS Hill Plot 4224-2	F_4	1
419	C98-3-22-1	ND12738/A250-4	99OS Hill Plot 4229-1	F_4	2
420	C98-3-22-2	ND12738/A250-4	99OS Hill Plot 4229-2	F_4	2
421	C98-3-22-3	ND12738/A250-4	99OS Hill Plot 4229-3	F_4	2
422	C98-3-33-1	ND12738/A250-4	99OS Hill Plot 4243-1	F_4	2
423	C98-3-34-1	ND12738/A250-4	99OS Hill Plot 4244-1	F_4	1
424	C98-3-34-2	ND12738/A250-4	99OS Hill Plot 4244-2	F_4	1
425	C98-3-34-3	ND12738/A250-4	99OS Hill Plot 4244-3	F_4	2
426	C98-3-34-4	ND12738/A250-4	99OS Hill Plot 4244-4	F_4	1
427	C98-3-34-5	ND12738/A250-4	99OS Hill Plot 4244-5	F_4	1
428	C98-3-47-1	ND12738/A250-4	99OS Hill Plot 4257-1	F_4	1
429	C98-3-47-2	ND12738/A250-4	99OS Hill Plot 4257-2	F_4	1
430	C98-3-47-3	ND12738/A250-4	99OS Hill Plot 4257-3	F_4	1
431	C98-3-47-4	ND12738/A250-4	99OS Hill Plot 4257-4	F_4	1
432	C98-3-47-5	ND12738/A250-4	99OS Hill Plot 4257-5	F_4	1
433	C98-3-48-1	ND12738/A250-4	99OS Hill Plot 4258-1	F_4	2
434	C98-3-48-2	ND12738/A250-4	99OS Hill Plot 4258-2	F_4	2
435	C98-3-49-1	ND12738/A250-4	99OS Hill Plot 4259-1	F_4	2
436	C98-3-49-2	ND12738/A250-4	99OS Hill Plot 4259-2	F_4	2
437	C98-3-49-3	ND12738/A250-4	99OS Hill Plot 4259-3	F_4	3
438	C98-3-49-4	ND12738/A250-4	99OS Hill Plot 4259-4	F_4	2
439	C98-3-50-1	ND12738/A250-4	99OS Hill Plot 4260-1	F_4	2
440	C98-3-64-1	ND12738/A250-4	99OS Hill Plot 4274-1	F_4	2
441	C98-3-64-2	ND12738/A250-4	99OS Hill Plot 4274-2	F_4	2
442	C98-3-64-3	ND12738/A250-4	99OS Hill Plot 4274-3	F_4	2
443	C98-3-64-4	ND12738/A250-4	99OS Hill Plot 4274-4	F_4	2
444	C98-3-66-1	ND12738/A250-4	99OS Hill Plot 4276-1	F_4	1
445	C98-3-66-2	ND12738/A250-4	99OS Hill Plot 4276-2	F_4	2
446	C98-3-66-3	ND12738/A250-4	99OS Hill Plot 4276-3	F_4	2
447	C98-3-66-4	ND12738/A250-4	99OS Hill Plot 4276-4	F_4	2
448	C98-3-66-5	ND12738/A250-4	99OS Hill Plot 4276-5	F_4	2
449	C98-3-68-1	ND12738/A250-4	99OS Hill Plot 4278-1	F_4	2
450	C98-3-68-2	ND12738/A250-4	99OS Hill Plot 4278-2	F_4	3
451	C98-3-68-3	ND12738/A250-4	99OS Hill Plot 4278-3	F_4	2
452	C98-3-68-4	ND12738/A250-4	99OS Hill Plot 4278-4	F_4	3
453	C98-3-71-1	ND12738/A250-4	99OS Hill Plot 4281-1	F_4	2

Row	Entry	Pedigree[1]	Source	Gen.	FHB severity[2]
454	C98-3-71-2	ND12738/A250-4	99OS Hill Plot 4281-2	F_4	2
455	C98-3-73-1	ND12738/A250-4	99OS Hill Plot 4283-1	F_4	2
456	C98-3-90-1	ND12738/A250-4	99OS Hill Plot 4300-1	F_4	2
457	C98-3-90-2	ND12738/A250-4	99OS Hill Plot 4300-2	F_4	2
458	C98-3-110-1	ND12738/A250-4	99OS Hill Plot 4323-1	F_4	2
459	C98-3-116-1	ND12738/A250-4	99OS Hill Plot 4329-1	F_4	1
460	C98-3-116-2	ND12738/A250-4	99OS Hill Plot 4329-2	F_4	1
461	Winter Wheat				
462	C98-7-2-1	ND12738/A250-8	99OS Hill Plot 4442-1	F_4	2
463	C98-7-2-2	ND12738/A250-8	99OS Hill Plot 4442-2	F_4	1
464	C98-7-2-3	ND12738/A250-8	99OS Hill Plot 4442-3	F_4	1
465	C98-7-2-4	ND12738/A250-8	99OS Hill Plot 4442-4	F_4	2
466	C98-7-11-1	ND12738/A250-8	99OS Hill Plot 4451-1	F_4	2
467	C98-7-11-2	ND12738/A250-8	99OS Hill Plot 4451-2	F_4	3
468	C98-7-29-1	ND12738/A250-8	99OS Hill Plot 4472-1	F_4	1
469	C98-7-29-2	ND12738/A250-8	99OS Hill Plot 4472-2	F_4	1
470	C98-7-31-1	ND12738/A250-8	99OS Hill Plot 4474-1	F_4	2
471	C98-7-31-2	ND12738/A250-8	99OS Hill Plot 4474-2	F_4	2
472	C98-7-55-1	ND12738/A250-8	99OS Hill Plot 4498-1	F_4	2
473	C98-7-55-2	ND12738/A250-8	99OS Hill Plot 4498-2	F_4	2
474	C98-7-55-3	ND12738/A250-8	99OS Hill Plot 4498-3	F_4	2
475	C98-7-55-4	ND12738/A250-8	99OS Hill Plot 4498-4	F_4	2
476	C98-7-56-1	ND12738/A250-8	99OS Hill Plot 4499-1	F_4	2
477	C98-7-56-2	ND12738/A250-8	99OS Hill Plot 4499-2	F_4	3
478	C98-7-57-1	ND12738/A250-8	99OS Hill Plot 4500-1	F_4	2
479	C98-7-57-2	ND12738/A250-8	99OS Hill Plot 4500-2	F_4	3
480	C98-7-57-3	ND12738/A250-8	99OS Hill Plot 4500-3	F_4	2
481	C98-7-57-4	ND12738/A250-8	99OS Hill Plot 4500-4	F_4	2
482	C98-7-57-5	ND12738/A250-8	99OS Hill Plot 4500-5	F_4	2
483	C98-7-57-6	ND12738/A250-8	99OS Hill Plot 4500-6	F_4	2
484	C98-7-71-1	ND12738/A250-8	99OS Hill Plot 4514-1	F_4	2
485	C98-7-71-2	ND12738/A250-8	99OS Hill Plot 4514-2	F_4	2
486	C98-7-71-3	ND12738/A250-8	99OS Hill Plot 4514-3	F_4	2
487	C98-7-71-4	ND12738/A250-8	99OS Hill Plot 4514-4	F_4	2
488	C98-7-100-1	ND12738/A250-8	99OS Hill Plot 4546-1	F_4	2
489	C98-7-100-2	ND12738/A250-8	99OS Hill Plot 4546-2	F_4	2
490	Winter Wheat				
491	C98-8-2-1	ND12738/A250-9	99OS Hill Plot 4653-1	F_4	2
492	C98-8-2-2	ND12738/A250-9	99OS Hill Plot 4653-2	F_4	2
493	C98-8-2-3	ND12738/A250-9	99OS Hill Plot 4653-3	F_4	2
494	C98-8-22-1	ND12738/A250-9	99OS Hill Plot 4673-1	F_4	2
495	C98-8-22-2	ND12738/A250-9	99OS Hill Plot 4673-2	F_4	2
496	C98-8-36-1	ND12738/A250-9	99OS Hill Plot 4687-1	F_4	2
497	C98-8-36-2	ND12738/A250-9	99OS Hill Plot 4687-2	F_4	2
498	C98-8-37-1	ND12738/A250-9	99OS Hill Plot 4691-1	F_4	1
499	C98-8-37-2	ND12738/A250-9	99OS Hill Plot 4691-2	F_4	2
500	C98-8-37-3	ND12738/A250-9	99OS Hill Plot 4691-3	F_4	2
501	C98-8-71-1	ND12738/A250-9	99OS Hill Plot 4725-1	F_4	1
502	C98-8-71-2	ND12738/A250-9	99OS Hill Plot 4725-2	F_4	1
503	C98-8-71-3	ND12738/A250-9	99OS Hill Plot 4725-3	F_4	1
504	C98-8-71-4	ND12738/A250-9	99OS Hill Plot 4725-4	F_4	2
505	C98-8-75-1	ND12738/A250-9	99OS Hill Plot 4729-1	F_4	1
506	C98-8-75-2	ND12738/A250-9	99OS Hill Plot 4729-2	F_4	2
507	C98-8-92-1	ND12738/A250-9	99OS Hill Plot 4746-1	F_4	2

Row	Entry	Pedigree[1]	Source	Gen.	FHB severity[2]
508	C98-8-92-2	ND12738/A250-9	99OS Hill Plot 4746-2	F_4	2
509	C98-8-107-1	ND12738/A250-9	99OS Hill Plot 4761-1	F_4	2
510	C98-8-107-2	ND12738/A250-9	99OS Hill Plot 4761-2	F_4	2
511	C98-8-113-1	ND12738/A250-9	99OS Hill Plot 4770-1	F_4	2
512	C98-8-114-1	ND12738/A250-9	99OS Hill Plot 4771-1	F_4	2
513	C98-8-120-1	ND12738/A250-9	99OS Hill Plot 4777-1	F_4	2
514	Winter Wheat				
515	C98-10-28-1	ND12738/A250-12	99OS Hill Plot 4891-1	F_4	3
516	C98-10-28-2	ND12738/A250-12	99OS Hill Plot 4892-2	F_4	2
517	C98-10-80-1	ND12738/A250-12	99OS Hill Plot 4946-1	F_4	2
518	C98-10-80-2	ND12738/A250-12	99OS Hill Plot 4946-2	F_4	3
519	C98-10-80-3	ND12738/A250-12	99OS Hill Plot 4946-3	F_4	3
520	C98-10-83-1	ND12738/A250-12	99OS Hill Plot 4949-1	F_4	3
521	C98-10-83-2	ND12738/A250-12	99OS Hill Plot 4949-2	F_4	4
522	C98-10-83-3	ND12738/A250-12	99OS Hill Plot 4949-3	F_4	3
523	C98-10-85-1	ND12738/A250-12	99OS Hill Plot 4951-1	F_4	2
524	C98-10-85-2	ND12738/A250-12	99OS Hill Plot 4951-2	F_4	3
525	C98-10-148-1	ND12738/A250-12	99OS Hill Plot 5017-1	F_4	3
526	C98-10-153-1	ND12738/A250-12	99OS Hill Plot 5022-1	F_4	2
527	C98-10-153-2	ND12738/A250-12	99OS Hill Plot 5022-2	F_4	3
528	C98-10-155-1	ND12738/A250-12	99OS Hill Plot 5024-1	F_4	3
529	C98-10-155-2	ND12738/A250-12	99OS Hill Plot 5024-2	F_4	2
530	C98-10-155-3	ND12738/A250-12	99OS Hill Plot 5024-3	F_4	1
531	C98-10-181-1	ND12738/A250-12	99OS Hill Plot 5050-1	F_4	3
532	C98-10-181-2	ND12738/A250-12	99OS Hill Plot 5050-2	F_4	3
533	C98-10-186-1	ND12738/A250-12	99OS Hill Plot 5050-1	F_4	2

[1]Pedigree of entries A250-4, A250-8, A250-9, and A250-12 = Foster/CIho4196.

[2]Rating scale 1 = very low incidence (<2%) and very low severity (<2%), 2 = low incidence (2-10%) and low severity (2-10%), 3 = moderate incidence (11-25%) and moderate severity (6-12%), 4 = high incidence (26-60%) and high severity (13-20%), and 5 = very high incidence (>60%) and very high severity (>20%).

Table 8. All data and comments for Richard Pickering's (New Zealand Crop & Food Institute) *Hordeum bulbosum* Introgression Nursery entries in the 2000 Hangzhou, China FHB Nursery.

Row	Entry	Backcross parent	Comments	1st reading[1]	2nd reading[1]	3rd reading[2]
				FHB severity		
4001	81882 BS1	Vada	2HS	3	3	1.8
4002	886Z3/1/10/1/2/1/5	Emir	2HL	3	3	0.5
4003	36L30/1/RFLP3	Emir	7HS	3	3	3.0
4004	36L31/9/3	Emir	4HL	2	3	4.8
4005	36L36/2/1/1	Emir	2HS	Missing	Missing	Missing
4006	36L50/3	Emir	5HL	2	3	0.7
4007	36L53/1/3-7/2	Emir	4HL	1	3	4.8
4008	38P18/22/3	Emir	2HL	2	2	0.7
4009	38U4/1/3/8/1	Golden Promise	5HL 6HS	3	3	1.4
4010	38U4/1/3/9/3	Golden Promise	6HS	2	4	5.1
4011	38U4/1/3/10/1	Golden Promise	6HS 7HL	3	4	2.5
4012	38U16/13/7	Golden Promise	5HL	3	4	0.2
4013	38U20/3/4	Golden Promise	2HL	3	5	15.9
4014	38U35/13/5/1	Golden Promise	2HL 6HS (7HS)	3	3	0.9
4015	38U35/15/6/1/1/1	Golden Promise	No data	Missing	Missing	Missing
4016	53A8	Golden Promise	4HL	3	3	5.1
4017	60N3/1/12	Emir	4HL	3	4	3.2
4018	65F12/5	Emir	2HL	3	3	9.4
4019	102C2/11/1/2/6	Emir	2HL	3	2	3.2
4020	102C2/16/2/11	Emir	1HL 2HL?	3	3	5.1
4021	102C2/18/3/2	Emir	2HS	3	3	5.5
4022	119Y4/4/5/10	Emir	6HS 7HS 7HL	3	3	1.8
4023	129F2	Emir	4HL	3	3	3.0
4024	170Q1	907-12/Emir	2HL	3	4	3.9
4025	170R1	Emir	6HS	3	3	5.1
4026	171J1	Emir	6HS 7HS	3	4	11.7
4027	210C1	Emir	7HL	3	3	5.1
4028	219W3	Emir	No data	2	2	0.9
4029	Emir		Control	3	3	1.4
4030	Golden Promise		Control	4	4	11.7
4031	Vada		Control	3	3	3.4
4032	907-12		Control	3	4	6.9

[1]Rating scale 1 = very low incidence (<2%) and very low severity (<2%), 2 = low incidence (2-10%) and low severity (2-10%), 3 = moderate incidence (11-25%) and moderate severity (6-12%), 4 = high incidence (26-60%) and high severity (13-20%), and 5 = very high incidence (>60%) and very high severity (>20%).
[2]FHB severity = (total number of infected kernels on 15 spikes / total number of kernels on 15 spikes) * 100.