SLOOP

A NEW malting quality barley for South Australian growers

Summary

- Sloop is a midseason maturing, malting quality barley (tested as WI2875-22).
- Sloop is related to the sucessful variety Schooner, and is agronomically very similar.
- Sloop has much improved malt quality than Schooner being higher in diastase and fermentablity, similar in extract and lower in malt and wort beta glucan.
- In recognition of superior malting quality, Sloop will attract a minimum $5 premium above the price of Schooner for malting grade deliveries to the ABB. To be reviewed for season 2000/01.
- Sloop has similar yields to Schooner in most situations in South Australia and should be considered as a replacement for Schooner.
- Sloop has slightly improved straw strength and head retention to Schooner.
- Sloop is moderately susceptible to Powdery Mildew and susceptible to Leaf Scald, Leaf Rust and Net Blotch (spot form).
- Sloop is susceptible to Cereal Cyst Nematode and Root Lesion Nematode.
- Sloop is intolerant of boron toxic soils, but appears to be more tolerant of manganese deficient soils than Schooner.

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Breeding

Developed by the South Australian Barley Improvement Program from the cross WI2468/Norbert//Golden Promise/WI2395/3/ Schooner and registered under PBR in 1997. Breeding has been funded by the MBQIP and an endpoint royalty will apply to malting grade Sloop.

Grain yield

Sloop has similar yields to Schooner in all South Australian agricultural districts and rainfall zones as shown in tables 1 and 2.

Table 1: Yields of Sloop, Franklin, Skiff and Chebec as a % of Schooner according to agricultural district, in the period, 1992-1996 (SAFCEP data, weighted average).

Variety	Agricultural district		
	Yorke Pen.	Upper & East Eyre Pen.	Lower Eyre Pen.
Sloop	101	102	101
Franklin	104	98	100
Chebec	101	101	101
Skiff	108	109	107
Schooner	100	100	100
	South East	**Murray Mallee**	**Mid North**
Sloop	100	100	102
Franklin	103	105	106
Chebec	99	100	100
Skiff	105	108	113
Schooner	100	100	100

Table 2: Yields of Sloop, Franklin, Skiff and Chebec as a % of Schooner according to annual rainfall (SAFCEP data 1992 to 1996).

Variety	Annual rainfall (mm)		
	<350mm	350-450	>450mm
Sloop	101 (11)	106 (15)	101 (11)
Franklin	95	99	111
Skiff	104	110	123
Chebec	99	104	97
Schooner	100	100	100

Limited evaluation of Sloop on manganese deficient soils indicates that it may be more efficient than Schooner. Sloop yields are similar to Schooner when grown in sandy soils of low fertility.

Plant characteristics

Sloop is midseason maturity like Schooner, thus providing good adaptation over a wide range of environments. Sloop has slightly improved straw strength and resistance to head loss than Schooner.

Disease resistance

Sloop like Schooner is moderately susceptible to Powdery Mildew, susceptible to Leaf rust and slightly more susceptible to Leaf Scald and Net Blotch (spot form) than Schooner.

Use of a fungicidal seed protectant will provide some early season Leaf Scald and Powdery Mildew protection, particularly when inoculum levels are high and in situations of early sowing and higher rainfall.

Sloop is susceptible to Cereal Cyst Nematode (Cereal Eelworm).

Leaf Scald	**Susceptible**	**slightly more than Schooner**
Powdery Mildew	**Moderately susceptible**	**slightly less than Schooner**
Leaf rust	**Susceptible**	**like Schooner**
Net Blotch (spot form)	**Susceptible**	**more susceptible than Schooner**
Cereal	**Susceptible and mod. tolerant**	**like Schooner**

Grain quality

Sloop has similar grain weight and plumpness to Schooner and is superior to Franklin.

Table 3: Summary of grain quality characteristics on samples from variety trials in SA. (SAFCEP data).

	Protein (%)	Screening (%) <2.2 mm	1 000 grain weight (g)
Sloop	11.7	3.6	42.5
Schooner	11.9	4.1	41.7

Sloop has been approved by the national Malting and Brewing Industry Barley Technical Committee (MBIBTC) as a malting variety offering substantial improvements over Schooner for local and export markets. For this reason, the adoption of Sloop by SA barley growers will be integral in the maintainence and further development of the Asian export market.

Diastase	**much higher than Schooner, close to Franklin**
Malt Extract	**equal to Schooner, not as good as Franklin**
Viscosity	**better than Franklin and Schooner**
Wort Beta Glucan	**better than Schooner**
Fermentability	**better than Schooner**

Herbicide reaction

Limited evidence indicates that both Sloop and Schooner, may have less tolerance to Hoegrass®, and Broadstrike®, while reaction to other commonly used herbicides appears to be similar to other varieties.

Soil nutrient requirements

Sloop is similar to Schooner in being intolerant to boron toxic soils. However, limited experimental data suggests that Sloop is more tolerant to manganese deficient soils than Schooner. Use of manganese enriched seed, nutrient seed coatings and manganese foliar sprays would still be recommended in these situations.

Sowing

Sloop like Schooner is suited to a range of sowing dates although maximum potential yields and the probability of malting classification is improved when Sloop is sown early.

Table 4. Yields of Sloop, Franklin, Chebec and Skiff as a % of Schooner according to sowing time. (SAFCEP data, 1993-1996)

Variety	Sowing time		
	May	June	July
Sloop	109	101	NA
Franklin	97	87	96
Chebec	95	99	108
Skiff	127	109	112
Schooner	100	100	100

Note: Sloop data based on 10 observations in May, and 28 observations in June with none in July.

Sowing rates should achieve a minimum plant density of 145 plants/m^2. Weight of grain sown should relate to seedbed conditions, germination % and grain weight which is generally similar to Schooner.

Compiled by

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Seed availability

The ABB, in conjunction with the Australian Field Crops Association, has taken on the responsibility of commercialising Sloop. Seed sales will be through a range of AFCA members and details are available through the ABB Grainline 1800 018 205.

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