

APPENDIX B: MALTING BARLEY QUALITY SPECIFICATIONS AND GRADING CRITERIA FOR THE 2020 LOCAL BARLEY CROP (DRYLAND AREAS)

PARAMETER		SPECIFICATION	NOTES
Cultivars		ABI 4: Elim, Kadie and S19 ABI 6: Hessekwa	Kadie and S19 are experimental cultivars by special arrangement from AB InBev and will be contracted against the ABI 4 specification
Purity of variety	Min	95% Certified pure	See note 1
Contaminant Free		Fit for purpose and merchantable, good colour, uniform, free of foreign odours and free of contamination	See note 2
Food Safety		Free from mould DON max 1000ppm	Free from mould that cause gushing and have Mycotoxin levels within legal specifications for food (note DON maximum which is specified herein). See note 3
Germinative Capacity	Min	98%	See Note 4
Germinative Energy	Min	97%	See Note 4
Plumpness > 2.50mm	Min	70%	See Note 5
Screenings < 2.20mm	Target Max.	3% 5%	See Note 6
Total nitrogen (dry basis)	Range Max.	1.5% 2.0% (ABI 4) 2.1% (ABI 6)	See Note 7 For clarity S19, Kadie and Elim are ABI 4 varieties, and Hessekwa is ABI 6 Refer to Table 1 below for Nitrogen segregation levels
Weather damaged kernels	Max.	3%	
Ergot sclerotia	Max.	0.001%	Length guide: 10mm rye grass ergot = 10mg/1kg sample. Standard to be established as necessary for other forms of ergot.
Foreign Matter:	Max.	2% Max.	See note 6
Stones	Max.	0.5%	
Wheat	Max.	0.5%	
Maize	Max.	0.3%	
Wild oats	Max.	0.5%	

Predikantsluis (Spear grass)	Max. Predikantsluis (Spear grass)	30 seeds per 100g Max. Predikantsluis	
Sunflower	Max.	<0.3%	
Insects (alive)	Max.	Absent	See note 8
Split Kernels	Max.	1%	
Green Kernels		1%	
Insect damage		1%	
Total Damaged kernels		all 3: max 2%	
Pre-germination	Max.	1%	Visual test
Sprouted barley (visual)	Max.	2/1000g	See note 9
Black-end kernels	Max.	20%	
Moisture content	Max.	13%	See note 6
Mechanical damage	Target Max.	As low as possible 4%	
Badly discoloured and heat damaged	Max.	3%	See note 4
Un-threshed ears	Max.	2%	
Smut (brand)	Max.	6 masses / 100g	
Hulled black barley cultivars	Max.	0.5%	
Six-row barley	Max.	2%	
Badly mould-infected (rotten)	Max.	Nil	
Datura spp	Max.	1 seed/1000g	See note 12
Crotolaria spp	Max.	1 seed/1000g	
Riccinis communis	Max.	1 seed/1000g	
Other noxious seeds as per Act (giftige sade)	Max.	7 seeds/1000g	
Aflatoxin	Max.	10 micrograms/kg	
Aflatoxin B1	Max.	5 micrograms/kg	
Agrochemical usage		Complies with all relevant Acts	See note 10 and 11

NITROGEN BANDS	RANGE		SHF	ACCEPTED ERROR	COMMENTS	RULES
	Min	Max				
BAND A	1.53	to 1.85	81 - 100%	0.03 +-		<85% Reject Silo (unless approval oobtained by AB-Inbev)
BAND B	1.88	to 2.00	81 - 100%	0.03 +-		<85% Reject Silo (unless approval oobtained by AB-Inbev)
BAND C (Primary Variety - Hessekwa)	2.00	to 2.10	81 - 100%	0.03 +-		<85% Reject Silo (unless approval oobtained by AB-Inbev)
Total Nitrogen %	>2.10			0.03 +-	REJECT	

Table 1: Dryland Nitrogen Band Segregation Levels

Notes

1. Only certified seed may be used by producers. Only barley produced from seed that has been certified pure by the co-op or supplier in consultation with SENSAKO/SABBI before planting will be accepted.
2. The barley must be fit for purpose and merchantable, of good colour, uniform, free of foreign odours and any contamination where contamination refers to chemical or other substance that renders it unsuitable for human consumption or feed. (this defines fit for purchase and merchantable). This relates to barley not being exposed to areas, handling and/or processes that could cause natural barley to become contaminated.
3. Molds that cause gushing are *Fusarium Graminarium* and we test for these during transfer and at intake. Adhering to accepted farming, storage and handling practises will ensure the absence. Accountability for intake vs storage fungi can be established via retention samples stored by depots.
4. If the barley has been artificially dried, it shall not exhibit any differences in the malting process or in the malt quality as compared to naturally dried barley.
5. Plumpness (>2.50mm), purity of variety, and other whole number specs, results to be rounded off to nearest integer number (heelgetal). Decimal places 0.1 to 0.4 to be rounded down and decimal places 0.5 to 0.9 to be rounded up.
6. Screenings (<2.20mm), foreign matter, moisture, results to be rounded off to nearest one decimal place. Decimal places 0.01 to 0.04 to be rounded down and decimal places 0.05 to 0.09 to be rounded up.
7. Total nitrogen (dry basis) results to be rounded off to the nearest 2 decimal places. Decimal places 0.001 to 0.004 to be rounded down and decimal places 0.005 to 0.009 to be rounded up.
8. If live insects that are harmful for barley, irrelevant to the development stage of such insects, are found in any one truckload from the same bin, and SABM can reasonably show there is an infestation, that truckload and any loads on rail or road as well as the bin, shall be fumigated before resumption of deliveries to the purchaser.
9. Malting barley not containing more than 2 sprouted kernels per 1000g sample (sample to be taken as prescribed in the Grading Rules) shall be considered free from sprouted kernels provided that a second sample taken from the same consignment contains no sprouted kernels.
10. A list of Agricultural Chemicals, not necessarily all encompassing, of active ingredients and formulations which may be used on barley will be shared with subsequent communications. Only formulations registered and having a registration number for barley, according to the Fertilizers, Farm Feeds, Agricultural Remedies and Stock Remedies Act no 36 of 1947 may be used on grain offered for malting or processing. Pesticides are only allowed to be applied at the dosage and with the method it is registered for – e.g. no increased dosage through a pivot is allowed. Residues on barley must comply with levels as per the Foodstuffs, Cosmetics and Disinfectant act and regulations, 54/1972 or amendment. Where chemicals are not on the list, it is the growers responsibility to ensure the chemical is registered.

11. Before any deliveries for malting barley can be made the producer has to ensure that the necessary barley Agrochemical Passport with the relevant details have been handed in at the depot of the grain trader and this is signed by Depot representative. SAB will conduct random audits on Passports.
12. Barley must comply with the current Regulations Governing the tolerances for certain seeds in certain Agricultural Products (Foodstuffs, cosmetics and disinfectants Act and regulations,54/1972 or amendment).