

Austrian Wheat, Crop

2017

Preface

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Ladies and Gentlemen,

Valued Customers and Friends of Austrian Wheat!

While in large parts of Europe the harvested amounts are satisfying, a long-lasting and extreme drought affected the Pannonian climate zone.

The early onset of winter, extremely dry and mild weather in March as well as a heatwave in June had significant negative impacts on the growth of winter wheat with correspondingly adverse effects on the yields.

In the areas where harvest usually starts early it started at the beginning of July and was finished under optimum conditions by the end of the month.

The yields of this year's Austrian wheat crop achieved a disappointing level of 1.4 million tonnes, which is around 25 % lower than last year.

Analysis results suggest that the major part of the total volume harvested in the Pannonian climate zone reached a protein level of 15 %, which allows its marketing as premium wheat.

Besides that, small quantities of quality wheat with a protein level of 14 % are available for the national market and for exports. Much to the regret of the domestic milling industry, milling wheat with low protein content is in short supply in Austria this year; it is only available in Upper Austria and in limited quantities in the Alpine foothills.

Due to the very high protein content and the excellent gluten content of the crop, we have reasonable grounds to believe that higher marketing revenues may partly compensate the low yields.

Since also in several of our neighbouring countries this year's dry weather conditions resulted in wheat crops with high protein contents, we must assume that over the coming months Austrian wheat is likely to face strong competitive challenges in the classic distribution markets.

The still high stocks throughout the world and the good harvests in important production areas such as the Black Sea region or France put the futures exchanges under enormous pressure during the last few weeks and will not allow any great hopes for further price increases.

The extreme drought in the spring wheat producing areas of Northern America as well as in Australia might however lead to a shortage in blending wheat supplies, so we can expect an improvement of the marketing chances in the first quarter of 2018.

Consequently, there are good prospects that marketing of the Austrian wheat crop 2017 will be successful. As, from today's point of view, the price development over the entire campaign remains difficult to estimate, it will again confront all market participants with challenges.

Introduction

In terms of quantity this year's harvest is below that of last year. The conditions were sub-optimal throughout the vegetation period. An early cold period caused winter cereals to enter dormancy relatively early. They survived low temperatures in January without damage, however winter moisture was low and the warmer than average spring from March allowed only unsatisfactory tillering. The late frost, which arrived in April as it did last year, caused minimal damage to cereal and oilseed plantings. In the ensuing growth period fewer grains per head were formed due to the shortage of moisture. The water deficit was gravest during the final phase of filling, which had an effect on grain size and grain weight. Good Austrian varieties however allowed hectolitre weights to stabilise at a satisfactory level. The precipitation deficit compared to average for the complete vegetation period varied in Lower Austria depending on the district between 15 % and 45 %, in the Burgenland from 37 % to 51 % and in Upper Austria between 10 % and 38 %. Rain was especially lacking during the filling phase (May and June). During this period the deficit in Lower Austria was between 13 % and 67 %, in the Burgenland between 42 % and 83 % and in Upper Austria between 43 % and 64 %. The quality of wheat harvested in 2017 in Austria is above average. Very high protein values (a preponderance of quality and premium wheat) and excellent falling numbers due to the warm and dry harvest period surprised market participants. The traditional Austrian quality wheat region covers the central and eastern parts of the province of Lower Austria and the northern and central parts of the province of Burgenland. In climate terms this region is called the continental Pannonian climate zone (Figure 1). As a result of long-term observations we know that this climate zone is the best region for the production of high quality wheat, a fact which has come to be known all over Europe. Although the yields are not as high as in the western parts of Lower Austria and in Upper Austria due to the lack of rainfall, the climate is highly favourable to the development of very good baking qualities. Moreover this region profits from the deep and rich humus soil that also has an influence on the wheat quality. In the milling wheat region (western Lower Austria and Upper Austria) the quality parameters are inferior, but they usually produce a good milling quality (Figure 1). The essential parameters for the baking quality of wheat are protein quantity, protein quality and the gelatinization of the starch. The protein quantity is determined by the variety as well as by weather conditions, soil, fertilization and climate. The protein quality on the other hand is mainly a genetic characteristic and thus a variety feature. Gelatinization of the starch depends essentially on the weather conditions before harvest.

Wheat Varieties

The Austrian wheat varieties are graded into 9 quality categories, category 1 representing the lowest and category 9 the highest baking quality. In the Pannonian climate zone in eastern Austria the quality wheat varieties are dominant, which are classed into the baking quality categories 7 to 9. The leading quality wheat varieties are “Bernstein”, “Capo”, “Midas”, “Energio”, “Lukullus” and “Emilio”. Among the milling wheat varieties, which are classed into the baking quality categories 3 to 6, the varieties “Spontan”, “RGT Reform”, “Pedro”, “Sailor”, “Chevalier” and “Sax” are noteworthy.

Yields

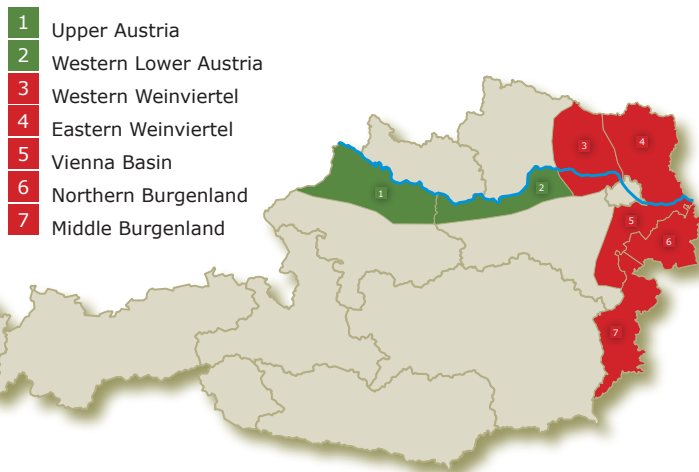
Table 1 lists crop areas, average yields and total production as well as available quantities. Quantities available from the crop 2017 are estimates.

Production and available quantities of quality and milling wheat per crop year

In comparison to last year the total crop area of winter wheat in Austria (259,891 ha) shrank (-16,000 ha) to the smallest area since 2003. The areas shown in figure 1 in the eastern part of Austria also sank to 161,000 ha, which is 5,000 ha less than last year. The crop area in western Lower Austria and in Upper Austria were also noticeably reduced (-5,000 ha) to around 71,000 ha. The average yield of soft wheat in the entire area is expected to be around 50dt/ha. This means that the region has a total production of quality and milling wheat in 2017 of around 1,100,000 tons (estimates). Around 58 % of the quantities available to the market are to be found in the Pannonian climate zone, of which 70 % is above 14 % protein. Despite the lower yields the quantity of wheat with over 14 % / 15 % protein is expected to be

Figure 1:
Quality wheat and milling wheat region

■ Quality wheat ■ Milling wheat



considerably higher than last year. The total production of wheat in Austria is 1,400,000 t.

Quality criteria

The quality data listed in the table below are based on a crop survey made by “Agrarmarkt Austria” and the “Versuchsanstalt für Getreideverarbeitung” (Institute for Cereal Processing) in Vienna who drew samples at the various wholesale buyers and analysed them. The recorded date of the quality data 2017 as well as of the comparative data from 2016 is August 10th, thus the results are provisional ones.

The average hectolitre weight of quality wheat is 80.7 kg and is good. In Upper Austria and in western Lower Austria the hectolitre weight is also good. The milling quality of the new crop is good. More details about the hectolitre weights in the different regions are to be found in tables 2a and 2b.

Quality Parameters of Quality and Milling wheat Crop 2017 in comparison to 2016

Figure 2 lists averages of this year’s quality and milling wheat crop. The protein content, at 15.9 % in the quality wheat area, is excellent, being well above last year. The gluten content is correspondingly good at 36.6 %. In the milling wheat area a protein of 13.3 % was measured, which is far above the minimum value for milling wheat at the Exchange for Agricultural Products (12.5 %). The wet gluten content is 29.3 %.

Quality Survey 2017 – Protein Contents and Falling Numbers of Quality Wheat

Tables 3a and 3b list the protein contents and the falling numbers of the Pannonian climate regions and the milling wheat regions. The protein levels and falling numbers are excellent in all areas of the quality wheat region.

Quality Survey 2017 – Farinogram and Alveogram of Quality Wheat

Table 4 lists the behaviour of wheat in processing. The Farinogram characterizes the consistency of the dough. The average dough development of 6.5 minutes is very good, while dough stability at 26.8 minutes is an extraordinarily good result. For the Alveogram the W-value of quality wheat with an average result of 385 units is very good. The ratio P/L of 0.6 is ideal.

Farinogram and Alveogram of the crop 2017 in the survey areas of quality wheat and milling wheat

The behaviour of wheat of the various Pannonian areas is listed in table 5a and of the milling wheat areas in table 5b. The Farinogram stability and the W-values as per Alveogram are excellent in all quality wheat areas. Farinogram and Alveogram values of milling wheat are normal to good.

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Mycotoxin Contamination

The problem of the mycotoxins DON (Deoxynivalenol) caused by Fusarium has been studied in Austria for many years (examination of the influencing factors in field tests, evaluation of head blight in variety classification tests, etc.). In particular the large-scale monitoring conducted by the Chambers of Agriculture and the samples analysed give on the one hand an excellent survey of the contamination in the various regions, and on the other hand they make it possible to develop adequate agricultural strategies for the reduction of infection risk. From this viewpoint the Austrian wheat producers have been well prepared to respond to the introduction of the maximum mycotoxin level of wheat applicable at present (DON 1250 µg/kg).

Summary

Due to below average yields the proportion of quality and premium wheat will be higher than last year. The specific gluten qualities are very good. The quality results are presented in the folder. Premium and quality wheat will make up around 70 % of the total Austrian wheat production.

The quality wheat harvest 2017 is classified as excellent regarding the baking quality in the Pannonian quality wheat region.

The protein, wet gluten and falling number values are of the highest.

The Farinogram and Alveogram lead to expectations of very good processing characteristics.

The values in the milling wheat areas are, as expected, lower than in the quality wheat area.

The mycotoxin levels (DON) are extremely low in the whole wheat area.

Figure 2

Quality of quality and milling wheat crop 2017, in comparison to crop 2016

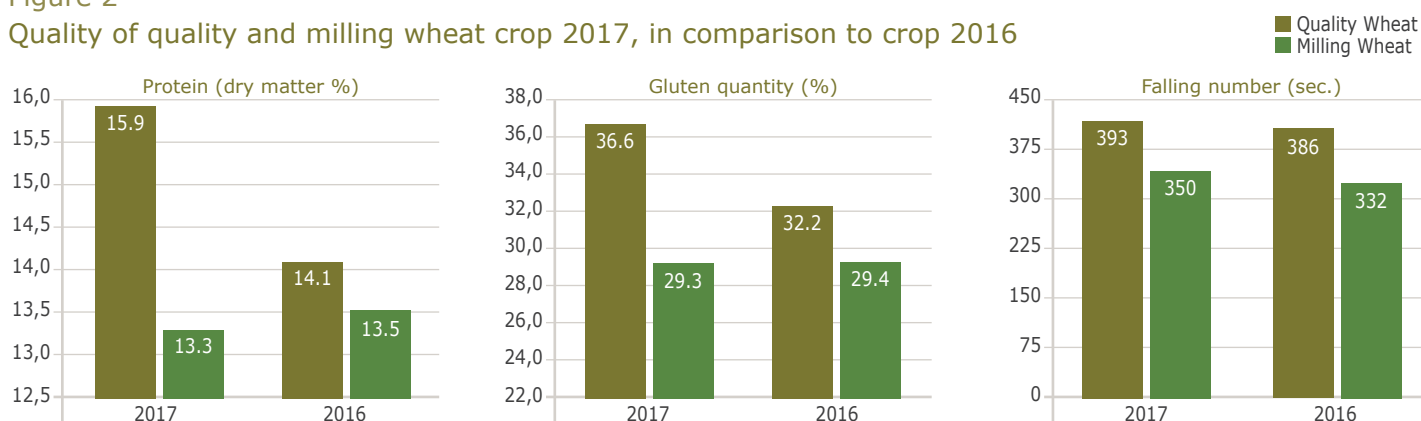


Table 1

Production and available quantities of Quality and Milling wheat

Survey area	2017/18 Estimate				2016/17 Final				2015/16 Final			
	Area in ha	Yield in dt	Production in t	Availability in t	Area in ha	Yield in dt	Production in t	Availability in t	Area in ha	Yield in dt	Production in t	Availability in t
Northern Burgenland	15,355	38	58,000	55,000	17,078	57	97,000	92,000	16,607	43.5	73,000	69,000
Middle Burgenland	11,399	39	45,000	42,000	11,601	60	70,000	66,000	11,155	43.5	49,000	46,600
Vienna Basin	21,449	51	109,000	104,000	23,151	62	144,000	137,000	23,322	55.2	128,700	125,500
Eastern Weinviertel	50,582	39	197,000	187,000	53,965	64	347,000	338,000	54,095	53.5	289,400	282,200
Western Weinviertel	58,909	41	242,000	229,000	60,228	64	385,500	366,000	58,910	58.6	345,200	336,600
	157,694	41	651,000	618,000	166,022	63	1,043,000	991,000	164,089	52.7	884,100	862,000
Lower Austria - West	23,184	65	151,000	143,000	25,563	74	188,000	179,000	24,813	69.0	171,200	166,900
Upper Austria	48,093	75	361,000	343,000	50,331	70	352,000	335,000	49,835	71.0	353,800	345,000
	71,277	67	483,000	458,000	75,894	71	541,000	514,000	74,648	70.0	525,000	511,900
Total	228,971*	50	1,134,000	1,077,000	241,916*	66	1,584,000	1,505,000	238,737*	59.0	1,409,100	1,373,900

* Remarks on the total area:

The following areas for organic farming are included: **2017/18:** 31,127 ha • **2016/17:** 26,820 ha

Quality Survey 2017

Table 2a

Hectolitre Weight of Quality Wheat in the Quality wheat region

Average Hectolitre Weight

SURVEY AREA	2017	2016	2015
Northern Burgenland	80.7	82.7	83.3
Central Burgenland	79.2	80.8	83.7
Vienna Basin	80.9	84.0	83.2
Eastern Weinviertel	81.4	79.8	83.6
Western Weinviertel	81.5	81.3	84.2
Average	80.7	81.7	83.6

Table 2b

Hectolitre Weight of Milling Wheat in the Milling wheat region

Average Hectolitre Weight

SURVEY AREA	2017	2016	2015
Western Lower Austria	81.7	79.1	84.2
Upper Austria	80.7	79.1	82.8
Average	81.2	79.1	83.5

Table 3a

Protein Contents and Falling Numbers of Quality Wheat in the Quality wheat region

Average Protein in dry matter %

SURVEY AREA	2017	2016	2015
Northern Burgenland	16.3	14.1	14.6
Central Burgenland	15.9	14.2	14.6
Vienna Basin	15.8	14.1	14.8
Eastern Weinviertel	16.3	14.1	14.5
Western Weinviertel	15.4	14.1	14.7
Average	15.9	14.1	14.6

Average Falling Number

SURVEY AREA	2017	2016	2015
Northern Burgenland	410	383	355
Central Burgenland	384	407	347
Wiener Becken	404	388	359
Eastern Weinviertel	401	387	380
Western Weinviertel	367	366	360
Average	393	386	360

Table 3b

Protein Contents and Falling Numbers of Milling Wheat in the Milling wheat region

Average Protein in dry matter %

SURVEY AREA	2017	2016	2015
Western Lower Austria	14.5	14.3	14.2
Upper Austria	12.1	12.7	12.1
Average	13.3	13.5	13.1

Average Falling Numbers

SURVEY AREA	2017	2016	2015
Western Lower Austria	366	318	362
Upper Austria	334	346	379
Average	350	332	371

Table 4

Average Farinogram Results

Quality wheat region

	2017	2016	2015
Stability	26.8	20.0	22.5

Average Alveogram Results

Quality wheat region

	2017	2016	2015
W (Total Energy)	385	309	322
P/L = Resistance/Extensibility	0.6	0.7	0.50

Table 5a

Farinogram and Alveogram of the crop 2017 in the survey areas of quality wheat

SURVEY AREA	Stability	W (Total Energy)	P/L (Resistance/Extensibility)
Northern Burgenland	26.0	395	0.6
Central Burgenland	25.7	370	0.6
Vienna Basin	27.5	385	0.6
Eastern Weinviertel	27.3	401	0.6
Western Weinviertel	27.4	374	0.6
Average	26.8	385	0.6

Table 5b

Farinogram and Alveogram of the crop 2017 in the survey areas of milling wheat

SURVEY AREA	Stability	W (Total Energy)	P/L (Resistance/Extensibility)
Western Lower Austria	28.2	311	0.6
Upper Austria	5.5	235	0.9
Average	16.8	273	0.7

Table 6

Mycotoxin contamination for each survey area

SURVEY AREA	DON 2017 [µg/kg]
Northern Burgenland	< 40
Central Burgenland	< 40
Vienna Basin	< 40
Eastern Weinviertel	< 40
Western Weinviertel	< 40
Western Lower Austria	< 40
Upper Austria	< 40

The contamination levels this year are below detectable levels.