

BY: DR M. KETHARAJ
S. JEYAKUMAR

BARLEY PRODUCTION ON RISE

With an increase in area under cultivation, barley production is expected to accelerate in the near future. Although the feed portion would remain stable, the food, seed and industrial use would go up substantially.



Ethiopia. As a wild grass, it was used as a feed for animals. As the barley crop was domesticated with time, its other uses were discovered, the primary use being in making alcoholic beverages at that time. As a matter of fact, barley is one of the first domesticated crops in the near east. The earliest known recipe of barley wine comes from Babylonia and dates back to as early as 2800 BC. The barley water derived from the barley grass is considered to have healing properties and that's why it was also used in various medicines.

Barley belonged to the staple diet of the ancient Egyptians who made beer and bread out of it. Greece also adopted barley as a primary cereal grain as it was used in producing

Barley is an annual cereal grain crop that is consumed as a major feed for the animals. The rest is used as malt in whiskey or sugar as well as health food. It is basically a grass crop that comes from the family of Poaceae and considered to be the fourth most important crop in the world after wheat, maize and rice. The crop resembles white berries and is believed to be excellent for drought-like conditions. Other than playing its part as a major food crop, it is also used in beverages

and beers.

The Latin name for barley is *Hordeum Vulgare*. It is available in a variety of forms like whole barley, hulled barley, pearled barley as well as barley flakes. It is a rich source of metals like zinc, copper and phosphorous, as well as other nutrients like calcium and iron.

History of barley

Barley is a very old crop, cultivated for more than 10,000 years now. The crop originated in wild state in the Middle East, and in the lands of

Table I
Production of Barley in India

(million metric tonnes)

Year	Production
2001-02	1.42
2002-03	1.41
2003-04	1.30
2004-05	1.20
2005-06	1.22
2006-07	1.33
2007-08	1.20
2008-09*	1.55

*3rd advanced estimate as on 8-5-2009

MARKET SURVEY

bread and considered to be a high energy food. Chinese culture made the crop a symbol of male virility. In this way, it got popularity in whole of the old countries. The European intruders introduced this crop to the new world countries in the 16th and 17th centuries. The pattern of usage of barley has still not changed much and now also it is used as food, feed and for making alcoholic beverages.

Varieties of barley

Barley is a hearty plant, able to withstand many different growing conditions. However, it is least tolerant of hot, humid conditions, which makes it unsuitable for the subtropical regions.

There are two basic types, based on the number of rows of grain seen

when the heads of the stalks are viewed from above:

1. Two-row barley, because there are two rows of barley kernels on the head of the stalk. Each stalk produces between 15 and 30 kernels.

2. Six-row barley, because the head of the stalk contains six rows of barley kernels. Each stalk produces between 25 and 60 kernels.

Cultivation pattern

Barley is a temperate as well as a tropical crop and widely adaptable to various climatic conditions. It is cultivated as a pure crop and also with wheat, gram, lentil, pea, rape, mustard and linseed. It is considered as one of the most drought- and salt-tolerant crops. But for effective yields, it needs appropriate irrigation and rich fertile soil. Extremely dry weather or wet weather can damage the crop even if the land is properly ploughed. A slightly dry weather is a bit favourable for the crop at the time of harvesting. The crop takes about four

months to mature. The crop is harvested manually either by pulling it out and or by cutting with the help of sickles. The grain is obtained through a process called 'threshing' (beating it up with sticks) and the barley plants are fed to the animals. In India, the sowing period of barley is around October and November, which makes it a *rabi* crop. The harvesting period is around March and April.

vested manually either by pulling it out and or by cutting with the help of sickles. The grain is obtained through a process called 'threshing' (beating it up with sticks) and the barley plants are fed to the animals. In India, the sowing period of barley is around October and November, which makes it a *rabi* crop. The harvesting period is around March and April.

Uses of barley

Barley finds a wide range of usage. Some of them are:

Animal feed. Barley, being a good source of protein, is used as a feed for the livestock. For use as an animal feed, it is rolled, grounded, flaked or pelleted. These products are given in the form of grain, silage or straw to dairy and beef cattle. The byproducts of malted barley are also used in the form of animal feed.

Human consumption. A wide variety of barley products are known to be suitable for human consumption. These include porridge, muesli and cookies made of barley flakes, cereals made of barley bran, and muffins, cookies, breads and pasta made of barley flour.

Malted barley. Barley is malted for use in alcoholic beverages like

Table II

Global Production and Consumption of Barley

Year	Production	Consumption	(million tonnes)
			Ending stocks
2004-05	152.41	142.41	32.78
2005-06	136.24	140.48	28.54
2006-07	136.47	143.90	21.11
2007-08	132.98	133.90	20.18
2008-09*	153.83	143.89	30.12

*Estimates; Source: USDA

Table III

Global Demand and Supply

Year	Area harvested ('000 ha)	Yield (metric tonnes/ha)	Beginning stocks (MMT)	Production (MMT)	Imports (MMT)	Exports (MMT)	Total consumption (MMT)
2000-01	53,885	2.5	23.5	133.1	16.2	16.7	134.4
2001-02	56,327	2.5	22.2	143.3	17.2	17.3	136.7
2002-03	56,179	2.4	28.9	135.0	16.3	16.2	137.1
2003-04	59,846	2.4	26.7	142.5	14.8	16.4	146.7
2004-05	58,007	2.6	22.5	152.7	17.0	15.1	142.4
2005-06	56,205	2.4	32.8	136.8	17.4	18.2	141.1
2006-07	57,478	2.4	28.4	137.7	14.4	15.3	145.5
2007-08	57,603	2.3	20.6	134.3	14.9	14.2	138.5
2008-09 May	55,675	2.5	16.3	141.8	18.0	17.9	140.3

*MMT=million metric tonnes; Source: Foreign Agricultural Service, USDA

Table IV
Demand and Supply of Barley in India

Year	Area harvested ('000 ha)	Yield (metric tonnes/ha)	Beginning stocks ('000 tonnes)	Production ('000 tonnes)	Total supply ('000 tonnes)	Total consumption ('000 tonnes)
2000-01	725	2	20	1,447	1,467	1,450
2001-02	754	1.9	17	1,432	1,449	1,425
2002-03	750	2	24	1,500	1,524	1,500
2003-04	750	1.88	24	1,410	1,434	1,400
2004-05	750	1.73	34	1,300	1,334	1,300
2005-06	755	1.59	34	1,200	1,234	1,200
2006-07	700	1.74	34	1,220	1,254	1,220
2007-08	770	1.73	34	1,330	1,364	1,330
2008-09 May	750	1.87	34	1,400	1,434	1,400

Source: Foreign Agricultural Service, USDA

beer and wine. Apart from this, the malted barley is also used as flavour, sweetener, malt extract, malt flour, etc.

Other uses. Apart from being used as an eatable, barley is used in fields like industries and agriculture. The barley straw is used to make the bed for the livestock, while bales of barley are used in making paper, fiberboard, etc. The starch present in barley is used in making paper, paper starch based detergents, biodegradable plastics, etc.

Barley production in India

Barley production in India is a mere 1.33 million tonnes out of a total grain production of 219 million tonnes. In 2007-08, the total area for barley cultivation was 0.77 million hectare, while the production was estimated at 1.31 million tonnes. With an increase in area under cultivation, it is believed that barley cultivation would accelerate in the near future. Although the feed portion would remain stable, the food, seed and industrial use would go up substantially.

Barley production in India was around 1.55 million tonnes in 2008-09, as against 1.2 million tonnes in 2007-08. The major producing states in India are Rajasthan, Uttar

Pradesh, Madhya Pradesh, Punjab and Haryana.

Indian supply and demand scenario

India accounts for only around one per cent of world barley production. Uttar Pradesh, Rajasthan, Bihar, Madhya Pradesh, Haryana, Punjab, West Bengal, Himachal Pradesh and Jammu & Kashmir were the top barley producing states in 2006-07. Majority of the barley produced is consumed within the country as human food. Over half of the barley grown is the two-row variety, which is processed into barley flour and blended with wheat flour to make flat bread. Due to extensive usage of corn as food, very small quantity of barley is used in feed manufacturing in India.

The spot prices for barley in the Jaipur market in India have increased by 33.41 per cent over the last year. The average price of barley in May was Rs 1131.69 per quintal.

World scenario

Supply and demand. Barley is one of the most popular crops and it is clear from the fact that it is grown in over 100 countries of the world. While barley production has

fluctuated globally, there has been no clear rising or falling trend as is clear from Table III. In 2007-08, EU-27 was the largest producer of barley accounting for 43 per cent of the world produce, followed by Russia (12 per cent), Canada (8 per cent), Turkey (5 per cent) and Ukraine (4 per cent). Earlier, Australia too was among the top producers. But the drought that the country has faced, has affected yields here. Nearly all of the barley producers are major consumers. Thus, EU-27 was the largest consumer in 2007-08 (with 39 per cent of the produce consumed within EU-27), followed by Russia (11 per cent), Canada (6 per cent), Turkey (5 per cent) and Saudi Arabia (5 per cent).

Major exporters. The major trading centres of barley in the world are Winnipeg Commodity Exchange (Canada) and Sofia Commodity Exchange (Bulgaria).

The world trade in barley hovers around a mere 16 million tonnes compared to the production figures as most of the cereal is consumed at the place of its production. The major exporters of barley are European Union (leading the list with around 5 million tonnes of export), Australia, Turkey, Russia, Ukraine, USA and Canada.

Major importers. Saudi Ara-

bia is the largest importer of barley in the world. It dominates world imports with an import figure of around 6 million tonnes. The other major importers of barley in the world are China, Japan, Algeria, Morocco, Libya and Tunisia.

World prices. Supply problems in Australia and Ukraine, tighter availability of maize and other feed grains, and the strong import demand have all contributed to the increase in prices of both feed and malting barley in recent times. Barley prices in the Canadian market are taken as the international benchmark. The international price of barley has increased by almost 200 per cent over the last seven years. For April 2008, the prices stood at an average of \$237.24 per tonne. Low

carryover stocks at the beginning of 2008-09 are expected to keep the international prices buoyant till the new crop is harvested and arrival pressure builds up.

Future of barley commodities

World barley production is estimated to have touched 142 million tonnes in 2008-09—much higher than previous year's production—with the largest increase in Ukraine, where production is seen increasing from 4 million tonnes to 10 million tonnes. An increase in barley production is also seen taking place in Russia, going up by 1.4 million tonnes to 17 million tonnes. The production in EU-27 is projected to go up by 4 per

cent to 60 million tonnes. Along with good production expectations, North Africa and the Middle East are likely to increase their imports due to poor crops. With increased production in all major producing as well as exporting countries, and sustained demand along with spillover effect from other cereals markets, prices are expected to sustain at higher levels.

Indian barley prices are expected to be range-bound, as there is no imbalance in domestic supplies. However, growing demand, particularly from the breweries, is keeping the undertone firm. ■

Dr M. Ketharaj is lecturer, while S. Jeyakumar is a PhD Research Scholar at PG and Research Department of Commerce, Sri S.R.N.M. College, Sattur, Tamil Nadu