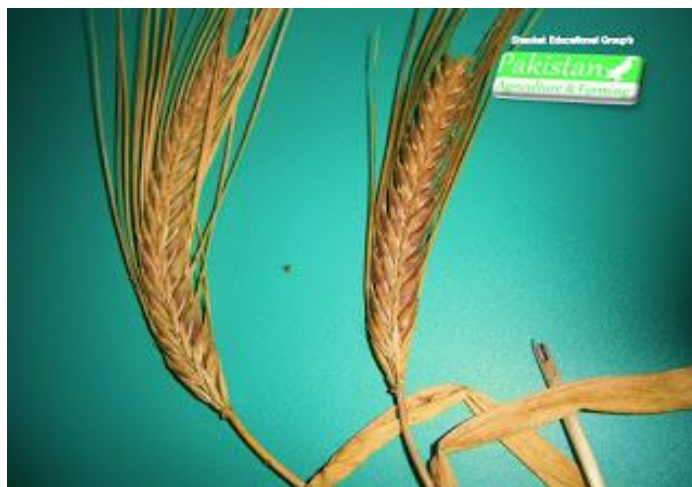


## Barley (*Hordeum vulgare* L.)

### INTRODUCTION

In the soils where wheat, maize, rice and sugarcane cannot be cultivated easily, we can cultivate barley (Jou - جو) because it is a **tolerant crop** and can **resist harsh environments**. Not only barley gives good yields with lesser agriculture inputs but it can also **replenish the damaged soils**. Barley, like all other crops is affected by the *saline soils*, but due to its high resistance it can give better yields than other crops.



*Spikes of Barley*

Sowing of barley starts with wheat, but due to fast growth rate, it matures early for harvesting. In this regard following points should be followed for the better crop yield off barley;

### SEEDBED PREPARATION

Barley is adapted to a wide range of soils such as less fertile, fertile, sandy or soils. But to get a good crop stand and better crop yield soil preparation is an important step. To prepare soil for barley, plough field with a deep plough it twice with sub-soiler or chisel and then level the field by planking. To remove the stubbles of the previous Kharif crops such as rice or maize, use of rotavator or disc harrow is beneficial.

Daab method of flooding the field for weed eradication followed by double ploughing and double planking is also good for preparation of seedbed.

### SEED RATE

Pure and healthy seed, with germination rate of 85%, used at the rate of 30 -35 kg / acre.

### SEED TREATMENT:

Barley is vulnerable to diseases such as loose smut, rust, Fusarium wilt and leaf blight, hence the seed should be treated with suitable fungicide.

## METHOD OF SOWING

Since barley also belong to same family Poaceace along with wheat, so it can be sown like wheat with seed drill, kera (when seed is dropped in furrows by hand, it is called **kera method**), pora (when it is dropped through a **pora** or nai (a wooden structure), it is called **pora method**, or broadcast methods. However in the problematic soils, the seed is sown by broadcasting method, after soaking the seed in water for 4 to 6 hours; or the seed can also be sown by drill or kera methods in dry soil to get better crop growth.

## TIME OF SOWING

**Rainfed areas** = 15 Oct. – 10 Nov.

**Irrigated areas** = 1st Nov. – 25 Nov.

## IRRIGATION

Barley is a delicate crop due to its hollow and herbaceous stem which may fall due to water stress; hence irrigation scheduling is very important. Thus according to requirements 2 – 3 irrigations are required for barley (1st after 12 – 18 days of germination, then at tillering and grain development stages) to get good yields. If, for example, wind is blowing and crop is under slight water stress and may fall due to wilting, then light irrigation can be given to the crop. In case of rains, the irrigation water can be reduced or irrigation can be delayed.

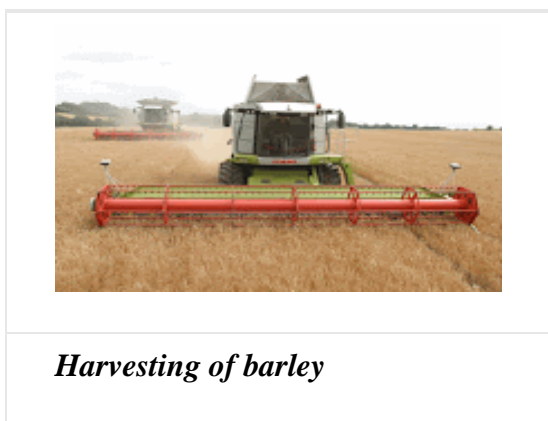
## WEEDING

Barley is a strong competitor of weeds, hence weeding is usually not required. But to get better yield eradication of weeds can be done by hand weeding, hoeing or use of weedicides.

## CHEMICAL FERTILIZERS

Barley has requires fertilizer in half quantity as compared to wheat. The use of 1 bag of DAP and 1 bag of urea will increase the number of grains per ear which will increase yield.

## HARVESTING



Barley is ready to harvest before wheat and its stem is more delicate as compared to wheat. Hence it should be harvest as soon as it gains physiological maturity or rains may cause damage to yield. Its

harvesting usually starts during the mid of March and continues till the end of April. It can be harvested with the same thresher which is used for wheat.

### **STORAGE OF BARLEY**

Following points should be kept in mind for grain storage of barley;

#### **THRESHING**

Care should be taken during threshing the grains so that they do not break because damaged grains get more attack of insects during storage.

#### **MOISTURE CONTENTS**

When storing the grains, the moisture contents should not be more than 10%. To check, break the grain with teeth, and if it breaks with a sound then its ready for storage.

#### **FILLING THE GRAIN BAGS**

Use new bags for grain storage. If old bags are to be used, then spray them with suitable insecticidal solution after consulting the local Agriculture Department and then dry and fill with grains. Then store the bags in stores.

#### **SANITATION OF GRAIN STORAGE**

If the store has some pits and crevices it should be filled up with cement or soil. Then with the consultation of local Agriculture Department spray the store with suitable insecticide or fumigate. After treatment, store should be closed for 48 hours and then open the doors for 4 – 6 hours and do not go into the store. Later, tidy up the store properly.

#### **FUMIGATION**

If the grain storage has an attack of rats or insects, use Aluminum phosphide tablets. Use 30 – 35 tablets per 1000 cubic meter. The stores should be fumigated twice a year. Once during the grain storage and the second time in July.