

1. INTRODUCTION

Balady bread is a basic food on the Egyptian family meal and its bland flavor for combining with many other foods (**Food Quality (2002)**).

In Egypt bread is a main source of energy and about 80% of the daily protein intake is obtained from cereals grains. Also 70% of the calories intake come from cereals mainly bread. Variation in bread consumption is particularly pronounced in Africa. In Egypt, bread consumption composes 60-70 % of the total food intake. (**FAO / WHO 1989**).

In Egypt, some of balady bread made from up to 20% ground corn or sorghum flour added to wheat flour 82% to produce new balady bread loaves. (**Faridi and Rubenthaler 1984**).

Barley and naked barely are excellent sources of dietary fiber due to β -glucan enrichment β -glucan are mainly present in the starch endosperm cell walls.

Balady bread produced from blended wheat flour (82% extraction) with 20% of naked, barley gave good loaves in appearance, separation of layers, distribution of texture.

(**Oscarsson *et al.*, 1996**).

Wheat is the most important winter crop in Egypt as in many parts of the world breeding for high yielding cultivars is the ultimate foal of most breeding programs.

In Egypt according to the limited area of cultivation land and the rapid increase in population, about 50%of consumer needs of

wheat are annually imports to cover the demand for bread consumption .The production of wheat in Egypt (1999) was 6.35 million ton (6346642 ton) (**FAO / WHO 1989**).

Therefore other cereals than wheat must be utilized and incorporated in bread making to reduce the amount of the imported wheat. On the other side , great efforts has been done to increase the available amount of wheat flour especially that produced locally . In addition utilizing of other raw materials in the process of balady bread have been tried to over come part of such problem . These raw materials may include different flour source (cereals and legumes)or any suitable and available by product **Mohsen et al., (1997)**.

Barley , (naked) Naked Barley ,corn and sorghum contain dietary fibers, which could be, defines as a part of the plants cell walls, which are not hydrolyzed by alimentary enzymes . Plants constituents such as cellulose , hemicelluloses , pectins and lignin are generally considered as dietary fibers .(**Hellendoorn et al ., 1975**)

Burkitt (1973) Studied of fiber suggested that the decrease in consumption of plant ,fiber was related to an increase in certain diseases such as colon cancer ,coronary heart diseases , serum cholesterol ,plasma glucose and diabetes .

The significant role of dietary fiber in the diet is related to its bulk density , hydration capacity , binding properties and ferment ability , (**Van Soest 1978**).