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TRADITIONAL PROCESSING AND UTILIZATION OF BUCKWHEAT IN YUGOSLAVIA

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Traditional production, dehulling, milling and utilization of buckwheat in Yugoslavia are reviewed. Preparation of Yugoslav dishes from buckwheat flour and groats is described.

INTRODUCTION

Buckwheat is one of crops traditionally grown in Slovenia and in some other parts of Yugoslavia. In Yugoslavia buckwheat is grown on about 6000 ha and total yield is about 8000 tons. Samples of buckwheat collected in Slovenia were briefly described by Kreft (1980). Buckwheat is usually a second crop in the year, it is sown mainly on the same field after the harvest of barley or wheat. It is sown in July 15 - 30 and harvested from September 25 to October 15. Only about 10 % of buckwheat fields are sown in spring (May or June). Some buckwheat is still hand harvested by scythes, other by harvesting machines, binding buckwheat up into sheaves (Fig. 1). Sheaves are dried in typical hay-racks (Slovenian "kozolci") before threshing by machines. Dry buckwheat kernels are stored mainly in large wooden boxes (Slov.: "kašča"). Although in growing other crops farmers use modern machinery, buckwheat is still grown in traditional way: a new technology for buckwheat growing has to be introduced. Probably it will be sowing by machine in rows, with cultivation between rows and combined harvesting and threshing, if the problem of green leaves and stems in harvest time will be solved.

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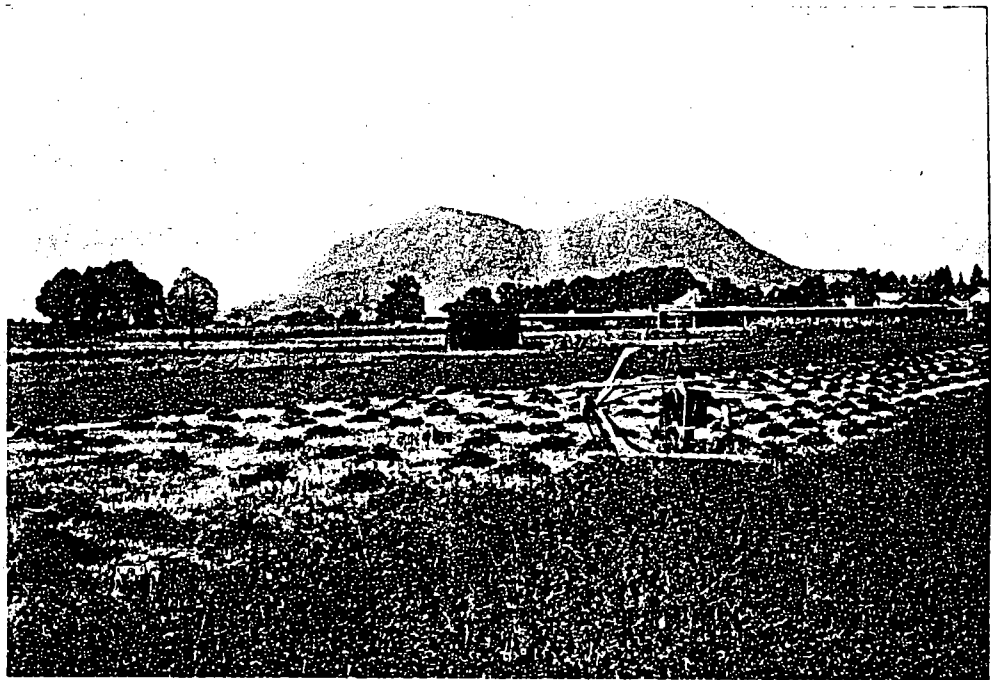


Fig. 1 Harvest of buckwheat in Kleče near Ljubljana.

MILLING

Traditional milling is performed by small water mills which are still in work in some parts of Yugoslavia. The main parts of water mill are a water wheel and two horizontally oriented milling stones. The wheel is run by steam of water and over the transmission parts moves the

upper milling stone. Milling of buckwheat is performed often by two passages through the mill (Figures 2 and 3). At the first passage both stones are quite remoted and most of the hulls are removed in large bits by sieving. At this passage the lighter flour and bran are obtained. In the next passage the bran is returned to mill and darker flour is obtained. Such flour is usually used for making polenta. The main property of this flour is that it is less sticky than the industrial buckwheat flour. Hulls may be used only to litter cattle. The rest on the sieve after the second passage is used for feed.

Farmers who have still own mills in function, use them often only for milling buckwheat. Wheat flour they purchase from commercial mills. The advantages of home made buckwheat flour are, that it is always fresh made (buckwheat has quite a lot of lipids and flour may after some time become rancid), and that they know, that buckwheat flour is without any admixture of much cheaper wheat flour (possibilities of control are discussed by Javornik 1978).

DEHULLING

Buckwheat groats ("kaša" or "kasha" in some languages) is obtained by dehulling buckwheat. The dehulling is an old process which is performed by the equipment called in Slovenian "stope". It comes from "stopati" (Engl.: to step), as "stope" are in the continental part of Slovenia run by legs. In alpine and subalpine parts of Slovenia dehulling equipments are run by water wheels.

For successful dehulling seeds must be prepared by boiling in water for about 15 to 20 minutes, until most hulls break and lighter endosperm structures could be seen at the place of break. Afterwards buckwheat is spread in a layer 1 to 2 cm thick on a linen for drying. It is dried in a shadow for 1 or 2 days, until hulls are dry, and the endosperm is hard. Prepared buckwheat kernels are slightly moistured and put into respective holes of "stope" (Fig. 4). The "stope" consists of fixed wooden part (the trunk, which is in some places hollowed out) and vertical movable conical hammer with iron edges. The hammer is moved up and down and beat the prepared buckwheat, placed in the holes of the trunk. After 30 to 60 minutes buckwheat groats is ready. Hulls are removed mainly by winding and partly by sieving.

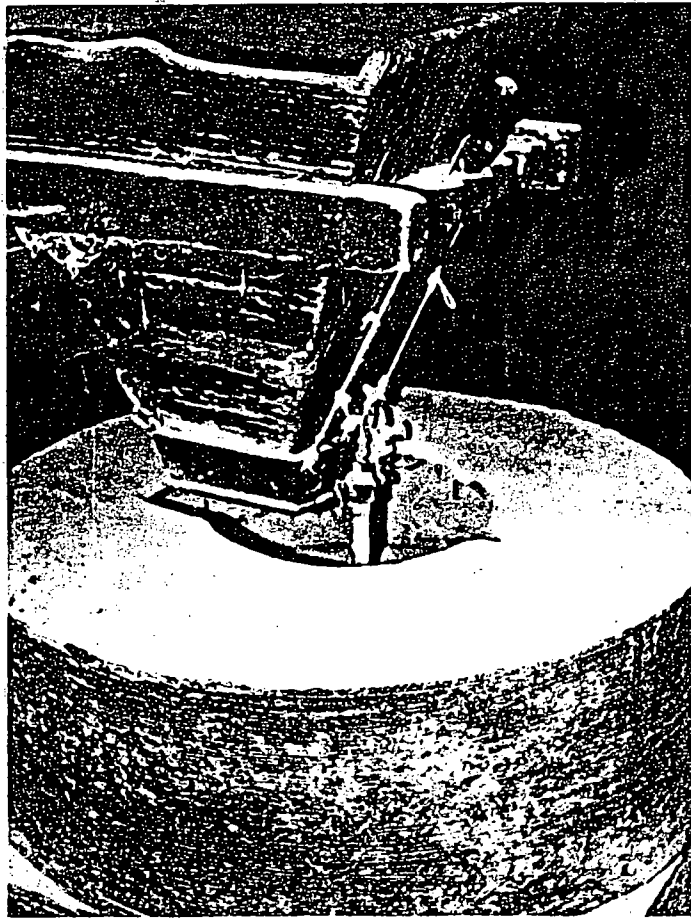


Fig. 2 Upper part of the mill.

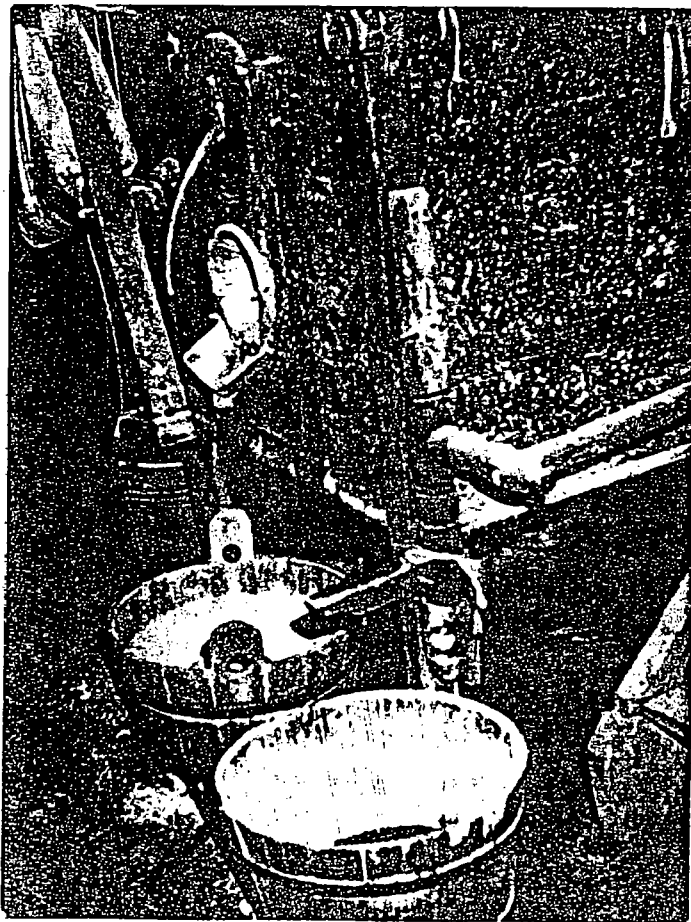


Fig. 3 Part of the mill with sieves .

FOODS FROM BUCKWHEAT

Buckwheat flour is used in similar way as wheat flour, though it has some different properties according to different chemical composition. Buckwheat flour can be mixed with wheat flour for making bread, pancakes, "potica" (potitsa), cakes and some other kinds of flour dishes. For some other kinds of dishes like "polenta", "žganci", dumplings, pies, round flat cakes etc. only buckwheat flour is used.

Buckwheat bread is usually made of 30 : 70 or 50 : 50 parts of buckwheat flour and wheat flour and it is prepared in the same way as wheat bread. Buckwheat "potica" (potitsa) can be dressed by walnuts, cottage cheese, cream, raisins or some other kinds of ingredients, depending on local habits.

Buckwheat polenta is simple and savoury dish from coarse buckwheat flour, mixed in boiling water. It may be served with milk, greaves, sour milk or with some kind of meat souces. The similar dish to polenta is "žganci" - a typical Slovenian food. The name comes from "žgati" (Engl.: to roast) and is connected with some way of preparing this food, when buckwheat flour was roasted before making "žganci". In contrary to polenta "žganci" are prepared from fine buckwheat flour; 1 liter flour is cooked in 2 liters boiling water about 15 minutes. Flour is cooked in form of a ball, without any mixing with water. Afterwards the flour ball is properly mixed with about half of amount of water.

In Bosnia buckwheat is in some places sown and harvested as a mixed crop with spring barley. Both kinds of kernels are milled together and the flour is used for some dishes, one of them is "tavan pita" (pie in floors). "Tavan pita" consists of several alternating layers of flat dough and "kajmak" (local soft cheese from cream) mixed with eggs. It is baked in oven.

Buckwheat groats can be prepared as a side dish, in some mixtures with meat, in soup or as a cake. Some home made sausages are filled with buckwheat groats mixed with pork. Baked buckwheat groats are prepared from cooked and cooled buckwheat groats with addition of walnuts, cottage cheese, cream, apples, eggs etc. in several variants, and baked in oven. Buckwheat groats may be also cooked in milk and served as a main dish.

Buckwheat is grown in Yugoslavia for some centuries and many ways of processing and utilization are known in different regions.



Fig. 4 Dehulling equipment ("stope").

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