

UTILIZATION OF GLUTEN-FREE CEREALS IN EUROPE

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INTRODUCTION

Allergies are increasing around the world including in Europe. The medical community is stating many reasons for this and the major factors are food, life style and the environment.

Today children are eating more and more processed foods. The food is manufactured to be shelf stable and hence to offer convenience to the trade with long shelf life. In order to reach that, a lot of additives are used such as preservatives, artificial flavourings as well as artificial colourings. The consumption of soft drinks is increasing which in many countries are leading also to obesity. The life style for children is changing from physical out-door activities to more time in-doors being less active spending much time in front of television, playing computer games etc. In particular in northern Europe, houses are on top of this built in a way to keep the heating cost as low as possible. Therefore houses are very well insulated as well as equipped with triple-glazed windows which affect the air circulation. In order to protect children from harmful diseases, they are vaccinated in early age which also may affect their immune system.

In the same time, the medical community has improved methods to discover allergies. Many people who before were living with stomach pains are now diagnosed with for example lactose or/and gluten intolerance. Regarding gluten intolerance, the estimated prevalence in Europe is about 1 % of a given population. As it is normally 1 member in a household, it means that 1 % of the families are in need of gluten free products.

What is important to be aware of is that the 1 % is a theoretical number and in many countries only a fraction of the gluten intolerants (or the coeliacs) are diagnosed. In United States, they estimate that 1 in 133 (Horvath, 1996) people are coeliacs but only 10 % of them have been given the diagnose which means that the people are eating products with gluten which harms their intestines and consequently have to eat different types of pain killers to suppress their symptoms. As the medical awareness is increasing all around the world, an increasing number are given correct medical diagnoses which offer them the opportunity to live a normal life with the exception of their food having to be gluten-free. The only acceptable treatment for celiac disease is strict adherence to a 100% gluten-free diet for life. An adherence to a gluten-free diet can prevent almost all complications caused by the disease (Halsted, 1996). A gluten-free diet means avoiding all products that contain wheat, rye and barley, or any of their derivatives. In Sweden, a target study was made on 13-year-olds and in this specific group 3 % were diagnosed as coeliacs which shows that 1 % could be a very low future estimate.

Regarding gluten, the cereal which is the most harmful is wheat. Wheat is today industrially processed and many people who are not suffering from gluten intolerance have still problems to digest wheat based products such as white bread, pizza etc. They feel inflated and often have stomach aches. Gluten is also found in barley, rye and oats. The gluten is different in the different cereals and in Sweden today, medical researchers have found that “pure” oats can be eaten by adult coeliacs. “Pure” means that otherwise most cereals are contaminated in the

mills, e.g. regular milled oats may contain 2-3 % wheat. Wheat can also be sold under different names such as durum wheat and spelt but still contain gluten.

The production of gluten-free products is made in accordance with the rules of Codex Alimentarius (FAO/WHO, 2007). According to this legislation, the products can be manufactured by either processed deglutenized ingredients or by naturally gluten free ingredients. Wheat flour is processed in a way that the gluten part is removed and then only the starch part is remaining. The ingredient is then called wheat starch. It is, however, not possible to “wash” away 100 % of the gluten but in accordance with the Codex Alimentarius, it is accepted to use wheat starch if the purity is 99,7 % or higher. The products baked with wheat starch must then be 99,8 % free from gluten or the gluten level are not allowed to exceed 200 ppm.

The EU countries have accepted the Codex Alimentarius while other countries such as the United States and Australia have not. In the US products with wheat starch are not allowed to be sold as gluten free and in Australia only as low gluten. Also in many countries in Europe, even if it is legal, the market does not accept wheat starch. The consumers do not have confidence in the products if they are not 100 % gluten free.

Therefore there is a pronounced interest for new ingredients which are naturally gluten free and that can be used in the production of bakery products. One original African ingredient which has been discovered is teff flour which today is cultivated in Holland and sold all over Europe. The Dutch company producing it has a monopoly situation in Europe as there are today no import of teff from Africa (<http://www.teff-flour.com/>). As always in a monopoly situation, the price levels are very high. The price of 1 kg teff is about €3,00. This gives large export opportunities for African growers to compete and open up the monopoly situation.

Other African grains which are of very high interest are millet and sorghum. These naturally gluten free ingredients are both nutritious of which finger millet also has good amounts of the essential amino acids important for human health and growth.

CONCLUSIONS

- The life style in Europe which leads to higher degree of food allergies gives a large export opportunity to African cereal growers and exporters.
- European companies have started local cultivation of African grains such as teff in order to satisfy the European demand of naturally gluten free ingredients. No market benefits from a monopoly situation and therefore there is an important interest to import and offer the same and other similar ingredients on the European market.
- As the awareness of food intolerance is constantly growing all the time, with the similar trends in other parts of the Western world, the market for natural gluten free ingredients will hence continue to grow. This will offer a bright future for African crop growers who are starting export of naturally gluten free cereals.

REFERENCES

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