

Lupine as Perspective Source of Protein

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Introduction. Nowadays research of alternative sources of protein is rather perspective. An important fact is that proteins aren't formed from other nutrients (fats, carbohydrates) and aren't stocked in the form of reserves. That's why, they are the only source of replenishment of amino acids and ensure equilibrium processes of synthesis and decay. Currently the important task is research of digister, as an alternative source of protein. Materials and methods. Lupine (*Lupinus L.*) – is an important one-year leguminous plant that is cultivated in the zones of Polesye and Forest steppe of Ukraine. It is used for food and for fattening of cattle. Without alkaloid sorts of lupine are grown for forage aims, that contain in one seed no more than 0,0025 alkaloids [1]. Due to the opinion of a lot of scientists, lupine is a perspective source of protein, because it contains all essential amino acids, and especially a large amount of lysine, threonine and leucine. The albumen of lupin is well digested and has a high biological value. Lupine is a food crop that can be recommended for increasing the biological value of food industries [2]. The main task of the paper is the research of food branches, which use lupin in food production. Results. Lupine flour is considered to be an excellent raw material for supplementing different food products because of high protein content and is widely used as an egg substitute, for example in cakes, pancakes, biscuits, buns, and can be added in spaghetti, pasta, crisps and bread. It was used as a butter substitute in cakes, buns, and croissants [3]. The possibility of usage of lupine concentrate in diet therapy for people suffering from celiac disease has been also proved. These results prove the absence of lupin squirrel in gluten. Due to full valuable amino acid composition and good vitamin-mineral composition this addition optimizes the daily ration of patients suffering from celiac disease. Lupine, as an albuminous containing component, can be also used in dairy industry. Scientists proved the possibility of usage of albuminous concentrate from a narrow-leaved lupine seed as a preparation in a dry and pasty kind of dairy industry. In case of adding and increasing the dose of albuminous concentrate from lupin, products were softer, with more easily soiled consistency, as compared with control samples. Lupine chips were proposed in food in Europe, as a new product. These chips can be added as a nutritional ingredient to salads, soups, with the addition of yellow colour to researched industrial samples[3]. Lupin flour can be incorporated into wheat flour to improve the nutritional value of final products without detrimental effects on the quality. In general, the addition of up to 10% lupin flour improves water binding, texture, shelf-life, and aroma [3]. Conclusion. Lupin has attracted interest worldwide as a potential food ingredient suitable for human consumption. Its special composition, which mostly consists of

protein, fibre, and limited amounts of oil, means that this seed can play a valuable role as a rich source of specific ingredients varieties. Various food industries realize the potential of lupine seed and increasing accessibility of products, including lupine flour and protein or fibre fractions. In bakery industry, lupine is a raw material that can be used for manufacturing different bakery products.