

Search and Perspective Use of Fleshy Oil Fruits of Forest Plants

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The article is devoted to topical at the present time search of nontraditional plants, having valuable nutrients, namely the unique fruits oils. It is a generalization of years of original studies of fleshy fruits, accumulating fat oil in non-seed parts of the fruits – fleshy oil fruits (FOF). Oils of non-seed parts of the FOF, unlike seed oils have a higher content of fat-soluble vitamins and valuable polyunsaturated, including unique fatty acids. In article assessed the series of woody and herbaceous plants, growing in the forests of the Russian Federation, on the subject of their having FOF, with particular attention given to plants, widespread and have a high bioresource potential. Considered the features of the localization of fat inclusions in cells of different fleshy parts of fruits, discussed the content and principles of the accumulation of fatty oil in them. The authors, along with popular buckthorn, which gave impetus to the study of FOF, are revealed the most promising forest woody and herbaceous plants having FOF: red-fruits honeysuckles, euonymus, celastrus, violets, hazelwort. It was shown that the accumulation of oil in the studied plants happening in different fleshy parts of fruits: at the sea-buckthorn – in hypanthium; in elderberry, derain and red-fruits honeysuckles – in pericarp (mesocarp); in euonymus, celastrus, violets and hazelwort – in aril. The authors determined that euonymus and red-fruits honeysuckles are most oilseeds among forest plants with FOF. Despite the fact that the fruits of these plants are poisonous, has been shown the ability to use these fruits as sources of carotenoids, tocopherols and other fat-soluble biologically active substances. The conducted monitoring researches have shown that some morphological and anatomical features of fruits, as well as symptoms associated with the dissemination, are good test-signs for finding of the FOF. Authors proposed phased scheme of search and study of FOF on the basis of own experience.