

Title Autumn berry a potential unexploited fruit of Azad Kashmir Pakistan

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Abstract

The autumn berry (*Elaeagnus umbel/ala*) tree is a member of the Elaeagnaceae family of plants, and is native to Asia including the Himalayan region, Pakistan, Afghanistan, India, northern China and Japan. The fruits of the Autumn Olive afford many health benefits; its nutrients including autumn olive berries contain vitamins A, C, E, essential fatty acids, flavanoids, and carotenoids. Berries are especially full of the antioxidant carotenoid lycopene, which is considered a powerful fighter of cancer and heart disease making it of interest for nutraceutical use. It was found that the level of lycopene in the berry of Autumn Olive may be as high as 17 times that of tomatoes. The autumn olives can be left for nearly two weeks at room temperature without spoiling and any unripened berries will mature. The berries can be dried with the seeds for crunchy snacking, or made into fruit leathers which concentrate their flavor. The seeds are soft enough to be chewed (fibrous), and can be eaten along with the fruit without ill effects. The red color in the berry is due to a carotenoid called lycopene (33-74 mg/100g) which has antioxidant properties. The seeds are used medicinally in cough stimulants and for pulmonary problems. Fruit consumed in raw or cooked. Juicy and pleasantly acid, they are tasty raw and can also be made into jams, preserves etc. The average weight of fresh berries was 0.14 g with the range from 0.09-0.15 g. The average rate of berry pulp was 70.01 %. The fruit contains about 8.3% sugars, 4.5% protein, and 1% ash. The vitamin C content is about 12mg per 100g. The total content of amino acids in 5 individual plants ranged from 140.596 to 172.634 mg/100g. The average content of Fe, Mo, Zn, Cu were 94.881, 74.550, 22.384 and 13.129 mg/100g and K, Ca were 10.190 and 4.720 mg/100g separately. Mature bushes in the wild yield about 650g of fruit over 2 - 3 pickings. The fruit is about 8mm in diameter and contains a single large seed. This unexploited fruit can be used as a potential source nutrients as well as nutraceutical purposes.