High Protein Fynbos Nuts: A New Superfood

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An indigenous Fynbos plant, such as Leucadendron species, adapted to the Western Cape’s harsh conditions would be ideal to replace foreign crops that are grown currently because these need fertilizers, pesticides and more water. However if Leucadendron nuts were nutritious they could be a suitable crop to grow.A nutritional analysis was done on a variety of nuts. A gel was run with the protein extraction of different Leucadendron species and peanut. It was then stained with coomassie as a first step to establishing whether Leucadendrons contain peanut allergens. Leucadendron sessile seeds had a total fat content of 32,3g per 100g. L. sessile nuts were low in omega 6 but had high levels of omega 3. L. sessile seeds were particularly high in protein at 55.6g per 100g. The different Fynbos species all contained high amounts of protein ranging from 20g of protein per 100g to 76.8g per 100g of protein. The protein profile of the Leucadendron species was very different to that of peanut. There is more protein just in terms of the intensity of the coomasssie stain in the Leucadendron compared to peanut extracts prepared from the same starting weight of raw nut. All 4 Leucadendrons contained the same set of dominant proteins characterized by a size distribution of 10 kDa, 17 kDa, 34 kDa, 43 kDa, and 130 kDa. The smallest kDa had the highest intensity of coomassie stain in all the Leucadendron samples. With further research the gene coding for this protein could be identified. The gene could be inserted into a crop like soybeans thus creating a plant, which has a good yield and also high protein content. Leucadendron nuts are high in nutrients with exceptional amounts of protein. What has been investigated suggests Fynbos nuts have the potential to be a suitable wild crop.

Awards Won:
Second Award of $2,000