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AMINO ACID COMPOSITION OF SUNFLOWER MEAL AND THE CHEMICAL CONSTANTS OF ITS OILS

by

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ABSTRACT

The proximate composition, amino acid contents and chemical constants of the oil of two important sunflower cultivars grown in N.W.F. Province were determined. It was observed that the mean oil and protein contents of sunflower seeds were 23.10 and 31.47%. respectively. Sunflower meal contained higher amounts of arginine, glutanic and aspartic acids. It aslo supplies the essential amino acids such as lysine and methionine which are deficient in the common food stuffs of plant origin. The iodine and saponification values of sunflower oil were high which indicated that the oil contains higher proportion of unsaturated fatty acids and low molecular weight triglycerides. Sunflower meal and oil can be used for eating purposes. The meal can serve as a good protein supplement in cereal diets.

INTRODUCTION

Sunflower (*Helianthus annuus L*) has the maximum potential for bringing the edible oil gap in Pakistan. It is a short duration crop which matures in 90 to 100 days and could be grown twice a year without clashing with major crops, like wheat and cotton. Being extremely drought resistant. it is also suited for barani (rainfed) areas (14).

Sunflower plays an important role in human nutrition. It is a valu-able cource of edible oil and protein. Its oil content varies from 24 to 40% (25). The high concentration of poly-unsaturated fatty acids in sunflower oil makes it useful for therapeutic purposes in coronary heart diseases (23). It contains 33.0 to 62.7 % oleic acid and 27.3 to E 54.3% linoleic acid (18). Sunflower seed meal contains about 50% protein (7) which can serve as a rich protein supplement in poultry, livestock and human food (6, 16).

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