Economic Importance and Use of Safflower in Human Life

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INTRODUCTION

Safflower (Carthamus tinctorius Linn.) is known by the following names in different languages: Hindi–Kusum, Kusumpuli, Barre; Sanskrit–Kusumbha; English–Safflower; Arabian–Kurtum, Usfar; Persian–Kazhirah; Bengali–Kusuphul; Marathi–Kardai, Kurdi; Tamil–Sendurakam; Telugu–Rushumba; Punjabi–Kasumba; Sindhi–pavari and Assamese–Fafran.

Safflower is said to be under cultivation from very ancient time and its origin is variously held to be India, Africa (Egypt and Abyssinia) and Arabia. Its cultivation is spread over various parts of the world both in the tropics and in the temperate zones. It extends from India, China and East Indies to Persia, Caucasus, Egypt, Italy, Germany and Spain and has been of late introduced into Australia and the United States of America. In India, where it appears to have been established for the longest period, it is cultivated in most of the states and it assumes greater importance, as an oil seed crop in Bombay, Madhya Pradesh, Andhra Pradesh, Mysore and North East of Madras. It was grown for production of the dye in Bengal, Utter Pradesh and Punjab.

The supposed primary centres of origin of Carthamus tinctorius are India, Africa and Arabia. Since the plant has not been found wild either in Indiagor in Africa, DeCandolle (1889) suggests that it may possibly be found indigenous to Arabia and spread from there to other countries.

MATERIAL AND METHODS

The seeds of PBNS–12 and PBNS–40 were collected from All India Co-ordinated Research Project on Safflower, Department of Agricultural Botany, Marathwada Agricultural University Parbhani–431 402 (M.S.), India and their florets.

RESULTS AND DISCUSSION

Safflower Oil

Safflower oil is an important industrial product. safflower seed oil is flavorless and colorless. Decorticated seed gives a better quality of oil rich in polyunsaturated fatty acids[linoleic acid] which play important role in reducing blood cholesterol level, control sugar level, helps in weight loss, skin [linoleic acid] and hair[oleic acid] improvement improves heart beat[omega-6 fatty acids] The oil is used for culinary and illuminating purposes and for soap manufacture.

Oil is also used for adulterating ghee and sesamum oil as well as for the preparation of the Macassar hair oil. The so-called commercial "Sweet Oil" of Bombay is obtained by crushing a mixture of groundnut, Sesamum and safflower seeds. Under certain conditions safflower oil develops an undesirable flavour; due to the high content of glycerides of linoleic acid, the oil has low stability. Now-a-days its use as a drying oil is increasing in India. Safflower oil is used for healing sores and in rheumatism; the seeds are used as diuretic and tonic.

Safflower Dye

The florets contain two colouring substances, carthemin and safflower yellow; the former is scarlet red in colour and insoluble in water, while the latter is soluble; a third compound incorporated has been recently isolated. Carthamin is found in the florets to the extent of 0.3–0.6 per cent and imparts a bright red colour to cotton and silk fabric; the yellow colour has to be separated from carthamin, in order to get a better colouring effect of the latter.

Safflower Oilcake

The oilcake extracted from decorticated seed is generally used for manuring purposes, while that obtained from decorticated seed is preferred as a nourishing cattle feed. If stored under dry conditions the cake does not get rancid or mouldy. As organic fertilizer it improves the physical condition of heavy soils, in addition to its nutritive effect.

Safflower Hull

The seed husk or hull forms a part of the undecorticated cake. It forms about 50 per cent of the seed (Mann and Kanitkar, 1919). It appears that hulls cannot be
added to cattle feed, excepting in a very small proportion. It is suggested that the hulls may be used in the manufacture of cellulose, insulations, abrasives, etc.

**Seed Reserves**

Mature seeds is the centre of concentration of reserve food materials. The chemical composition of seed reserve of varieties PBNS–12 and PBNS–40 is presented in Table 3.1.

Chemical composition of seed reserves of mature seed of Safflower (*Carthamus tinctorius*).

<table>
<thead>
<tr>
<th>Contents (%)</th>
<th>Varieties</th>
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<tr>
<td></td>
<td>PBNS–12</td>
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<tr>
<td><strong>Crude Protein</strong></td>
<td>29.01</td>
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<tr>
<td><strong>Oil Ether Soluble</strong></td>
<td>33.25</td>
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<tr>
<td><strong>Total Carbohydrate</strong></td>
<td>37.74</td>
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Oil is the principal food reserve of the mature seeds of variety PBNS–12 and PBNS–40 was found to be 34.40% and 33.80% respectively.

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**REFERENCES**


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