



KATTĀN II. LINSEED OIL

Linseed oil (*rowgān-e kattān*) is a product of cultivated linseed or flax (*Linum usitatissimum* L.). Rahimi-Laridjani suggests that the term *semsem* ‘sesame’ would be used for the oil-extraction variety of flax (p. 136). Although “sesame” (Mid. Pers. *konjīd*; *ŠM*^g < Aram. *šmšm*) appears twice in the *Bundahišn* (q.v.; TD1, fols. 38r, 48r; ed. Bahār, pp. 78, 88; Laufer, p. 192-93), *kattān* is absent from it.

According to Berthold Laufer (1874-1934) flax was cultivated in ancient Persia as a source of linseed and linseed oil (p. 294). Flax as an oil plant seems to have been replaced by sesame because sesame oil is tastier and more suitable for cooking than linseed oil which is used more in oriental folk medicine and as lamp oil (Rahimi-Laridjani, p. 136) and also in varnish and ink making (see LIGHTING EQUIPMENT AND HEATING FUEL).

The medicinal properties of linseed oil are highlighted in nearly all medieval and modern herbal books. Abu Maṣṣūr Mowaffaq Heravi (q.v.) mentions linseed oil (*rowgān-e bazr-e kattān*) only once and attributes it a dry and warm humor (p. 140). In other medicinal preparations concerning flax seeds (*bazr-e kattān*) the author does not mention linseed oil but the ground, crashed, or roasted seeds mixed up with other flora (p. 269). His contemporary Aḥmad Aḳawayni Bokāri (q.v.) does not mention linseed oil, but describes the usage of linseed mucilage (*lo‘āb-e tokm-e kattān*) or boiled seeds in milk (pp. 534, 504, 620). Two centuries later, another physician, Sayyed Esmā‘il Jorjāni (q.v.), mentions in his book, *Daḳira-ye k‘ārazmšāhi* (q.v.), the use of the boiled linseed oil or its sediment (*dordī*) in many of his recipes (III, p. 571; VI, p. 320; VII, p.



135). The medicinal properties of linseed oil were mentioned, for example, in the 17th century *Toḥfa-ye Ḥakim Mo'men* (Mo'men, pp. 709, 1172) and *Maḳzan al-adwia* written at the end of the 18th century (ʿAqili Ḳorāsāni Širāzi, p. 821), and continued to be recounted in herbal medicinal books in Persian until the 20th century.

ʿAqili Ḳorāsāni Širāzi also describes ink-making with the soot (*duda*) of linseed oil. However, the best description of black ink (*morakkab*) preparation is provided by the Safavid historian Qāzi Aḥmad Monši Qomi in his *Golestān-e honar* (q.v.): The soot of linseed oil (*rowḡan-e baḍrak*) is gathered in a piece of paper from the bottom of an earthen (*sofālina*) oil lamp (for oil lamps see Olmer, pp. 93-94). The paper is covered by a paste and put in an oven and heated so that the soot loses its oil. It is then ready to make the ink (p. 168; tr. Minorsky, p. 199).

According to the *Borhān-e qāteʿ* (q.v.), lamp oil (*rowḡan-e čerāḡ*) was made from linseed (*baḍrak*; Ḳalaf Tabrizi, I, p. 272) and its soot was also employed in ink-making.

Moreover, linseed oil was used in preparation of a varnish applied over paintings. This varnish was called *rowḡan-e kamān* by Šādeq Šādeqi Afšār (1533-1610) and was made of a mixture of sandarac (*Tetraclinis articulata* L.; Pers. *sandarus*) and linseed oil boiled in a pot (Šādeqi Afšār, pp. 163-64). According to a medical textbook, attributed to Ḥakim Ṭuluzān Yunāni (tr. into Turkish in 1505 and then into Persian in India), the oil of sandarac, which was used by painters as a varnish (*jalā*), was made of sandarac and linseed oil and used by lacquers (*kamāngarān*) and painters (p. 55). Jean Chardin (Sir John Chardin, q.v.; 1643-1713) describes the preparation of the same varnish, which was applied on lapis-lazuli to give it a gloss (V, p. 204).

Finally, the extraction of linseed or cotton oil is described briefly by Ḥāfez Ešfahāni (q.v.), who invented a fully mechanized oil extractor, powered by water to replace animal-driven mills (ed. Bineš, p. 96; Mohebbi, p. 163). His invention being forgotten, Mirzā Ḥosayn Khan Taḥwildār, in the 19th century, describes in detail a common oil extractor (*ʿaššāri* or *bazr-ḳāna*), which used two mill stones, a vertical one rotating over a fixed horizontal one (Figure 1), crushing the flax or other seeds which were then put under pressure to yield oil (Taḥwildār, p. 109). Elisabeth Beazley (p. 93, note 15), in 1961, saw such a linseed mill in the bazaar in Isfahan, powered by camels, which was then fully described by Hans Wulff (pp. 296-300) and more recently in an article by ʿAli-



Rezā Morādi.

Although these authors refer to the oil presses in the urban areas, the rural areas, less documented, had certainly used such presses. A rare example of a rural oil extractor is given by Ḥāfeẓ Eṣfahāni at the end of 15th century when he visited an oil production establishment in a village (*qarya*) near Sarakhs. He described it as “an oil workshop powered by animals (*kārkāna-ye ‘aṣṣāri keh beh ‘avāmel ma ‘mul bud*)” (Ḥāfeẓ Eṣfahāni, p. 90).

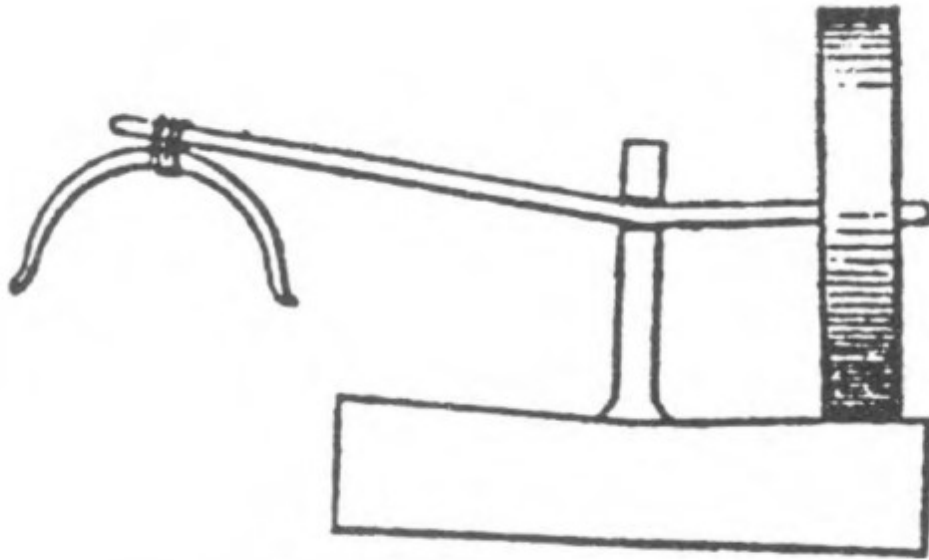


Figure 1. Schematic representation of a mill system (Olmer, p. 80)

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