

## Saffron : The King of Spice World

### It has a Heavenly Aroma

VIKRAM DOCTOR

Saffron's status as the world's most expensive spice is a mixed blessing. It bestows superluxury status which ensures the extra demand that keeps its price high. It entices top chefs to use it in premium priced dishes such as Ferran Adria's tagliatelle of jellied saffron consomme cut in fine strips and Jordi Roca's frozen orange mousse with saffron, and makes it a must for the most expensive Diwali mithai.

But it does mean most of us rarely experience how good real saffron can be, and oddly accessible too. Many spices require cooking in oil—frying in a tadka, for example, or grinding with oil for a cooking paste—because their essential flavour chemicals are fat soluble.

#### Constituents

Saffron contains crocin, which is not a brand name analgesic, but a chemical that food scientist Harold McGee describes as "a molecular sandwich of one pigment molecule with a sugar molecule attached at each end".

The sugar molecules ensure that crocin dissolves in water, which is why steeping saffron strands in cold water overnight will result in a fine clear gold liquid with faint bitter taste that fades into lingering notes of near-sweetness and fine fresh clean aroma. Saffron's aroma is often described as hay-like and if you close your eyes when sipping an infusion you can imagine you are in an open field in summer where the heat is drying out a rising fragrance, redolent of both warm earth and sweet herbs and grasses.

It is subtle, unlike the harsh attack of spices like cloves and cardamom, but it does need a mediating liquid—saffron eaten on its own is mostly just bitter. McGee notes that a liquid with alcohol or fat in it will also dissolve out the other flavour molecules in saffron, which is why milk heated with it has a richer taste and deeper colour.

#### Kesar Kasturi

Saffron also features in gins like Boudier's Saffron Gin from France and Old Raj from the UK, both of which claim to be based on colonial Indian recipes. It is also the main ingredient in Kesar Kasturi, the famous heritage liquor from Rajasthan. Yet in the end plain water in which saffron has been steeped, has a simple elegance that is hard to beat as a sign of real luxury.

Saffron's accessibility also comes from its surprising strength: it may be expensive, yet you need just a few strands to feel it. McGee writes that just one part per million units of crocin in water can make a visible tinge. Saffron will never be

cheap and, like all luxury goods, it is very often adulterated. But if you are willing to pay a fair amount, and can find a trusted source—and the best way is just to risk one, and then go back if it's real—you can get good saffron without needing to mortgage your house.

This is partly due to another paradoxical saffron fact—it is, or can be, one of the most widely cultivable of spices. Many spices come from plants that grow in the tropical zone, where most of India falls, and it is why these are sometimes called The Spice Lands. But the saffron crocus, from which the stigmata are harvested as the spice, grows best in subtropical zones that surround the tropics and can even, given a sheltered location and mild weather conditions, be grown in fairly cool climates.

As a result, saffron's growing range is very wide. Iran accounts for the most production by far, followed by Spain, but pockets of saffron cultivation are found in unexpected places. The Swiss village of Mund harvests a few kilos a year and the town of Saffron Walden not far from London commemorates in its name a historical tradition of growing saffron, though this no longer takes place. German migrants are said to have taken saffron to the US where the community known as the Pennsylvania Dutch (from Deutsch) were known for growing and using it.

#### Hard to Harvest

The saffron crocus is tricky to grow, but the real constraint with saffron is the harvesting. The crocus blossoms for just a day and must be picked at once for the saffron to be at its best. The flowers are so delicate that it must be done by hand, and it is backbreaking labour. The cost of this is so high that many places which could grow it have given up. Yet the prices are tempting and saffron's history is full of examples of places that started growing it, but gave them up when extra supply brought prices down.

This subtropical origin of saffron is why Kashmir is the only place in India to grow it. It also points to another curious fact. Despite its niche cultivation in India it is associated with Hinduism (and other religions) across the country, and this in turn has led to its association with strongly nationalistic politics of a certain kind. Yet this saffron label—which is probably used by opponents—comes from a plant whose Indian history is relatively recent.

#### Origin

Saffron's exact point of origin is not clear, but it was



probably in the Eastern Mediterranean, with Crete and other neighbouring islands being one plausible location. The Minoan civilisation that flourished there depicted saffron's growth and use in frescoes on its palace walls. Since the volcanic eruptions and tsunamis that destroyed these palaces can be dated, saffron's use can be put as far back as 1500-1600 BCE. A painting on Santorini showing a goddess using saffron to heal a foot injury may be the earliest known depiction of a particular plant being used for medicinal purposes.

In the millennium that followed, saffron seems to have made its way East across Asia, may be reaching Kashmir between 700-500 BCE, though some sources suggest its cultivation started centuries later. It is quite possible, it was imported before it was grown—Andrew Dalby points out in *'Dangerous Tastes'*, his history of the spice trade, that India was as much a consumer of expensive imported commodities like spices as much as it exported them.

#### In Ashokan Period

Trade always flows both ways and India's position, between the Spice Islands of Southeast Asia and the spice hungry West, had made it rich and ready to consume expensive commodities. There was also an interest in growing new, potentially useful plants. Dalby quotes from an edict of Emperor Ashok, in the third century BCE, recording how "medicinal herbs, suitable for plants and animals, have been imported and planted wherever they were not previously available". Ashoka was a Buddhist and one tradition from Kashmir ascribes the introduction of saffron to the Buddhist monk Madhyantika.

Another aspect of India's tradition of importing plants is how we seem pragmatically ready to substitute a traditional product with a more efficient new one. Chillies were probably substituted for long pepper, a similar-looking but more perishable spice, and potatoes for tubers such as various yams which didn't grow as easily or needed more processing. And this suggests one possibility for how foreign saffron was so quickly absorbed into the Indian tradition, by substituting with turmeric.

Turmeric's history in India is truly ancient, used in medicine, cooking, religious rituals and even dyeing cloth (though other yellow pigments were also used for this, like the urine of cows fed with mango leaves). It has never ceased to be esteemed, but it is not subtle in its taste, as saffron is, and it is also very cheaply and easily available. Perhaps expensive, imported and subtle saffron was preferred by kings, priests and merchants as a refined alternative to humble, harsh and simple turmeric. Luxury comes from both intrinsic and perceived factors and saffron has always been able to master them all.

(From the *Economic Times*, Nov. 2014).

### Climate Change

#### May cause 5 lac additional deaths by 2050

If the global emissions continue unabated, it may lead to half a million extra deaths by 2050, reveals a recent study by *'The Lancet'*. Among the worst-hit countries will be China and India, where scores of people will die due to food scarcity and malnutrition triggered by climate change.

While India will witness 1.36 lac additional deaths by 2050, China will register over 2.48 lac deaths.

The study, which is being pegged as first of its kind, focuses on the impact of the climate change on public health. It states that a change in climate will also eventually lead to a change in people's diet, resulting in rise in fatal diseases.

Dr. Marco Springmann, lead author of the study and a researcher at the Oxford Martin Programme on the Future of Food at the University of Oxford in England, mentions in the research, "The model projects that by 2050, climate change will lead to per person reductions of 3-2% in global food availability, 4-0% in fruit and vegetable consumption, and 0-7% in red meat consumption. These changes will be associated with 5,29,000 climate-related deaths worldwide, representing a 28% reduction in the number of deaths that would be avoided because of changes in dietary and weight-related risk factors between 2010 and 2050. Twice as many climate-related deaths were associated with reductions, in fruit and vegetable consumption, than with climate-related increases in the prevalence of overweight, and most climate-related deaths were projected to occur in South and East Asia."

Experts are of the view that health effects of climate change from changes in dietary and weight-related risk factors could be substantial and exceed other climate-related health impacts.

On death data, the study indicates that adoption of climate-stabilisation path-ways can reduce the number of climate-related deaths by 29-71%, depending on the adopted strategy.

Giving out various ways to mitigate the impact of climate change on public health across the world, the study further states, "Strengthening of public health programmes aimed at preventing and treating diet and weight related risk factors could be a suitable climate change adaptation strategy".