



INDIGO

Different kinds of Indigo plants grow all over the world. The plant has multiple uses in different cultures – these include traditional medicine, believed to lessen pain and was applied to burns and other skin ailments. The smell is also believed to repel harmful insects. Makeup and tattooing also use Indigo as an ingredient. One of the most important plants to produce the indigo dye grows in South and Central America; and Vasco da Gama – a European explorer

– brought it to Europe for the first time, replacing the European native Woad as the primary source for blue dyes. Importing Indigo changed the whole economy of producing blue colors.

It also means that Indigo is embedded in a *colonial* history, where European settlers took over the land in the Americas to transport the resources (Indigo as a powder) back to their homelands – often violently robbing them from native people.

At the same time, it is also an early example of *globalization*. Globalization refers to transporting goods all over the world. In particular, production of a good occurs in one country, while the good is sold in a different country. Transportation of goods around the globe causes strong environmental damage and destruction to create fuel to power ships and airplanes. Globalization often causes the introduction of foreign species and plants to local ecosystems in the process (either by accident or on purpose). This was also the case with Indigo, replacing Woad as a dyestuff in Europe.

This history continues today when most of the Indigo (usually sold in the form of powder) is grown on the Indian subcontinent, possibly far from where we are today. It takes about 20 tons of indigo leaves to produce about 100 lbs of dye powder.

Making dyes from Indigo is a very complicated process, and changes with what you use (powdered, fresh or dried plants). It involves a lot of chemistry which you need to get exactly right, where the plants are fermented (which is a smelly process, as you will see today).





TURMERIC

Turmeric is related to ginger - and also called “Indian saffron” for its importance in Asian and Middle-Eastern cooking, and you might know it from the yellow color it gives to curry. The root of the plant is used for both dyeing and cooking. It is a particularly important dyestuff in India, where it is still used for textile painting and printing. In India, the plant is considered holy and has been used in Hindu ceremonies for thousands of years, and plays important religious roles in other

cultures in south and southeastern Asia.

It produces bright yellows and even greens when you combine it with indigo. As a dyestuff, it does not need a mordant, although it fades quickly in sunlight and is sensitive to soap.

Turmeric grows in southern Asia. When not used fresh, they are dried in hot ovens to produce a deep-orange-yellow powder. It is an important ingredient in the cuisines of Bangladesh, India, Indonesia, Iran, and Pakistan, where it also is used for dyeing. It also had long been used for medical purposes, especially in Ayurvedic, Siddha, Unani, and traditional Chinese medicine to cure disease.

Although not very light fast (it fades quickly in sunlight), it is still important as a dyestuff in India and Bangladesh, and both saris and Buddhist monks’ robes are dyed with it. It is also a natural additive to protect food from sunlight or in water-containing products. It is used to color food, for example, making cheese appear extra-yellow.

Given the value of Turmeric, and as it is usually sold as a powder, there have been cases of fraud – where less expensive material was mixed with Turmeric to make higher profits. There are even cases where highly toxic material such as lead or metanil yellow (also known as acid yellow 36) has been used to increase profits.



ONION



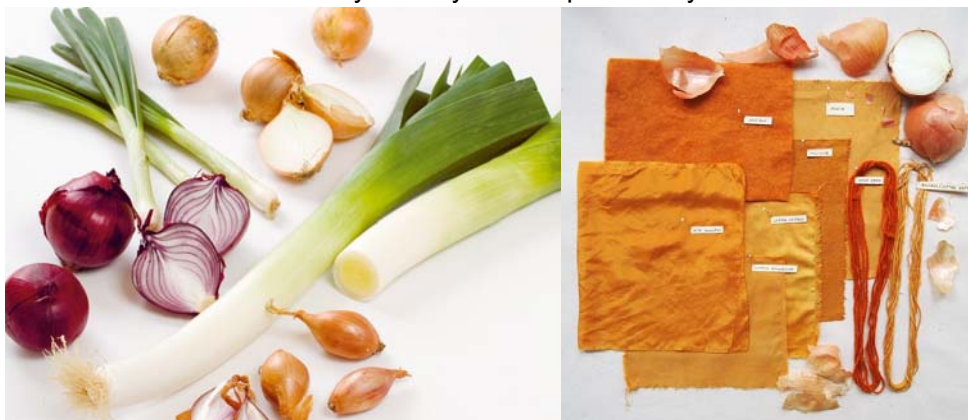
It is not entirely clear where onions first grew, as they were spread all over the world early on, as people migrated. It is assumed that onion cultivation either originated in central Asia, West Pakistan or Iran. It was used very early in human history before the invention of farming or writing. They probably are one of the earliest cultivated crops.

Onions probably played a crucial role in allowing early tribes and cultures to spread, as it can be easily stored, grown, and prevents thirst. Onion has an important place in cultures, not only as a food source - but also in art and medicine. Onions grew in Chinese gardens 5000 years ago, and are mentioned in the oldest Indian writings known today. China, India and the US produce most of the onions and ship them around the world.

In Egypt, onions were worshiped as a sacred plant, symbolizing eternity – they were an important sacred object and buried with their Pharaohs. They also were used in the process of mummification.

Onions were important in medicine for their antiseptic properties because they prevent infections. In India, the onion was celebrated as one of the most important medical resources 2600 years ago, and it was also known to many cultures in Europe as medicine. Native Americans used wild onions as food, medicine, dyes, and as toys.

Onions are one of the most common dyestuffs because the dye is easily extracted from the plant and there are a great number of varieties of onions that exist around the globe. It seems perfect for sustainable dyes, as it can be grown organically and locally, without interrupting ecosystems. At the same time, the different parts of the onion can be used for cooking, dyeing, medical purposes, or cultural practices - making it even more suitable for a careful and sustainable lifestyle. They are not particularly color “fast.”





BLACKBERRIES

Blackberries grow all over the world, and most commonly can be found everywhere in Europe. They are important parts of most European ecosystems, providing an important food source for caterpillars and many grazing mammals, especially deer, the red fox or the badger, as well as small birds. In other parts of the world (Australia, Chile, New Zealand) they are considered a serious weed and invasive species, threatening their ecosystems.

Throughout history, it was an important element in traditional European medicine, for example by the Greeks and Romans. Native Americans used the plant for food, medicine and to dye animal skins. The blackberry was also planted around European villages in the Americas to protect against enemies and large animals. The berries also were an important plant to produce purple and indigo-colored dyes in Europe. The fruit remains important for modern medicine today. Blackberries also contain a lot of chemical components that are promising to help in cancer treatment, including breast cancer. There are also claims that blackberries have a wide range of positive medicinal effects, but there is not enough research to support this claim.



Mexico is the leading producer of blackberries, with most of them being exported to off-season climates such as North America and Europe – to supply these markets when the berries do not grow naturally in these regions. For this purpose, the berries are shipped around the world, which requires a lot of energy and contributes to pollution (e.g. through powering the ships that carry the berries to Europe).