Oils and Fatty Acids 101

As you read this post, look at the fatty acid numbers in Soapcalc for the various oils, so you can see what I'm talking about.

Oils tend to be composed of several fatty acids, but they can also be broadly classified as being a good source of a specific fatty acid. If you are aiming at a certain fatty acid profile, you will tend to turn to these oils:

Palmitic Oils
Palm oil (duh), lard and tallow.

Stearic Oils
Tallow, high melting point soy wax and tropical nut butters (shea, cocoa, etc.).

Lauric Oils
Coconut oil, palm kernel oil, palm kernel flakes, babassu.

Oleic Oils
Olive oil (duh), olive oil, olive oil, and olive oil.
Also specially-bred versions of certain oils such as high-oleic sunflower oil and high-oleic safflower oil. Also some specialty oils like avocado and sweet almond.

Linoleic Oils
Soy oil, regular sunflower oil, regular safflower oil and various others that have similar fatty acid profiles if you look in Soapcalc.

Ricinoleic Oils
Castor oil.

Some random notes:

There is no such thing as "sunfloweriness". Linoleic sunflower oil and high-oleic sunflower oil have completely different fatty acid profiles and bring completely different properties to soap. When you talk about or purchase one of the oils that is available in different versions like sunflower or safflower, you have to be clear about which one you're thinking of. They are different oils even if they are both produced by the same plant species.

As a point of interest, olive oil, palm oil and lard are more similar than they seem. Palm and lard can be solid because they have a greater amount of palmitic acid (saturated, so it tends to solidify the oil), but they also have a lot of oleic acid. Olive is an oleic oil (monounsaturated, which tends to make oil liquid), but it has a bigger helping of palmitic acid than most other oleic oils. If you put it in the fridge, it will partly solidify. This inner hardness quality helps olive make an acceptable single-oil soap (castile). It contributes a little more hardness to any recipe compared to other oleic oils.

Some people like to use rice bran oil and some consider it a substitute for olive oil. RBO is an unusual oil and not so classifiable. It has significant amounts of palmitic and oleic acid, but it also has a large helping of linoleic acid. The palmitic gives it that inner hardness like olive oil, but the linoleic acid limits how much you can use, so it's not entirely an OO substitute.