Converting soybean hulls into useful products

Background

Due to a large manufacturing of soybean products, a lot of soy hulls were produced. Approximately 240 millions tons of soybeans are produced annually and about 18-20 million tons of soybean hulls are generated from the production.(1) Normally, these hulls will be sent to local pig farmers as pig feed or to landfills as waste. Soy hulls still contain a lot of proteins and minerals, which are very useful materials, and it would be a waste to just send them to farms or landfills. Instead of throwing away the useful materials, it would be better to put them to good use. Besides, by upcycling the soybean hulls, the burden on landfills can also be relieved. Other than that, the soybean hulls also contain a certain amount of cellulose which is a major source of dietary fibre. The dietary fibre in soybean hulls is very useful in promoting digestion in the human body.

Aim

Knowing how wasteful it is to throw away nutritious soybean hulls, our team aims to upcycle these leftover soybean hulls into useful products, as a substitute in foods to increase its nutritional value and as healthy alternatives to junk food so as to propel sustainable development in Hong Kong. The upcycling of soybeans is not very common in Hong Kong, we hope to popularize the upcycling of soybeans by discovering cheap and convenient methods to convert soybeans hull into something useful. These methods can also be introduced into households so that, for example, after making soy milk with soybeans, everyone can put the leftover soybean hulls to use and be a part of promoting sustainable development in Hong Kong.