

Texturized Vegetable Protein (TVP)

TVP is a product made from **soybeans**. It is often used to enhance the texture and nutritional content of dishes. In addition to being highly nutritious and rich in fibre and protein, it could also support heart health and protect against heart disease and stroke.

TVP is usually made from high (50%) soy protein, soy flour or concentrate, but can also be made from cottonseed, wheat, and oats. It is extruded into various shapes (chunks, flakes, nuggets, grains, and strips) and sizes, exiting the nozzle while still hot and expanding as it does so. The defatted thermoplastic proteins are heated to 150–200 °C (300–390 °F), which denatures them into a fibrous, insoluble, porous network that can soak up as much as three times its weight in liquids. As the pressurized molten protein mixture exits the extruder, the sudden drop in pressure causes rapid expansion into a puffy solid that is then dried. As much as 50% protein when dry, TVP can be rehydrated at a 2:1 ratio, which drops the percentage of protein to an approximation of ground meat at 16%.

TVP is primarily used as a meat substitute due to its very low cost at less than a third the price of ground beef and, when cooked together, will help retain more nutrients from the meat by absorbing juices normally lost.

With about 50 000 metric tonnes of soya beans having been produced in 2021, there is abundant local raw materials available to produce texturized vegetable protein in Zimbabwe. IDCZ is exploring the possibility of partnering with companies in the food processing sector to produce texturized vegetable protein.

