

# How to make Kurkure in pilot plant



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## Steps:

- **Mixing and Feeding**
- **Extruder**
- **Sieving**
- **Frying**
- **Deoiling**
- **Flavouring/Seasoning**
- **Packaging**

# Kurkure Ingredients:

- Kurkure is made from
- rice meal,
- corn meal
- edible vegetable oil (palm oil),
- gram meal,
- spices, condiments,
- salt, sugar, tartaric, milk solids, and E631.  
Also, it contains flavour (natural and nature identical flavouring substances).

# Kurkure Production Line



# Vertical Mixer

- Vertical mixers have vertically mounted agitator shafts. They can also be described as slowly rotating shear mixers. Their mode of action is based on the upward motion of goods in the periphery of the mixing chamber and the downward flow of goods in the centre



# Screw Conveyor

- A screw conveyor or auger conveyor is a mechanism that uses a rotating helical screw blade, called a "flighting", usually within a tube, to move liquid or granular materials. They are used in many bulk handling industries. Screw conveyors in modern industry are often used horizontally or at a slight incline as an efficient way to move semi-solid materials, including food waste, wood chips, aggregates, cereal grains, animal feed, boiler ash, meat and bone meal, municipal solid waste, and many others. The first type of screw conveyor was the Archimedes' screw, used since ancient times to pump irrigation water.





# Rotating head extruder

- Gelatinization of moisturized starchy ingredients takes place inside a concentric cavity between two brass plates, one rotary with 3 blades (fingers) plus grooves, and the other one with grooves only. The action of these blades on the rotating head creates the necessary condition of pressure and heat to achieve gelatinization of the raw materials at approximately 260°F (127°C). Expansion and forming of the product occurs in a narrow gap between the two plates (usually referred to as rotor and stator). Blades affixed to a circular knife support ring mounted on the outer edge of the rotor cuts to the desired size. Moisture, feed screw speed and type of brass used for the extruder heads control the expansion and texture of the product.



# Hoister

- **Food grade hoists are designed for use in clean environments like commercial kitchens and mass production facilities. A hoist for the food industry requires stainless steel components and corrosion-resistant surfaces, and is intended for use in a room that is water sprayed and chemically sanitised regularly. Lifting equipment for the food industry also uses food grade lubricant so in the event oil drips from the seal, the product would not be contaminated.**



# Tumble sifter

- Tumbler screening is a separation method that uses three-dimensional elliptical movement to separate very fine particles from larger ones. It is an important technique applied in many fields dealing with raw materials and building materials for process to remove exceed oil from corn curls.



## Continuous fryer with box oil filter and oil pump motor and pipe

**Continuous frying system with heat exchanger - to fry the kurkure in hot cooking oil. The uniform frying introduces the crunchy taste to the kurkure.**



## Vibrator sifter

**De-oiling belt – to remove exceed oil from corn curls.**

### 8. Seasoner (single roller machine )

**Automatic seasoning system with Slurry System - to add required seasoning to the fried and cooled kurkure to give the different flavours to them. Description of flavour applicator and tumbler Fried snacks are flavoured according to consumer tastes and the type of pellet to be used. From the technical point of view, it is necessary that flavouring be made immediately after the frying process, so that the absorption of the oil in the surface is completed.**



**Mixing various ingredients homogenously**



**To pass through extruder to get various shapes and sizes**



**Pass extrudates through sieves of different sizes and shapes**



**Frying extrudates with heat exchangers to maintain temperature of frying oil**



**Removal of surface oil from fried kurkure**



**Sprays & mix flavourings/seasonings and Packaging**

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