How to Build Yam Chips Production Plant

Why Build Yam Chips Production Plant

Yam is a good source of carbohydrates, vitamins and mineral salts, besides several components that serve as raw material for medicines. So yams as the edible food in people's daily diets can bring lots of healthy benefits, which is increasingly favored by people in the world.

The harvest of yams generally is between 7 and 12 months after planting. When harvested, yams possess about 70% of moisture which can cause its fast deterioration in the atmospheric temperature. Thus it is difficult for yams' storage and long-distance transportation.

Due to great demand for yams and difficulty in storage, yam processing industry develops fast in the world to prolong its storage, improve values, and balance yam seasonal and regional discrepancy. Crispy yam chip is one of most popular yam processing ways to process fresh yams into snack chips. Yam chips production can not only bring delicious snack in people's daily life but also benefit your health. Obviously, to build yam chips production plant is necessary and profitable investment and here is detailed information about building yam production plant.

How to Build Yam Chips Production Plant

I. Choose Suitable Factory Site

1. The factory should be near the city or town, to facilitate the yam chips production and provide daily necessities.

2. It would be better that the factory is near the place with rich raw materials. And good transportation is also necessary.

3. Choose the site with rich water supply to save refrigerating output. Yam chips production factory should be with enough electricity, so it should be near the thermal power station.

4. The site should be located at the downwind direction of the residential area and the downstream of river.

5. The waste water discharge and dilution should be taken into consideration in choosing factory

site.

II. Arrange Right Yam Chips Plant Layout

1. Meet yam chips production process demand

According to the production flow process to arrange plant layout, raw materials can be processed continuously in the horizontal and vertical directions, to minimize the production line from raw materials to finished products. Save production pipes, lower the investment and bring good economical effect.

2. Unified design

Machines should be arranged in unified design to form a concentrated operation platform, avoiding increasing building components & floor area and enlarging the investment. Workplace will be tidy and clean.

3. Reasonable facility layout

Arrange well the location of factory entrance, passageway and stairs.Factory gate should be set apart from other facility gates. The width & height of factory gate should be over 0.2m wider than that of the widest equipment.

4. Layout of substation and distribution room

The substation and the distribution room should be located in the upwind direction, and be near the equipments with much energy consumption to avoid energy loss.

5. Reserved field

The expansion area should be reserved in the factory design.

III.Purchase Equipments Applied in Chips Production

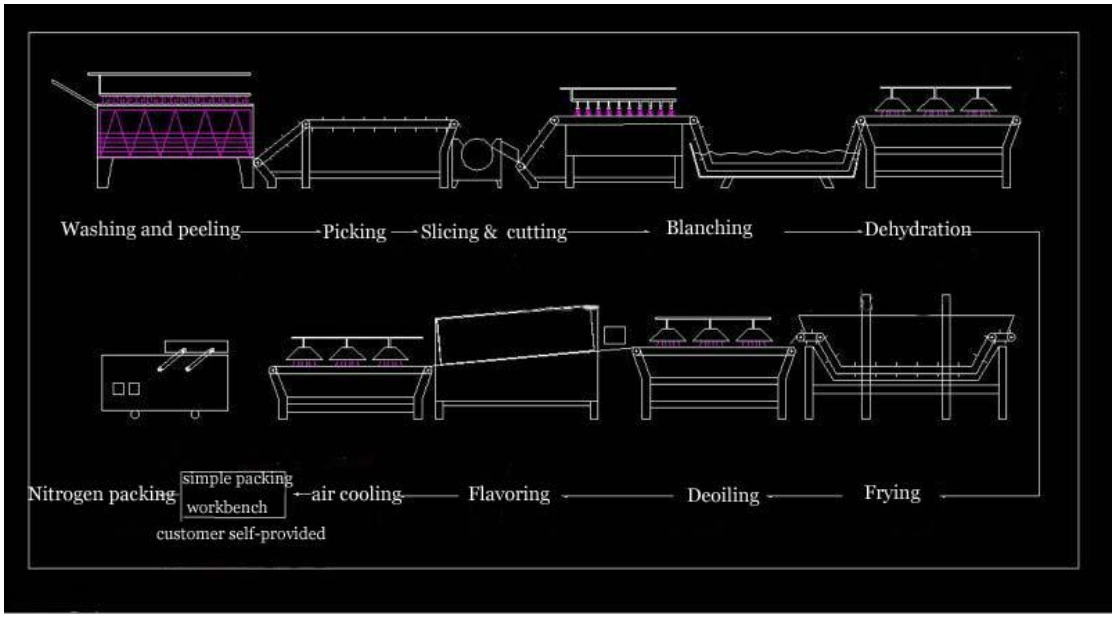
1	Cleaning and peeling machine	Brush type cleaning & peeling machine is suitable for yam, and TP series peeling machine is not the right one. Because yams are relatively soft, brush type machine not only peels yam also brings no harm to it.

2	Picking line	Picking line can picking well formed ones and then transport them to cutting machine. It is widely used in food processing line, suitable for various kinds of food.
3	Chips cutting machine	The cutter machine for slicing yam chips has two feed designs including vertical feeding and side feeding. Based on capacity, we have various models to cut different capacity and thickness. It is also applied for cutting carrots, potatoes, lotus and so on.
4	***Blanching machine***	Blanching machine is for pre-cooking yam chips. The blanching time can be adjusted by changing convey belt running speed. And there are three models for chips processing.
5	***Dehydration machine***	Dehydration machine adopts the centrifugal principle and removes food surface water through the fast rotating barrel. Four capacities are available: 8-10kg/time, 15-20kg/time, 25-30kg/time and 35-40kg/time.
6	Frying machine	The frying machine is designed for frying chips also for frying nuts, fruits like peanuts, puffed food, etc.. The frying time is about 1-2 minutes. Two discharging methods can be chosen: manual type and automatic type. There are different models for food frying.
7	Deoiling machine	Deoiling machine can offer a quick deoiling and cooling process. Equipped with anti-shock system, deoiling machine can operate stably at high roasting speed. Four models with different capacities for your reference.
8	***Flavoring machine***	With flavoring machine, customers can season diversified flavor totally based on their demands. There are three types of seasoning machines: disc type, octagonal type and roller type. Besides, the diameter and length of roller seasoning machine can be customized according to your need.
9	***Packing machine***	The mufti-functional packing machine can realize both nitrogen filling package and vacuum package. Yam chips should be packed in nitrogen filled bags. And other meat products and blanched vegetables are packaged in vacuum bags. Three models for your reference with respective capacities: 60-160 times/h , 90-360 times/h and 90-360 times/h.
10	Elevator	Elevator is the auxiliary equipment in processing line, used for material feeding to connect two machines, ensuring complete production.

IV. Build Complete Yam Chips Production Line

Before beginning yam chips production, you should choose good quality raw materials. Choose

straight, thick and fresh yams and remove malted and rotten ones. The chips production line should strictly follow these steps:



1. Cleaning and peeling

Put yams into the washing and peeling machine for washing off the mud and sand on yam surface, removing yam peels. Cleaning and peeling is the vital step to reduce impurity pollution and pesticide residues.

2. Picking

Pick out the yams relatively uniform in size by the picking line and send them to cutting machine.

3 Slicing

Yams are transported into slicing machine for cutting into uniform slices. Yams can be cut by the slicer in different thickness and shapes to meet various demand.

4. Blanching

Blanching is a necessary part as it can protect materials' natural flavor from being broken. Yam chips is put into boiling water for a few minutes and then plunged into cold water. During blanching, yam chips' flavor, color, texture and nutritional value are altered. Water blanching minimizes the leaching of solid, which leaves more natural sugars in products and it improves flavor retention and color retention to produce a final product with superior flavor, texture and color.

5. Dehydration

Yam chips are put into the dehydration machine to remove the surface water from the slices. with the centrifugal principle and the fast rotating barrel, chips are dehydrated.

6. Frying

Dehydrated chips are fried in the frying machine. Oil on the top to fry food and water at the bottom to receive waste, which actually can keep oil clear and reduce the oil-wasting.

7. Deoiling

Fried yam chips are put into the rotatable screen drum in cabin. With wind from the bottom, fried chips turn over under the centrifuge force. High pressure airflow blows away the surface oil and cool down chips. The extra oil that is blown out is dropped out with centrifuge force, flowing out from beside pipe. You can place a bucket to collect them.

8. Flavoring and cooling

For better taste, chips seasoning machine is applied. Chips are rotary in the drum and different flavor are added, thus chips and flavor are mix evenly, then discharged from the machine automatically. Then chips will be cooled by the air cooling.

9. Packing

After seasoning and cooling, chips will be packed by the packing machine. Weigh, pack and store.