

## Overhead Conveyor with Free Standing Support

Conveyor is for a production line to air-dry herbal products after harvest. Each day, fresh plants will be hung from the conveyor at a ground level loading point, then move through the pathway inside the drying space each day, to allow for new materials to be loaded in. At full capacity, each day, dried plants will be removed, at ground level, at the unloading point. Materials will be processed first in/first out. The plants will weigh approximately 6-8 lbs when initially loaded, but will be 2-3 lbs by the time they are indexed to the main drying space.

The drying space will be inside a covered, but open-air agriculture building. The conveyor and supporting structure must be free standing, with no attachments to the covering structure.

The conveyor will pass through 2 zones in the process. The initial zone will be on the right side of the building (shown in plan/elevation sketch), and will be at ground level. Plants will be hung at a concentration of 0.5 plants per square foot. This space will be 10-12 feet wide x 40' long. Plants will enter this space at 6-8 lbs, and exit at 2-3 lbs.

The main zone, in the center of the building, is approximately 60' long x 40' wide x 24' high. We envision the conveyors leaving the initial zone, turning into the main zone, then following a pattern to create 3 layers of conveyors, with plants at 1' centers, or supporting 1 plant per square foot. They conveyors will raise the plants to the top level, then back down for first in/first out exit at the ground level unload on the left side of the building.

## Product Information

Freshly harvested herbal plants, 2-8 lbs will be suspended from the conveyor. It is possible to suspend more than one plant if a hanging fixture is attached to the conveyor to accommodate multiple plants from one hook.

The product will be approximately 3 feet in diameter and 6 feet tall, and 6 to 8 lbs in the initial zone. Product will be 1 foot in diameter, 6 feet tall, and 2-3 lbs in the main zone.

The conveyor should allow approximately 1 plant per foot in the main zone, and 1 plant per 2 feet in the initial zone. At full capacity, the conveyor should be able to support 6,720 plants in the main zone, and 200 plants in the initial zone.

## Physical Requirements

The conveyor will be installed in a free-standing warehouse space. Therefore, the conveyor system must be floor mounted and free standing, and require no attachment to the surrounding structure.

They space will not be heated or cooled beyond natural draft air circulation, and the humidity will vary from 50-85%. Structure and materials should be all-weather, moisture resistant, and rust resistant.

The conveyor may be manual or motorized, or a combination. A method to move the product along the conveyor, including raising and lowering the product, must be provided.

### Timeline

Installation complete target is July 15, 2016! Would like to use refurbished/used conveyors materials in stock if possible.