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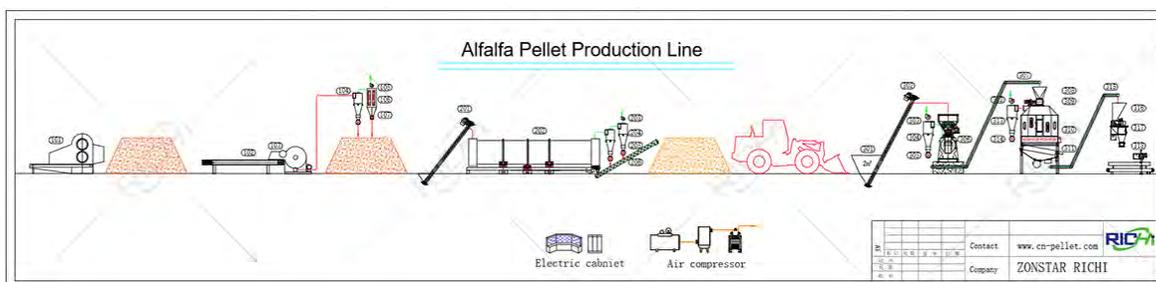
**ALFALFA PELLET
PRODUCTION MACHINERY
MANUFACTURER**



Alfalfa Pellet Production Line

Alfalfa is widely grown throughout the world as forage for cattle, and is most often harvested as hay, but can also be made into silage, grazed, or fed as greenchop. Alfalfa usually has the highest feeding value of all common hay crops.

Alfalfa Pellet Production Line process



The process of alfalfa pellet manufacturing was first developed for the livestock feed industry. It can be said to consist of a few basic sub-processes: grinding of alfalfa grass, drying, pelletizing and cooling.

The raw alfalfa grass is first freed from heavy contaminant (rocks, metals and other foreign material), and then grinded in a hammer mill or a chipping machine. The pellet size is adjusted to a uniform maximum dimension, which is approximately 85 % or less of the minimum thickness of the pellet to be produced. The often high moisture content of raw alfalfa makes drying necessary. The product from the hammer mill is therefore transported to a dryer (generally a rotary drum type one) where the moisture content of the uniformly dimensioned particles is reduced to about 10 % (w.b.).

Then, alfalfa pellets can be conditioned, i.e. steam or organic binding agents can be added (according to legal specifications). After conditioning,

the particles are then moved by conveyor to a pellet mill, where the pellets are extruded through the action of rollers acting on a perforated matrix. On the outer side of the latter, a knife cut off the pellets at the desired length. Residual moisture in the feedstock turns to steam during compression and helps lubricate the compression die. After extrusion, alfalfa pellets are very hot (90-100°C) and are immediately air quenched down to 25°C. This sets up the lignin and hardens the product, and contributes to maintain its quality during storage and handling.

Finally it is screened, so as to separate the residual fines which are generally re-used in the process. Dust free alfalfa pellets are then ready for storage (in a silo) or for automatic packing (in 25 kg bags or big bags – 1 to 1,5 m³).

In the second step in alfalfa pellet processing, there are two main types of pellet presses: flat die and ring die types. The flat die alfalfa pellet mill have a circular perforated disk on which two or more rollers rotate and force the material through the holes. The ring die alfalfa pellet mill features a rotating perforated ring on which rollers (normally two or three) press on the material to the inner perimeter.

The final processed alfalfa pellets can be used as animal feed, mainly horse feed. Using alfalfa products as forage for young horse is very beneficial because it is much more digestible compared to grass hays. Young horses do not have the ability to ferment fiber until they are about a year old. Feeding higher insoluble fiber forages such as timothy or orchard grass hay or poorer quality forage sources often results in “hay belly”. Therefore, feeding only highly digestible fiber such as alfalfa, clover, and beet pulp is recommended for the young growing horse.



Benefits of Alfalfa

1. A food source for dairy cows, beef cattle, sheep, horses, and even zoo animals.
2. Legumes such as alfalfa convert atmospheric nitrogen into forms that plants can use.
3. Facilitates soil conservation by reducing soil erosion.
4. A wildlife habitat for hundreds of animals, including some endangered species.
5. Lots of open space is created, which provides beauty.
6. Flowers on the plant make alfalfa honey the main honey crop in the U.S.
7. A habitat for over 1,000 diverse species of insects, spiders, and mites.