

II d IMPROVING AND TESTING OF PELLET MACHINE

INTRODUCTION

The object is to improve Pellet Machine to make a suitable pellet feed for a ruminant by using wood parts of Ipil-Ipil, which have not been used as feed.

MATERIALS AND METHODS

1. Contents of trial works;

(A) Trial works for attached blade of Rotary Screw.

- (1) Single Blade.
- (2) Double Blades.

(B) Trial works for Circular Plate.

- (1) Diameter of holes12m/m, 10m/m, 8m/m.
- (2) Thickness of the plate.....15m/m, 20m/m, 30m/m.
- (3) Number of holes30p'cs, 50p'cs, 80p'cs.

2. Conditions of test;

- (1) Main Motor of testing Pellet Machine is 15Hp, 11.25Kw.
- (2) Material of test is branches of Ipil-Ipil cutted into 3cm to 5cm.
- (3) Moisture of materials is controlled to almost 35 % moisture.
- (4) 12 kinds of plate are made trial under the conditions of plate as mentioned above.
- (5) Single and double blades are tried under the conditions of each plates.
- (6) List of trial plates are on the other sheet.

Table 1 Trial Works List of Plate (mm)

No.	Diameter	Thickness	Number of holes
1	12	15	30 P'cs
2	12	20	50
3	12	20	80
4	12	30	30
5	10	15	30
6	10	15	50
7	10	20	50
8	10	30	50
9	8	15	50
10	8	20	50
11	8	20	50
12	8	30	30

RESULTS AND DISCUSSION

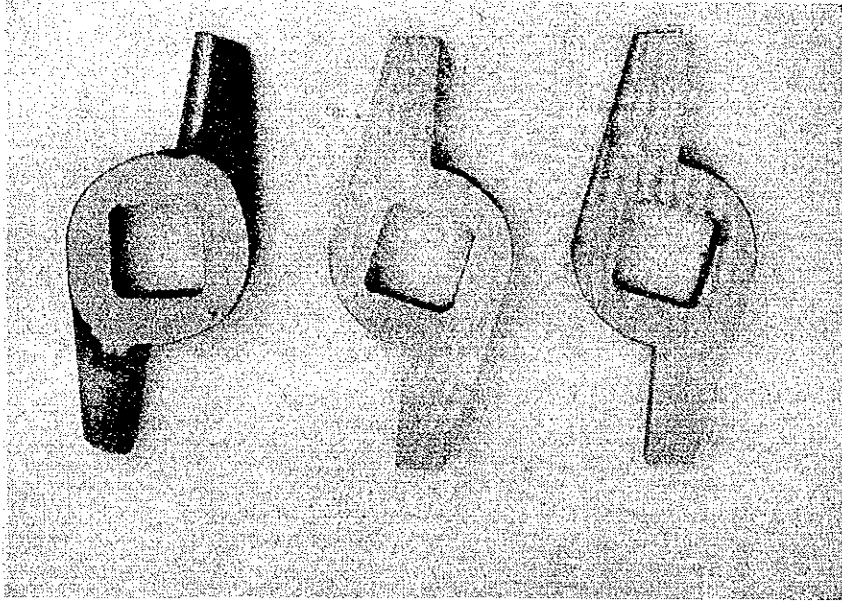
As the result of the test, it was possible to make a feed from Ipil-Ipil wood by using plate of No. 10 (hole diameter 8m/m, thickness 20m/m, holes number, 50p'cs), No. 11 (hole diameter 8m/m, thickness 20m/m, holes number 30p'cs.) and No. 12 (hole diameter 8m/m, thickness 30m/m, holes number 30p'cs.). Attached blade should be single. But, condition of Ipil-Ipil feed made by No. 10 plate was not so good. It will be absolutely able to make good shaped pellet feed if we could use binder like a corn, wheat or something like that.

By using No. 11 plate and No. 12 plate, we can say that it is able to constantly make well shaped Ipil-Ipil pellet feed.

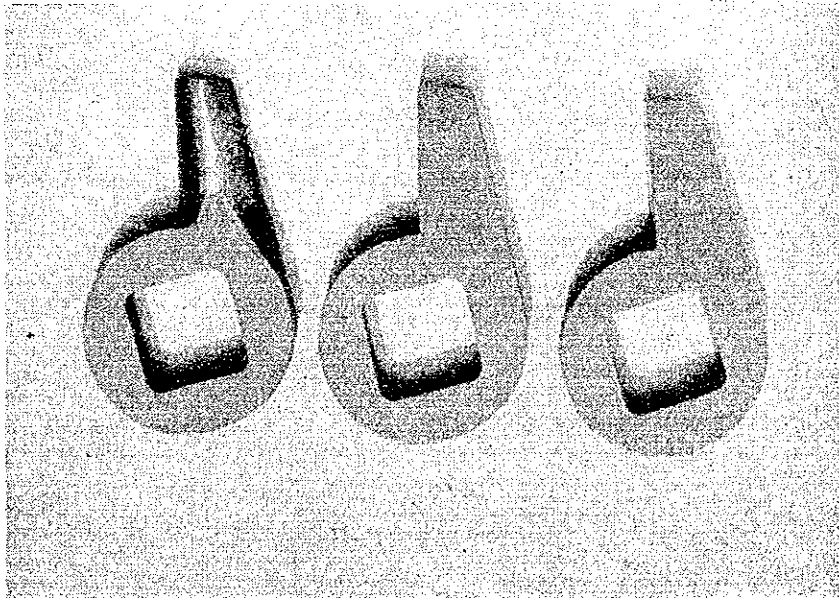
Pressure of making pellet will be estimated about 20kg/cm and temperature will be almost 100~130 Centigrade. Hour production volume will be about 150kg/H.

As our final conclusion, this tests making Ipil-Ipil pellet feed and improvement of Pellet Machine are much successful.

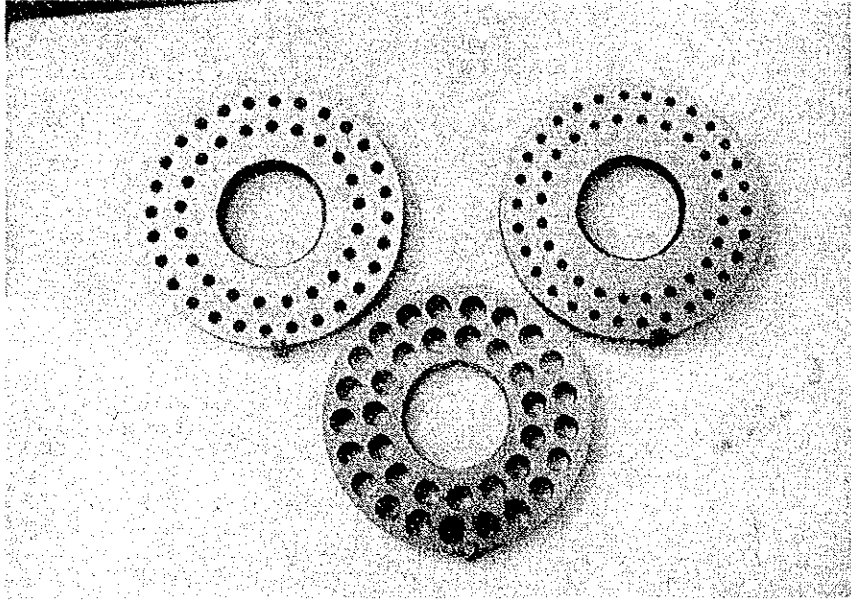
Single Blade



Double Blade



Circular Plate



Rotary Screw

