

Evaluation of flail type mower conditioner to use on Pangola grass hay production ⁽¹⁾

Ming-Hung Chu ⁽²⁾⁽³⁾ Min-Lang Chang ⁽²⁾ Hsin-Hung Liu ⁽²⁾
Tsui-Huang Yu ⁽²⁾ and Chia-Sheng Chen ⁽²⁾

Received: Aug. 4, 2016; Accepted: Nov. 10, 2016

Abstract

Climate is the key factor affects hay production, the longer the time needs for field curing, the higher the risk of rain damage and the greater impact on yield and quality of hay. For speeding forage curing, mower conditioner is used for hay production frequently. To evaluate the effect on speed drying and the efficiency of hay production, this study was conducted to use flail type mower conditioner to mow different growth stage of pangola grass. The result showed that the mower conditioner could break the stem to make grass drying faster than it mowed by disc mower, so it would reach the harvest standard half to one day ahead of time. Flail type mower conditioner was the disc mower combined flail type conditioner, it needed more engine power to operate than disc mower, so its fuel consumption was higher than disc mower when mowed the same area or yielded the same weight of hay. The prostrate grass stem limited the speed of mower conditioner in long grass field, so its mowing area and hay yield per hour were 20% and 37% less than disc mower, respectively. However, the speed of mower conditioner was not decelerate in short grass field, its wider mowing range could make the mowing area and hay yield per hour were 38% and 30% higher than disc mower, respectively. Mower conditioner could break stem to accelerate the drying speed of pangola grass, but this additional conditioning process would not affect the hay quality. The flail type mower conditioner could speed field curing to reach the harvest standard ahead of time, it is beneficial for yielding high quality pangola grass hay.

Key words: Mower conditioner, Pangola grass, Hay.

(1) Contribution No. 2534 from Livestock Research Institute, Council of Agriculture, Executive Yuan.

(2) Hengchun Branch, COA-LRI, Pingtung 94644, Taiwan, R.O.C.

(3) Corresponding author, E-mail: mmchu@mail.tlri.gov.tw.