INFLUENCE OF THE MEAT COMPONENTS ON THE WEAR OF CROSS BLADES

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INTRODUCTION

Under practice conditions, ^{Cross} blades (Fig. 1) of the Cutting set of the FW 160/3 Meat mincer were tested for Wear (reduction of blade Midth B) as a function of the ^{Neat} components and the amount of meat processed.

MATERIALS AND METHODS In addition to two cross blades the cutting set consisted of a rough cutter. ^a 13 mm perforated disk and a ک مس perforated disk. The stuff to be processed consisted of the following ^{Stuff} components: Pork meat II (S2), pork meat III (S₂), beef II (R₂), cheek (Schwa) (Ba), fat (Fe), rind (Schw.) ^{and} belly (Bau).

RESULTS

It turned out that rind causes the highest wear of the blades (Fig. 2). Sz, Bau, and Ba also have an essential influence on the blade wear (Fig. 2).

Pork meat II (S2) has little influence, and fat (Fe) as well as beef II (R2) are of little importance on the blade wear.

During processing the temperature of the processed stuff increased by 2.3 K on an average. The average blade wear to be expected is appr. 0,1 mm per ton of meat

 $(\Delta B = 0, 1 \text{ mm}/1 \text{ t}).$

CONCLUSION

9,32 tons of meat were processed with a wear of 1 mm $(\Delta B = 1 \text{ mm}/9,32 \text{ t})$. A blade can be reground five or six times until rejection. So an average quantity of 108 t of meat can be processed with one blade until rejection.

Fig. 1





Fig. 2



Captions

Fig. 1: Cross blade of the meat mincer of type FW 160 Fig. 2: Blade width reduction as a function of the pork meat components and the amount of meat processed, ^mj (1) \triangle B in mm (2) m_j in kg x 10³ (3) \triangle B = f (meat components) m_j)

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Under practice conditions, cross blades (Fig. 1) of the Cutting set of the FW 160/3 Meat mincer were tested for Wear (reduction of blade Width B) as a function of the Meat components and the amount

of meat processed. In addition to two cross blades the cutting set ^{consisted} of a rough cutter, a 13 mm perforated disk and a 3 mm perforated disk. The stuff to be processed consisted of the following ^{Stuff} components: Pork meat II (S2), pork meat III (S_3) , beef II (R_2) , cheek (Ba), fat (Fe), rind (Schw.) and belly (Bau). It turned out that rind causes the highest wear of the blades (Fig. 2). Sz, Bau, and Ba also have an essential influence on the blade wear (Fig. 2).

Pork meat II (S2) has little influence, and fat (Fe) as well as beef II (R2) are of little importance on the blade wear.

During processing the temperature of the processed stuff increased by 2.3 K on an average. The average blade wear to be expected is appr. 0.1 mm per ton of meat $(\Delta B = 0.1 \text{ mm}/1 \text{ t}).$ 9.32 tons of meat were processed with a wear of 1 mm $(\Delta B = 1 \text{ mm}/9.32 \text{ t})$. A blade can be reground five or six times until rejection. So an average quantity of 108 t of meat can be processed with one blade

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Captions

Fig. 1: Cross blade of the meat mincer of type FW 160 Fig. 2: Blade width reduction as a function of the pork meat components and the amount of meat processed, ^mj (1) Δ B in mm (2) m_j in kg x 10³ (3) Δ B = f (meat components, m_j) 1 1.

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