

WHEAT SEED CONDITIONING IN A CONTINUOUS FLOWING BLOWER USING A VERTICAL AIR STREAM

Source: Chapter 4 of the dissertation:

USE OF CONTINUOUS FLOWING BLOWER WITH VERTICAL AIR STREAM IN BARLEY, WHEAT AND CRIMSON CLOVER SEEDS

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ABSTRACT – Seed conditioning aims to improve seed quality, as well, to prepare the seeds for sowing. Among seed aerodynamical properties in seed processing, terminal velocity shows out as one of most important. So, the objective of this study was to evaluate a continuous seed blower to improve physical and physiological wheat seed quality. 16 wheat seed lots were used. After the separation the seed lots in 1 kg samples, the moisture content was determined and they were subjected to the Continuous Seed Blower (Mater Seed Equipment) set to air speed from 8 to 17 m.s⁻¹ at intervals of 1 m.s⁻¹. The physical purity and the factors involved in this component of seed quality was evaluated as well the thousand seed weight, germination and dry weight of seedlings. It was concluded that: 1 - it is possible to clean and upgrade physiological quality of wheat seeds using a continuous flowing blower with vertical air stream; and 2 - the air velocity of 11 ms⁻¹ highlighted as optimum cleaning and improvement of wheat seed quality point with seed discharge lesser than 14%.

Key words: *Triticum aestivum*, terminal velocity, air velocity, seed quality