

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

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

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ABSTRACT – The aerodynamic properties are used for conditioning process of various agricultural products such as in pneumatic conveying and seed cleaning, for example. Thus the aim of this study was to evaluate the physical and physiological quality of barley seeds, after cleaning in the Continuous Seed Blower a blower with vertical air stream, using different air velocities. After separation of the seed lot in three samples, the moisture content was determined and they were subjected to the continuous blower set to air speed from 6 m.s⁻¹ to 14 m.s⁻¹ at intervals of 1 m.s⁻¹. The physical purity and the factors involved in this component, thousand seeds weight, germination percentage, germination rate and dry weight of seedlings at seven and 15 days after sowing, were determined. It was concluded that: 1 - it is possible to clean barley seeds and upgrading its physiological quality using a continuous flowing blower with vertical air stream and; 2 - the air velocity 9 m.s⁻¹ is the barley optimum cleaning and quality upgrading point in a continuous flowing blower with vertical air stream, considering seed physical purity, germination and vigor 3 - to remove 1 percentage point of undesirable material from barley seed lots in the continuous seed blower with vertical airstream, seed discard reaches 3.3 percentage points. .

Key words: *Hordeum vulgare*, aerodynamic properties, purity, germination, vigor