

## **DRYDOWN COEFFICIENT ANALYSIS IN SOME COMMERCIAL CORN HYBRIDS**

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### **Abstract**

The concept of drydown or loss of water from the corn grain has been little studied in Romania. Hybrid seed manufacturer's recommendations are not always complete in terms of water loss rate of the grain, than may cause additional costs for farmers, represented by drying after harvest. Choosing a hybrid for a farm must also consider the possibilities of artificial drying, if the selection does not considering an analysis of the rate of water loss of the grain. Also having knowledge about the rhythm of loss of water from grain grown hybrids, we can expect early harvest and a harvest schedul. Based on these considerations, in the spring of 2015, in the village Lovrin, Timisoara, was placed an experimental field that was aimed to evaluate the rate of water loss of the corn grain. It was analyzed a set of 18 commercial hybrids in Romania, assigned in groups of maturity FAO 260-510. Moisture determinations occurred in the first phase to identify physiological maturity stage (humidity 30%) of 3 in 3 days (black layer). Subsequently, determinations were made daily up to a humidity of 15% for each hybrid. Results indicate a percentage of water loss from the grain from 0.28 to 1.1% daily depending on the hybrid. Thus, early hybrids lose water more uniformly than late hybrids (0.58%/day and 0.86%/day). Immediately after reaching physiological maturity, the rate of water loss from early grain hybrids is slower than late hybrids values being 0.47%/day and 0.79%/day respectively. With the synthesis of dry matter in kernel of physiological maturity value for technological maturity (15%), the rate of water loss in grain presenting values of 0.38%/day for early hybrids and 0.43%/day for late hybrids. Another aspect experimentation was seized after concluding that hybrids flint grain lose water more slowly than dent grain hybrids, averaged 0.33%/day and 0.73%/day respectively.

**Key words:** drydown, later loss in corn, black layer

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