



## Physiological Quality of Soy Cultivar Seeds

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### Abstract

The aim of this study was to analyze the degree of moisture (%U), germination (%), fresh/dry hypocotyl mass (g) and fresh/dry primary root (g) of the 24 soybean cultivars to have the most adapted cultivar in the Montes Claros region. The experimental design was completely randomized, using 4 replicates for the treatment (cultivar). It was found that the means followed by the same lower case letters do not differ statistically from each other by the Tukey test at 5% probability. Among the cultivars evaluated, the cultivar CD2750IPRO showed greater physiological potential for all variables and cultivars CD270IPRO, AS3730IPRO, NS5959IPRO and M7739IPRO reached germination above 80%, with this minimum necessary of the 24 cultivars evaluated, but none of them showed high vigor.

**Keywords:** *Glycine max* (L.) Merrill; Vigor; Methodology

### Introduction

Soy (*Glycine max* (L.) Merrill.) is a *fabaceae* of great economic relevance in the world. One of the main aspects considered for assessing the quality of soybean seeds is the physiological attributes, since these are directly related to estimates of vigor and field performance. For the planting of soybeans it is of fundamental importance to use quality seeds to obtain uniformity, vigorous plants and therefore good productivity [1].

Thus, the present study aimed to assess the physiological quality of seeds of 24 soybean cultivars.

### Material and Methods

The present study was conducted in the demonstration unit in the Seed Analysis Laboratory of the Agrarian Sciences Institute of

the Federal University of Minas Gerais (Las/ICA-UFMG) Campus Montes Claros-MG.

The seeds were obtained from an experimental area of Center Studies in Cereal Production and Technology (NEProTeC) of ICA/UFMG, where 24 cultivars were used.

The statistical procedure was completely randomized (DIC), with 4 replicates per treatment (cultivar).

In this work, the following parameters were evaluated: Degree of Moisture (%U), Germination (%), Fresh/Dry hypocotyl mass (g) and Fresh/Dry primary root (g).

### Results and Discussion

Cultivars	Moisture (%)	Germination (%)	Fresh hypocotyl mass and root 1 <sup>a</sup> (g)	Dry mass of the hypocotyl and root 1 <sup>a</sup> (g)
99R09	6,35	13	0,44575	0,03605
AS3610IPRO	6,97	62	3,06225	0,25455
AS3730IPRO	6,62	86	5,24450	0,42715
BMX Ponta IPRO	6,46	68	4,39900	0,30228
CD2720IPRO	6,48	73	5,00950	0,37233
CD2728IPRO	4,71	57	3,62425	0,26845

CD2730IPRO	6,55	71	4,00630	0,29608
CD2750IPRO	6,44	89	5,64000	0,44255
CD2817IPRO	6,49	23	0,93450	0,08315
DM6563RSFIPRO	6,67	63	4,42125	0,30125
DS5916IPRO	6,83	72	4,83550	0,29865
M6210IPRO	6,93	20	0,84975	0,07553
M7110IPRO	6,6	38	1,43200	0,11255
M7739IPRO	6,48	81	5,48475	0,38535
M8210IPRO	6,59	52	2,14825	0,17735
NA5909RG	6,48	79	4,63900	0,35565
NS5959IPRO	6,95	84	5,22500	0,41463
NS6906IPRO	6,59	75	4,20450	0,30513
NS6909IPRO	6,68	77	4,14775	0,33305
NS7300IPRO	6,82	67	4,18613	0,31433
NS7338IPRO	6,69	30	0,88725	0,08408
TMG7062IPRO	6,69	70	3,98950	0,30055
RK6813	6,86	65	3,97975	0,27068
RK7814	6,91	58	3,66900	0,02572

Table

**Notes:** The averages followed by the same lower case letters do not differ statistically from each other by the Tukey test at 5% probability.

## Conclusion

- Among the cultivars evaluated, the cultivar CD2750IPRO showed greater physiological potential for all variables.
- The cultivars CD2750IPRO, AS3730IPRO, NS5959IPRO and M7739IPRO reached germination above 80%, this minimum being necessary of the 24 cultivars evaluated, but none of them have high vigor.

## Bibliography

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