

Severity of Asian rust in soybeans grown in crop-livestock-forest systems at Barra do Garças, Mato Grosso, Brazil

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Introduction: The objective of this research was to evaluate the interactions among integrated forest plantations and annual crops, mainly in soybean crop that is widely used in this system, in order to evaluate the severity of disease in this case.

Material and Methods: The experiment was conducted at the Technology Reference Units of EMBRAPA, in partnership with the "Fazenda Brazil" (AFB), located in the municipality of Barra do Garças, MT, Brazil. Experimental area consisted of soybean crop cultivated between rows (lines) of eucalyptus. The rows were single, double and triple (with one, two or three rows of eucalyptus). Each treatment consisted of six distances, that were the collection points: 2 m, 4 m, 6 m, 8 m, 10 m, 12 m, in each plot. The positions were measured from the edge of the rows to the center.

Results and Conclusions: The system with double lines had the highest percentage of rust severity and the simple lines shows lowest value, for the distance of 2 m. For the distance of 6 m also there was statistical differences, where the triple lines had the highest percentage of rust severity and the double and single lines did not differ.


Table 1: Severity of rust in soybean cultivated in crop-livestock-forest systems.

Distance of rows (m)	Lines of trees						Average
	Single, %		Double, %		Triple, %		
2	1.64 (±0.37)	c	20.84 (±1.25)	a	5.88 (±0.56)	b	9.45 (±2.24)
4	1.74 (±0.52)	a	1.04 (±0.22)	a	2.52 (±0.39)	a	1.77 (±0.27)
6	1.36 (±0.50)	b	0.24 (±0.24)	b	4.28 (±0.75)	a	1.96 (±0.54)
8	0.12 (±0.08)	a	0.16 (±0.12)	a	1.08 (±0.27)	a	0.45 (±0.15)
10	2.30 (±0.52)	a	0.61 (±0.38)	a	1.60 (±0.40)	a	1.50 (±0.30)
12	1.08 (±0.34)	a	0.16 (±0.10)	a	0.24 (±0.16)	a	0.49 (±0.16)
Average	1.37 (±0.20)		3.84 (1.43)		2.60 (±0.40)		2.61 (±0,50)


Soybean plants nearest the eucalyptus lines had higher rust severity. At the conditions of this research, it seem that the environment due to eucalyptus plants can favor the development of Asian rust in soybean in this crop system.

Integrated pest management in ICLF and its interaction with the neighboring environment




 **Marcelo Raphael Volf**

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