



The use of technological reference units (TRU) on smallholder farms as a technology transfer tool of crop and livestock integration in southern Brazil

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Introduction

Embrapa (Brazilian Agriculture Research Corporation) and Emater (Extension Agency) are using family farms as reference units to transfer technologies and key technical knowledge to small milk and beef producers. The TRUs were conducted as production system models, and technological meetings were carried out during the entire year. In this presentation, we report the results of two years of winter and summer annual forages integrated on commercial enterprises.

Material and Methods

The TRUs were chosen by Emater. It represented the average smallholder farms of Rio Grande do Sul, and were managed as production systems for at least 3 years, during winter and summer. In each TRU, winter and summer forages are managed in plots of 500 to 5000 m². On the beginning of each cropping season, the extension agents responsible for each TRU were trained on forage establishment and management, and also received a “kit” containing seeds and technical information of each technology. The technology transfer was carried out through the formation of multipliers, and the realization of field days in these TRUs for crop and livestock producers, other extension agents, and regional leaderships.

Results and Conclusions

Table 1: Average green matter (GM) production and number of TRUs of winter and summer forages established in 2013 and 2014 (winter averages), and 2012/2013 and 2013/2014 (summer averages).

Winter Forages	Avg. GM (kg/ha)	Number of TRUs	Summer Forages	Avg. GM (kg/ha)	Number of TRUs
Ryegrass BRS Ponteio	33.550	16	Forage Sorghum BRS 802	56.394	17
Rye BRS Serrano	31.796	12	Silage Sorghum BRS 655	58.632	13
Oat BRS Centauro	26.411	13	Sudangrass BRS Estribo	49.072	12
Wheat BRS Tarumã	23.650	16	Pearl Millet BRS 1501	50.405	17
Control*	19.943	8	Corn BRS Missões*	35.347	9

* Control and corn BRS Missões – average of 2013;

The two year forage production data showed that the winter and summer cultivars present opportunities for greater forage production than the control-forage in use by the producer (Table 1). Additionally, the use of TRUs proved to be an important technology transfer tool to promote adoption of reliable technology and knowledge among family farmers.

Acknowledgements

To the extension agents of Emater/RS from Água Santa, Agudo, Almirante Tamandaré do Sul, Alpestre, Benjamin Constant do Sul, Boa Vista das Missões, Caseiros, Ciríaco, Cristal do Sul, David Canabarro, Erechim, Gaurama, Gentil, Herval Seco, Iraí, Jaboticaba, Marau, Mariano Moro, Mormaço, Nova Alvorada, Nova Boa Vista, Paim Filho, Palmitinho, Passo Fundo, Ponte Preta, Restinga Seca, Rodeio Bonito, Rondinha, Santa Cruz do Sul, São José do Ouro, São José das Missões, São Pedro das Missões, São Sepé, Sertão, Silveira Martins, Soledade, Tapejara, Taquaruçu do Sul, Vale do Sol, Vila Maria and Vista Alegre who diligently maintained the TRUs and registered the forage production data presented in this abstract.