

Coffee Frost Warning System in Southern Brazil

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Introduction: The North and Northwest regions of Parana state, Brazil, are within the recommended coffee zone, despite occurrences of light and moderate occasional frosts. To mitigate this problem, a Frost Warning System was started in 1995 by IDR-Paraná and SIMEPAR, whose purpose is to inform coffee growers in Paraná of the imminent occurrence of frosts, as well as the recommended methods to protect their crops.

Materials/Methods: The Frost Warning System operates annually from May to September, when there is a risk of frost in Paraná. The polar masses are monitored and daily bulletins are issued with frost forecast and intensity that will reach the coffee growing area of Paraná. In addition to the frost forecast, the most efficient methods for protection of nurseries and crops up to two-year-old are available to the farmers.

Results/Discussion:

Newly planted seedlings: Cover seedlings up to 6 months old with soil or a thick layer of straw. The plants can remain covered for up to 20 days.



Older coffee plants: Soil banking close to the trunks up to the first pair of plagiotropic branches. Recommended to plants with 6 months to 2 years in the field. The soil banking must remain up to the end of risk of frost.



Conclusion: All the frosts predicted were confirmed and there were no episodes without disclosure. The farmers protected their crops and avoided losses. The Frost Warning System has been important to reduce risks of coffee production in Paraná.