

INRA

Domaine de la Tour de Rance



The *Domaine de la Tour de Rance* is a property belonging to the INRA - the French National Institute for Agronomic Research - where it conducts trials as part of its work for the Ministries of Agriculture and Research.

This experimental site is an hour and 15 minutes away from Bordeaux and 45 minutes from Agen, right in the heart of the *PrunEAU d'Agen* production area. The domain covers 55 hectares along the lower terraces of the Garonne River, including 50 hectares of usable farm area and 35 hectares of orchards, nurseries and experimental woodland. The soils are of the "boulbène" type (1/3 clay, 1/3 silt, 1/3 sand) and tend to become dry and compacted in summer, so that irrigation has to be carefully managed.

The climate is oceanic but subject to continental influences : total annual rainfall is in the region of 650 mm, and the area is drought-prone in summer. Although temperatures are fairly mild, sudden downdrafts of cold, continental air can bring severe frosts.



Trials conducted in the orchards are mainly on *Prunus* species, especially cherry, peach and plum trees and their rootstock. A great many trials, in either orchards or woodlands, are conducted under genetic or ecological research programmes aiming to understand and assess how trees are adapting to climate change. Other plots are hosting experimental protocols under research programmes on the genetic determinism of traits such as fruit quality or resistance to pathogens. The sharka (plum pox virus) research programme will be described during the visit.

The site at Bourran also has most of the collections managed by *Prunus* Gene Resource Centre (to be presented during the visit).

Under a long-running agreement with the BIP (the French inter-professional body for prunes), orchards are being established using innovative methods designed to reduce the adverse environmental impacts of production while maintaining high levels of quality and production and improving economic performance.

Approaches to sustainable fruit growing in general are also being tested with other species (peach and apple trees) through national networks between organisations.

The Bourran site and a few others have been selected as pilot sites for experiments contributing to INRA's overall effort to reduce the carbon footprint of its activities.

