



VISIT NAME: Visit TSE's first agrivoltaics shade structure in Chadeleuf (63)

TOUR DATE: Wednesday, October 8 – Morning

DESCRIPTION

Farm Background

- Arable farming and aromatic plants
- 82 ha of Utilized Agricultural Area (UAA)
- Farming practices: simplified tillage and conservation agriculture

Description of the Agrivoltaic Shade Structure

- 0.76 ha fenced area
- Row spacing: 15 m
- Coverage rate: 34.5%
- 392 modules
- Capacity: 278 kWp
- Dynamic panels on trackers – Max height: 4.65 m
- An experimental agronomic protocol is being conducted on the plot

Technical Data

The agrivoltaic shade structure helps improve agro-climatic conditions for crops while generating green energy. The partial and rotating shading system reduces climate stress on crops, helping to preserve their agronomic potential.

Key technical features of the solution

- Suitable for large-scale arable farming
- Low ground coverage and 30% panel density for optimized cultivated area
- Dynamic panels providing partial, rotating shade to protect crops from climate extremes (drought, high temperatures, excessive sunlight, frost, hail)
- Intelligent solar panel control to meet both crop agro-climatic needs and the farmer's operational requirements
- Fully compatible with agricultural machinery — up to 15 meters of clearance
- Eligible for equipment subsidies
- Option to integrate an irrigation system

Agronomic benefits of partial and rotating shade

- Reduced plot temperature and protection from excessive sunlight during summer
- Lower evapotranspiration, reduced water stress, and water savings
- Decreased risk of spring frost

These benefits contribute to enhancing the agronomic potential of farmland and stabilizing crop yields.