



Sugar beets: Chelal Kubig

Aim of the trial

The goal of the trials is to increase beet yield by improving resistance to Cercosporia.

General information

	Trial 1	Trial 2	Trial 3
Year	2022	2022	2021
Trial location	France – Condé sur Marne	France - Prosnes	France - Tours Sur Marne
Soil type	Calcareous clay	Calcareous clay	Calcareous clay
Variety	?	?	Jellera (little susceptible to Cercosporia)
In cooperation with	Cristal Union	Cristal Union	Cristal Union
Experimental design	Chelal Kubig: 1 strip (750 m x 38 m = 3 ha)	Chelal Kubig 2 strips (600 m x 27 m = 1.62 ha)	Chelal Kubig: 1 strip of 50 m
Additional information		Field susceptible to cercosporia	

Treatments

Trial 1 :

	Chelal Kubig	Reference
T1	Chelal Kubig at 1.7 L/ha + fungicides	Copper oxychloride 250 at 2.5 L/ha + fungicides
T2	Fungicides	Fungicides
Total Cu	170 g/ha	625 g/ha

Trial 2 :

	Chelal Kubig	Reference
T1	Chelal Kubig at 2 L/ha + fungicides	Copper oxychloride 250 at 3 L/ha + fungicides
T2	Fungicides	Fungicides
Total Cu	200 g/ha	750 g/ha

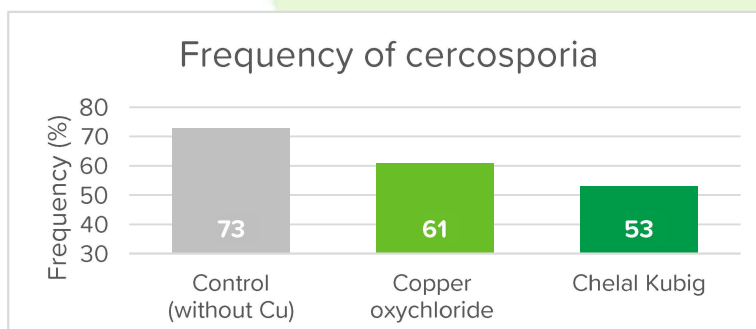
Trial 3 :

	Chelal Kubig	Reference
T1 : 10/07/21	Chelal Kubig at 1 L/ha + fungicides	Copper oxychloride 250 at 3 L/ha + fungicides
T2 : 04/08/21	-	Fungicides
T3 : 07/09/21	-	Fungicides
Total Cu	100 g/ha	750 g/ha

Results

Trial 1 :

Sampling of the leaves (19/09/22)
3 x 30 leaves per modality





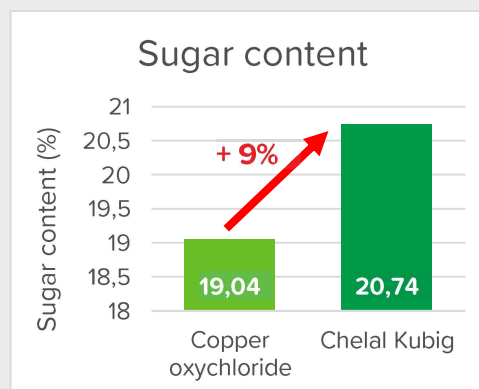
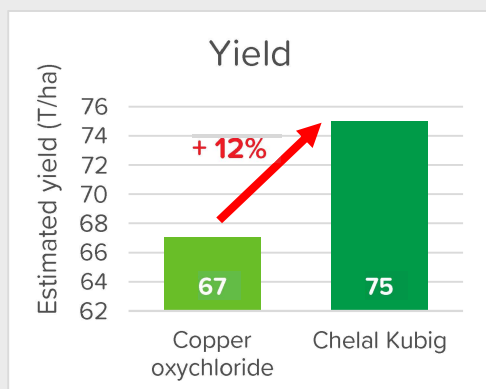
Trial 2 :

Sampling of the leaves (25/07/22) – 3 x 30 leaves per modality

	Copper oxychloride	Chelal Kubig
Frequency	71 %	63 %
Intensity	3-4%	1-2%

Sampling of the beets (14/09/22) – 3 x 10 beets per modality

	Copper oxychloride	Chelal Kubig
Weight of the beets (3 x 10)	15.39 kg	17.25 kg
Estimated yield (130 000 seeds/ha)	67 T/Ha	75 T/Ha
Sugar content	19.04%	20.74%



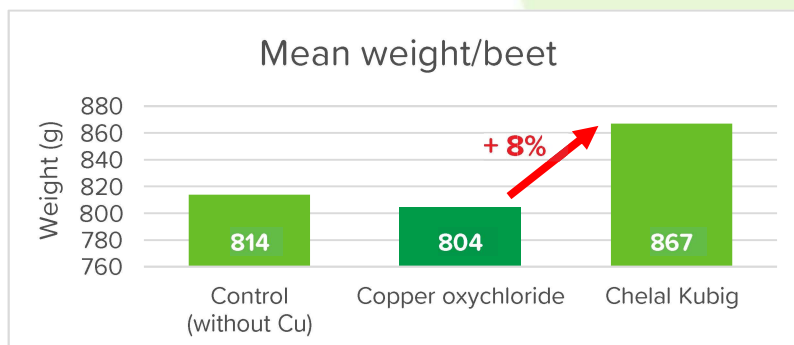
Trial 3 :

Sampling of the leaves (15/09/21) – 50 leaves per modality

	Copper oxychloride	Chelal Kubig
Frequency	50 %	60 %
Intensity	10% affected at 10-15%	6% affected at 10-15%

Sampling of the beets (10/11/21) – 3 x 10 beets per modality

	Control (without Cu)	Copper oxychloride	Chelal Kubig
Weight of the beets (30)	24.41 kg	24.11 kg	26.01 kg
Mean weight/beet (g)	814 gr	804 gr	867 gr
Sugar content	18.06%	17.77%	18.04%



We find that the frequency is slightly higher in the Chelal Kubig modality, but the intensity is lower. In other words, with Chelal Kubig we have slightly more leaves that are affected, but the disease development is smaller. In addition, in the Chelal Kubig modality, no fungicides were used at the second and third time point (3 less phytosanitary products).