

# Wine grapes: NTF in the Champagne region



BMS Micro-Nutrients

## Objective of the trial

The objective of this trial is to study the mode of action and the impact of total foliar nutrition (NTF) on vines through various experiments implemented on four plots. Four consecutive years (2013-2016).

## General information

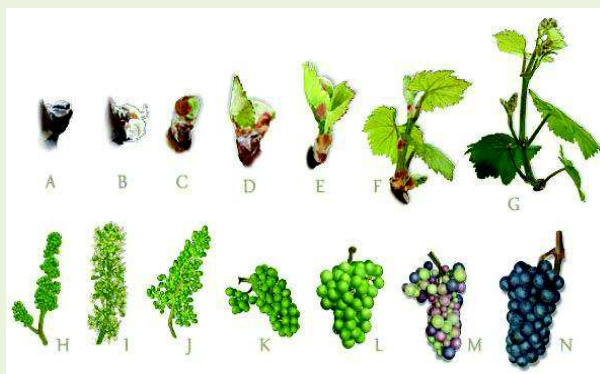
France – Champagne  
 Variety: Pinot Noire of 25 and 48 years old  
 In cooperation with: Licence Professionnelle Agro-Ressources et Environnement  
 Spécialité Viticulture UFR Reims.

Trial No.: 2015-81  
2016-059

## Treatments

- Control
- Liquid nitrogen / soil fertilizers
- NTF:

Phenological stages	Product and dosage
F	Kappa V 2 kg/ha
G	Kappa V 3 kg/ha
H	Fructol NF 2 kg/ha Chelal B 1 L/ha Chelal Zn 1 L/ha
I	/
J	Fructol NF 2,5 kg/ha
K	Kappa G 4 kg/ha
L	Kappa G 4 kg/ha
M	Fructol NF 2,5 kg/ha



## Results

**Yield:** similar yields compared to the other modalities.

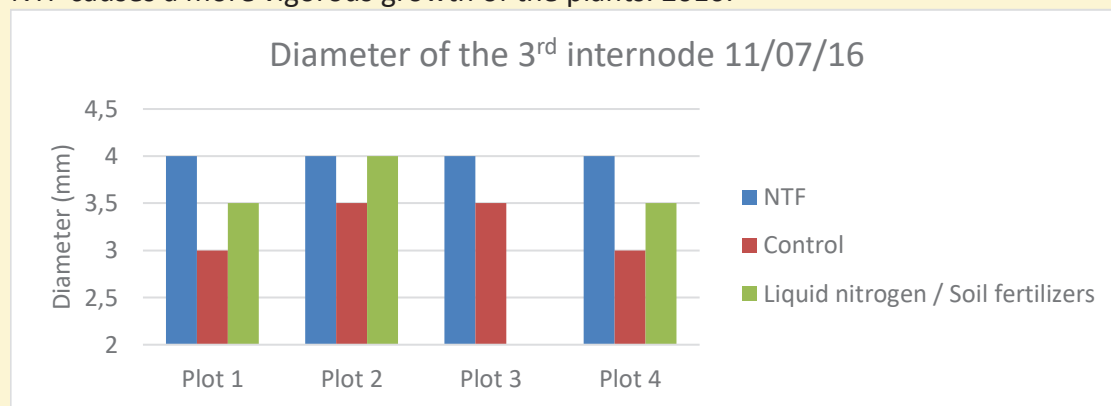
2015:

	Plot 1			Plot 2		
	Control	Soil fertilizers	NTF	Control	Liquid nitrogen	NTF
Yield (t/ha)	12,0	12,7	12,5	12,5	13,2	12,6

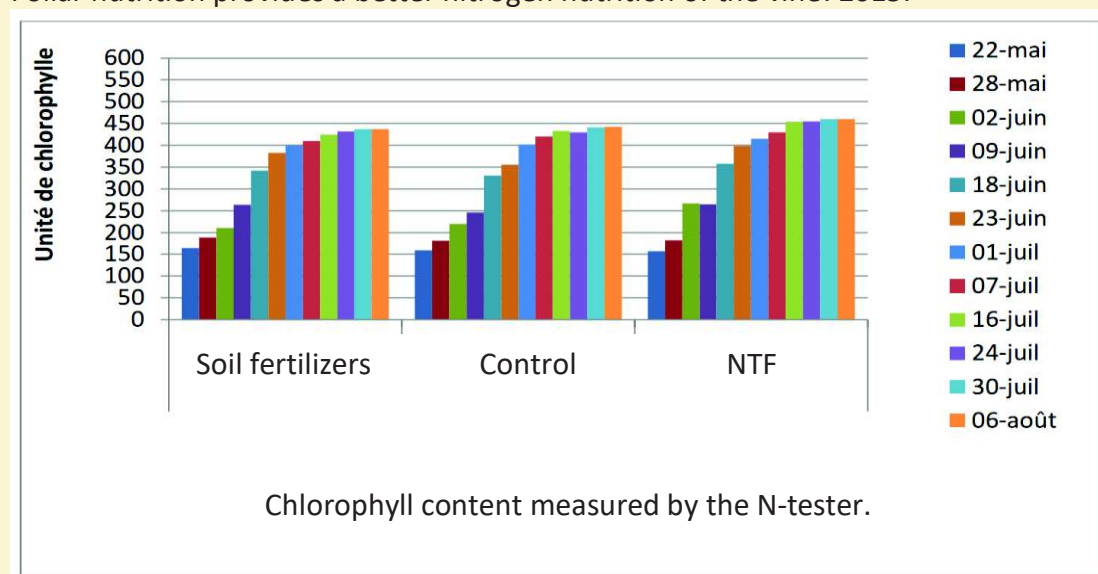
	Plot 3			Plot 4	
	Control	Soil fertilizers	NTF	Control	NTF
Yield (t/ha)	13,1	13,4	13,2	10,4	11,5

**Vigour and measurements with the N-tester:**

NTF causes a more vigorous growth of the plants. 2016:



Foliar nutrition provides a better nitrogen nutrition of the vine. 2015:



**Downy mildew (*Plasmopara viticola*):**

2013 and 2016: significant rainfall during these years caused major infections with downy mildew.

On all plots, the plants treated with the NTF programme were less affected by mildew on the leaves and the bunches.

This can be explained by the fact that vines regularly nourished with micronutrients, particularly in periods with low soil availability or reduced root activity caused by excess of water and root asphyxiation, or leaching, defends themselves better against pathogens.

