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HOW DO WE CLOSE THE YIELD GAP?

ABSTRACT

Potential yield in sugar beet and in sugar is high: in France in 2015, ITB experimental stations achieved, with currently available varieties and optimized agricultural practices, 27 tons of sucrose per hectare. In comparison, in field conditions, productions spread today from 12 to 17 tons of sugar per hectare. Improvements by closing those yield gaps and by gathering both economical and ecological improvements are within our immediate reach.

Factual knowledge of current practices and understanding why yield gap exists between farms are necessary so we can develop and improve communication to farmers allowing them to reach the best achievable agricultural practice. There is never a factor too little to be studied. Any step to improve current practices will help us reach this goal!

Some already available techniques are not yet thoroughly used in France. Adjusting sowing density to actual seed germination potential can now be advised; French average still reaches 1.21 when 1.1 is possible. New seeders can allow farmers to reduce the 26-day current sowing period in favour of growing period.

Tools to choose the most suitable sugar beet variety for local conditions (weather, diseases and pests) and advice to accurately adjust fertilization according to plant needs are already available.

Farmers and the whole sugar beet sector have to be informed of their availability and how to make the most of them. Further information is available to organize harvesting and storage period in order to deliver to factories with the best achievable quality roots to respond to industrial expectations.

By closing the yield gap we will improve profitability of our whole sector, securing it and preparing it to further new improvements.