Newsletter FruitLook June 2019: Analyse the fruit production season

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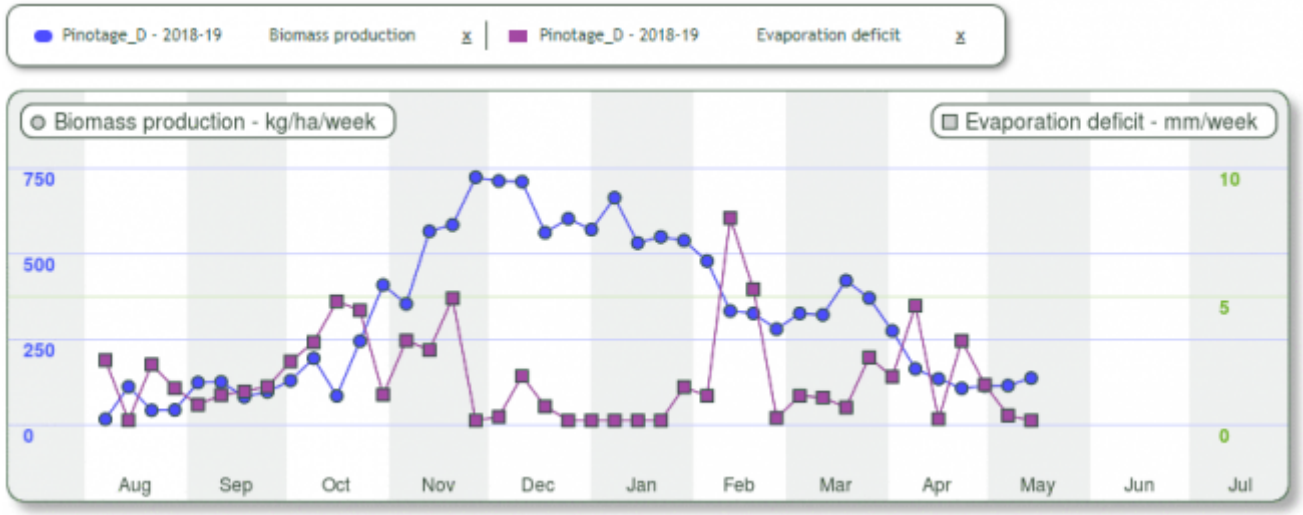
Dear Mr. Doe,

For most of you, the 2018-19 fruit production season in the Western Cape has come to an end. FruitLook enables you as farmer, technical manager, consultant or researcher to reflect and evaluate the production season through satellite eyes. The full FruitLook 2018-19 dataset is available for you to use, enabling various ways to explore what worked and what went wrong this year.

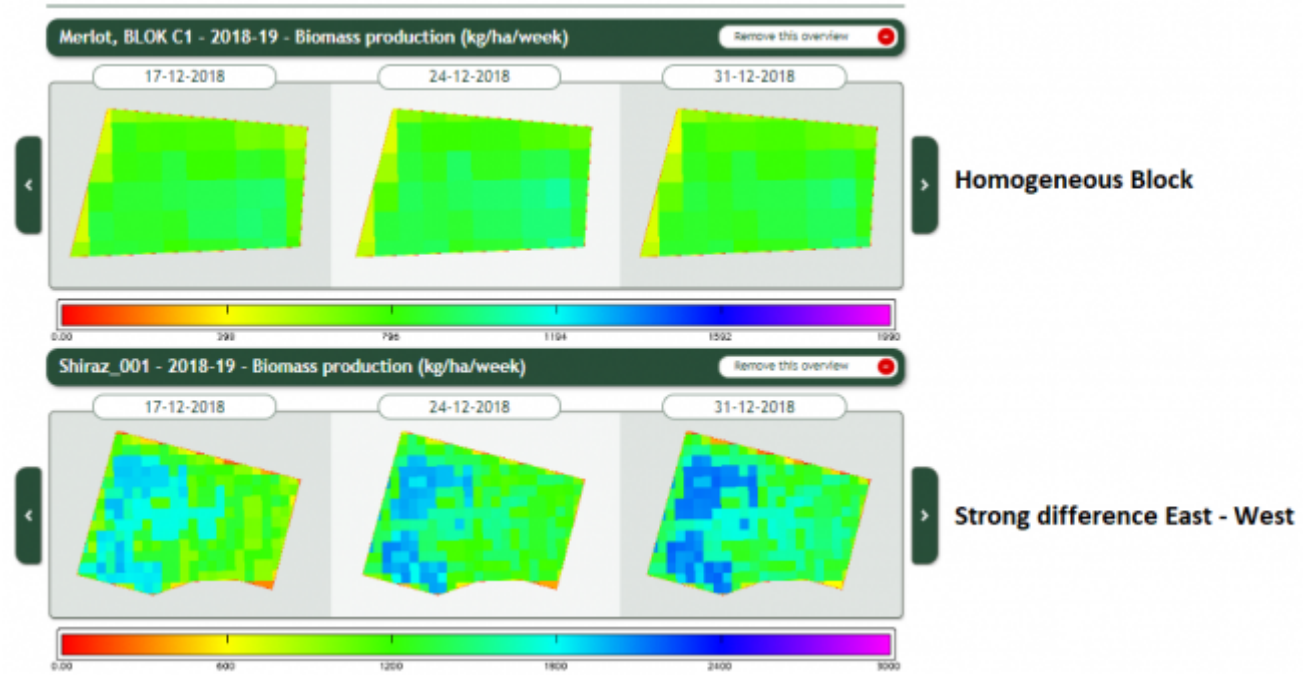
This newsletter focusses on the seasonal evaluation of the fruit production season. With all FruitLook data available and the harvest complete, it is an ideal time to do so!

How to approach your seasonal evaluation via FruitLook? Why are yields in one block higher than in the other? Did your irrigation system provide sufficient water throughout the season? And what is actually a realistic "water budget" for your blocks? Using the complete FruitLook 2018-19 dataset in combination with your own production information you can make a detailed seasonal assessment. We have 5 tips on how to do this:

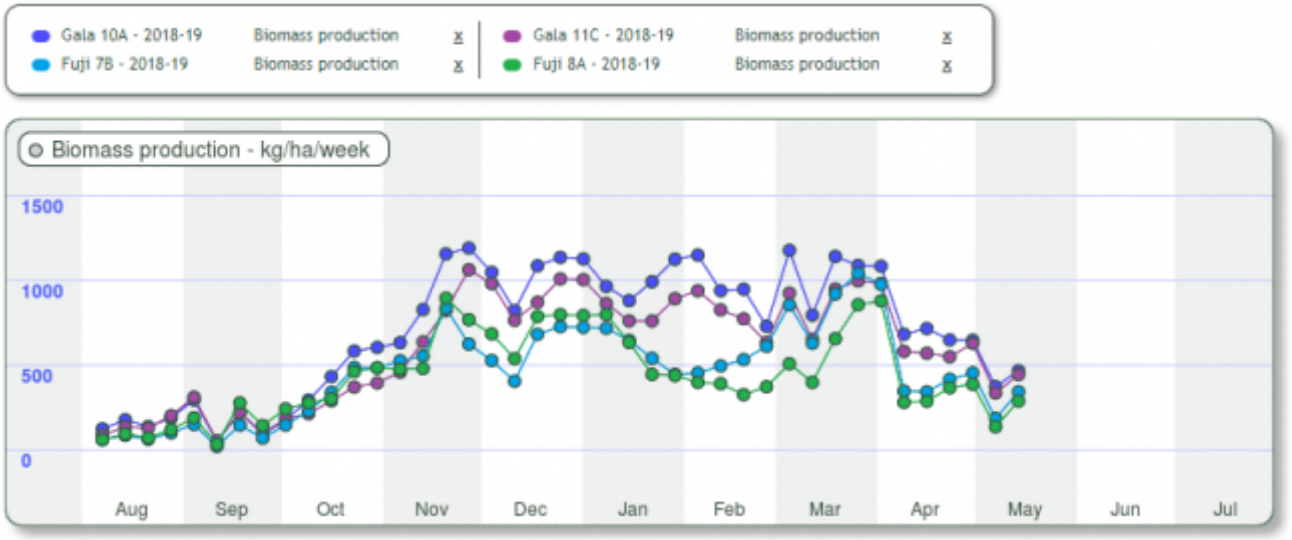
1. Understanding your production during the 2018-19 season: Via the MyFields-page and MyField Analysis the development of your block through time can be visualized. The graph below depicts the Actual Biomass Production compared to Evapotranspiration Deficit for a Pinotage block near Stellenbosch. During certain phases Evapotranspiration Deficits are visible, especially in February. *Why are these there? Are these related to deficit irrigation or the result of a problem in the block?* To analyse the consistency of crop production focus on the Biomass Production, Vegetation Index, Actual Evapotranspiration and Biomass WUE.



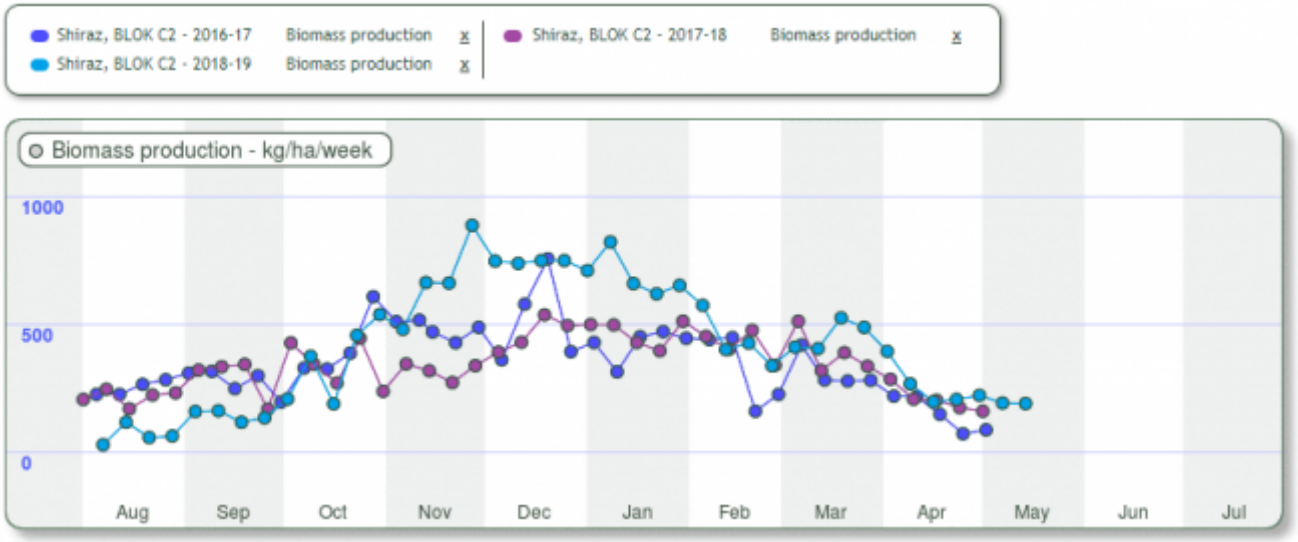
2. Map the spatial variation in your block: Within MyField Analysis you can easily identify recurring growth variation in your block, for example via the actual biomass production and cumulative biomass production parameters. What causes this heterogeneity: *can it be related to soil type? Or have other factors contributed to lesser growth in certain parts of your block, e.g. irrigation system failure or disease?* Some examples are displayed below. Remember you can adjust the legend underneath the pictures to better display block variation.



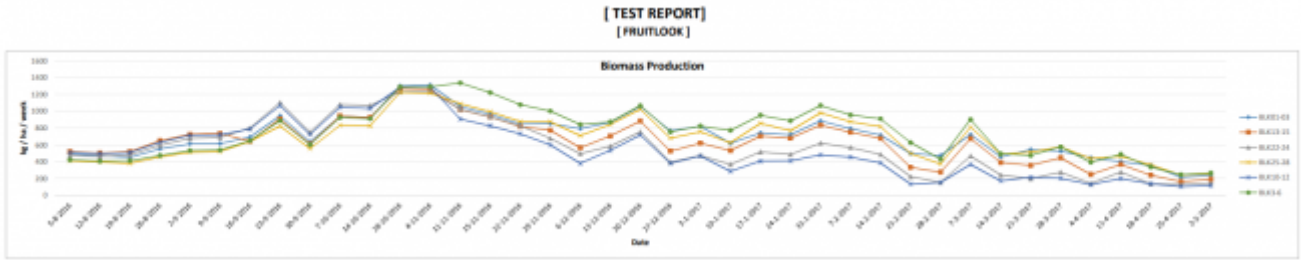
3. Compare different blocks during last season: Apart from looking into spatial growth variation the MyField Analysis page can be used to compare blocks with each other in terms of crop development, water use, etc. The graph below depicts four apple blocks around Warme Bokkeveld. The Fuji blocks are less productive, in terms of biomass, than the Gala blocks. This is especially so in January and February. *Did this reflect in the yield of these blocks?* Identifying such trends might help you understand and improve your crop production towards next season.



4. Evaluate and compare block production of last season to previous seasons: Did a field produce less or more yield compared to previous season? You might want to know why. For example, in the graph below it is clearly visible this Shiraz block shows much more growth between November and January compared to last years. *What caused this change? Was it block management or can it be related to climate? And how does this reflect in the block yield?* Via MyField Analysis you can compare the 2018-19 season with earlier seasons. It might improve your notion of what works for your crop!



5. Use pivot tables to evaluate the seasonal progression of your fields: Last year, in the March 2018 newsletter, we discussed the use of pivot tables. You can create pivot tables via the .csv which can be exported from the FruitLook website (Smart export under the MyFields page). Pivot tables are a great way to easily summarise and compare a large number of fields as well as parameters in Excel. A pivot table can for example be used to make an assessment on the water budget for your block, by summing the Actual ET and ET deficit data components for the production period of your crop.



So how can you start using pivot tables yourself? You will need 1. The script and 2. The Pivotize manual. The pivot tables are created via a .bas-file (which is the script), which has specified instructions on how this pivot table can be created from the FruitLook export. The manual provides a step-by-step instruction to transform your FruitLook csv into an easy-to-use pivot table. An example can be found HERE. If you need help, don't hesitate to contact us via info@fruitlook.co.za or call us on (+27) 074 322 6574.

We trust that these examples will be useful in reflecting on the past season and in preparing for the next. For those of you whose season has just started or will be continuing throughout the winter, please note that data delivery will continue for the 2018/19 season until the end of July 2019.

If you have any remarks/questions about this newsletter or FruitLook in general, feel free to contact us. Our next FruitLook training session at Elsenburg takes place at **Wednesday 12 June 2019**; you are welcome to register via info@fruitlook.co.za.

The FruitLook Team

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