

Leaf series as an image of shoot growth
Method, examples and interpretation; revised edition, 2000
Blattfolgen als Bild des Zweigwachstums

Poster: J. Bloksma, P.J. Jansonius, Louis Bolk Institute¹

Zusammenfassung

Das Louis Bolk Institut entwickelte die Methode von den 'Blattfolgen'. Die Blattfolge zeigt ein Art von 'Biografie der Wachstumsperiode' und beschreibt das vegetative Wachstum wie ein Totalbild: Zweiglänge, Blattgröße, Regelmäßigkeit im Zeitverlauf. Man kann die Perioden mit Trockenstress oder üppigem Wachstum datieren mit Hilfe eines 'Triebmessers'. Jetzt ist eine erneuerte Ausgabe mit Methode, Beispielen und Interpretation bei unserem Institut zur Verfügung in Englisch (LF58) oder in Holländisch (LF57).

Introduction

The sequential leaves of the shoot show a 'biography' of the growing season. The shape of the leaves shows the conditions under which the leaves are formed. To save this picture, the leaves are picked from the shoot, dried and pasted next to each other. If necessary, they are also drawn. The distance between the petioles is equivalent to the original distance of the leaves along the shoot. This is referred to as a 'leaf series'.

The advantages of working with leaf series include:

- The leaf series provides a picture of the development in time and not only the final result. For example, it is possible to recognise periods with luxuriant growing conditions or poor growing conditions.
- The leaf series comprises various characteristics such as shoot length, leaf size, regularity, etc. It is a 'total picture'.
- The leaf series contributes to better communication between researcher and fruit grower. Fruit growers know and evaluate their trees as a 'picture' and not as a 'number'.
- This concerns a representative shoot and not an observation which you need to repeat ten times and calculate the average and standard deviation.

This method was developed to help answer the questions of fruit growers and researchers. Fruit cultivation researchers need to record vegetative development during the course of the growing season. The quality of the shoots with the leaves determines the 'production capacity' of the tree and the quality of the fruit and the buds for the next year. Fruit growers need extra characteristics to be able to

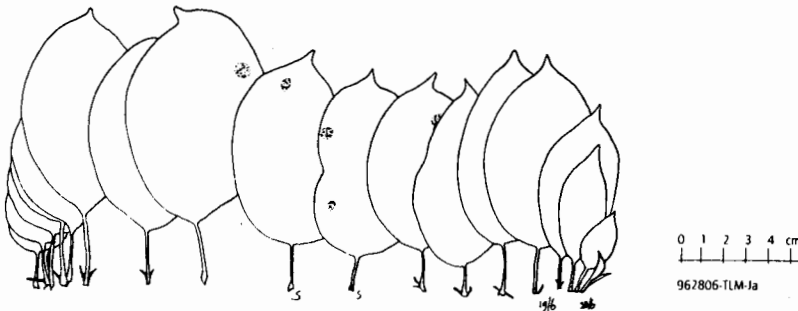
¹ Louis Bolk Institute, Hoofdstraat 24, NL-3972 LA Driebergen, the Netherlands, tel. 0031-343-517814; email: p.jansonius@louisbolk.nl and j.bloksma@louisbolk.nl

evaluate their trees themselves and to see in the field whether they have taken the proper cultivation measures.

The Louis Bolk Institute introduced the concept of the 'leaf series method' in 1992. Since then the Institute has continued to develop the method during a number of research projects. Now, you can order for a revised publication about the method with recent examples in Dutch (LF57) or in English (LF58) at our institute.

Summary

The Louis Bolk Institute developed the method of working with 'leave series'. A leave series shows a kind of biography of the growing season as a total picture: twig length, leave size, regularity in time. Periods of water stress or luxurious growth can be dated by use of a 'shoot ruler'. We published a revised edition about method, examples from our research and interpretation in English (as publication number LF58) or in Dutch (as LF57).



962806-TLM-Ja: shoot with one fruit, virus free planting stock Jonica on M9, great deal of scab (S).