**EVAluation of Soybean varieties for low Input and Organic productioN under stressed conditions (EVASION)**

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Weed competitiveness of soybean varieties is a desirable trait for organic, but also for non-organic production, as the use of herbicides is increasingly limited. Soybean cultivation will have to cope more often with drought in the future.

The objective of the EVASION project (2021-2024) is to improve the assessment of varieties in order to identify the ones with the best behavior in stress conditions, following the effort of breeding companies to offer new lines with new characteristics. Variety evaluation usually consists in comparing candidate varieties performances to « standard » varieties, in multilocal trials. This is usually not enough to identify the varieties with the best potential in limiting conditions, like drought or strong weed infestation, as stress conditions may result in the abandon of the location, due to an extreme high variability among plots and locations.

It is therefore important to define a new methodology to assess variety performance in a large range of growing conditions. The first step will consist in improving the knowledge of variety adaptation to drought and weed stress and their interactions. The best strategies (morphological and physiological) will be identified in field trials. The second step will be to test non destructive measurement tools and choose the most relevant for routine evaluation. The third step will be to implement these methods to routine evaluation, in organic and non-organic trials. At the end of the project we will have new evaluation strategies allowing to propose varieties with better performance in stress conditions, for both feed and food, and better description of each variety potential depending on the environmental conditions. Furthermore, farmers will learn about soybean cultivation and implications of drought, stress- and weed tolerant varieties thanks to strip trials and field visits and by other dissemination activities.