

Success story from Kelmeni farm: The most success action to manage weeds – proper crop sequence plus harrowing in the right time

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Kelmeni farm (*Gaujasreveli, Ranka county, Gulbene municipality,, LATVIA*) was founded 1993 to grow rye within an organic farming system. Their main idea of its owner **Juris Paulovičs** since the beginning is to produce rye bread by traditional methods and to be a good practice example of how to combine quality and environmentally friendly initiatives as well to promote healthy eating habits.

The farm manages 800 ha of arable land, incl. 200-owned. Soils are diverse, but mostly – light, loamy. Fields are organized basicly in 5-6 year crop rotations, designed to maintain soil fertility and effectively limit weeds: winter rye– pea/oat mixture– buckwheat– winter rye with red clover undersown–clover– green fallow; spring wheat– barley/oat/pea mix with undersown–clover, buckwheat–winter rye. The most common weeds: *Elytrigia*, *Chenopodium*, *Viola*, *Vicia*, *Raphanus*.

Since Kelmeni farm is a good example in field crop management for other organic farms, it was invited to participate in the Core Organic Plus project, named PRODIVA, in which weeds were surveyed in more than 200 fields across regions in Finland, Sweden, Germany, Denmark, Poland and Latvia; all bordering the Baltic Sea (<http://projects.au.dk/coreorganicplus/research-projects/prodiva/>).

In context of weed control farmer using all possible crop diversity experiences– undersowing, crop mixtures, diverse rotation, winter cover.

Juris Paulovičs accenting that diversity is a key element to prevent spread of all kind of harmful organisms of crops (weeds, pests and diseases).

Additionally this harrowing is very important agronomic element to manage weeds in sowings in organic farms. And it must be done at the right time. Always.

JP tells his experience to other farmers willingly in seminars organized together with weed scientists and advisers.



- a) *Buckwheat in crop rotation- one of the key elements for success in weed management: it's fast germination makes it a top choice for smothering weeds.*
- b) *Harrowing- very important agronomic element, it must be done at the right time*



- c) *One of rye's strengths as a crop is weed suppression. Along with its allelopathic effect, rye's vigorous growth out-competes weeds while the crop grows and results in plenty of crop residue for a physical barrier against weed growth after the crop dies.*



PRODIVA

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