FAQ019 Efficiency through synergy

Making non-chemical plant control effective

Even with purely chemical treatment methods, the efficiency of the active ingredient can be greatly increased by using optimized formulations that facilitate the path of the substances to the final site of action. This concept of synergetic action can also be easily extended to the combination of chemical and physical methods. In the case of electrophysical treatment alone, a systemic effect of weed control down to the roots can be achieved with high contact resistance between the electrical applicator and the leaf surface having considerable energy consumption. After the end of approval for glyphosate as the last widely used systemic herbicide, however, very high application rates are required for the non-systemic herbicide pelargonic acid in order to achieve appropriate effects without, however, reliably hitting the roots.

The combination of the two concepts chemistry and electric current leads to a reduction of the electrical contact resistance of the leaves. The combination can thus be used as a systemic herbicide with lower electrical energy input. This then enables higher application widths on the field with a lower overall energy input and thus a higher area performance and working efficiency of the overall process (working width x driving speed). In addition, soil protection is increased by lower machine weights, fewer passages per hectare and the option to use permanent or temporary tramlines.