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Current diseases and pests in lettuce in Western Europe

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Lettuce is an important crop for Western Europe vegetables with 2.6 x 10^6 t in 2008. The first production is in Spain (38%) with mainly Iceberg lettuce, the second country is Italy (19%) with different types, and the third production is in France (13%). The first type in France is the Batavia (37%), followed by leaf-lettuce (31%) and butterhead (28%). The French production is over the year with protected crop in winter and open field in summer. The main area is the South-East with 56% of the French production, especially in winter under plastic tunnels. The second area is the North with 11% of the production, mainly in summer between May and October. Three other areas in the West are each producing 8-9 % of French lettuce.
Lettuce is susceptible to many diseases and pests all over the year, in the field as well as in protected culture. The damage for lettuce is not similar for all diseases and pests.
In recent years, the importance of some diseases decreased; for example, damage due to *Lettuce mosaic virus* (LMV) or to *Beet western yellow virus* (BWYV) disappeared from the field. Some fungal diseases, well known by the growers, are still a problem, like *Bremia lactucae* (downy mildew) with the overcoming of the genetic resistance introduced in new varieties, or *Botrytis cinerea* (gray mold) with adaptation to the used fungicides. Bacterial Leaf Spot (*Xanthomonas campestris* pv. *vitians*) is still more or less damageable, depending of the weather in the field.
Recently several soil-based diseases became more important with the break of the methyl bromide and certain pesticides. Among these diseases, there is especially the root knot nematodes (*Meloidogyne* spp.), several viruses transmitted by *Olpidium brassicae*, like the *Lettuce big vein virus* (LBVV), the *Mirafiori lettuce virus* (MiLV), and the *Lettuce ring necrosis agent* (LRNA). Moreover, aphids became a serious problem in some fields in several production areas, with the overcoming of the gene *Nr* conferring resistance to *Nasonovia ribisnigri*,; the damage due to *Pemphigus bursarius* became also more important from 2003, as well as the loss due to *Agriotes* spp., *Sclerotinia* spp., *Rhizoctonia solani*, and *Pythium tracheiphilum*. Other disease were introduced in Southern Europe, like *Fusarium oxysporum* f. sp. *lactucae* in Italy. This could be a threat for other countries close by, especially France where it was reported in the South-Eastern area.
Important for all breeders is the development of more research to provide alternative protection, like organic control with antagonist or Plant Defense Activator. The introduction of new resistance could be also a very efficient method of protection again these diseases and pests.

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