Virus prevalence in the Irish Potato Seed Crops

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SUMMARY

Virus diseases are of key importance in potato production and in particular for the production of disease free potato seed. Virus infection persists systemically and multiplies over successive seed generations causing a major problem for the potato industry worldwide.

Information from all known potato virus testing carried out by the Department of Agriculture Food and Marine in the years 2006-2012 was collated and analysed to give an indication of the distribution and incidence of potato virus in Ireland.

The most common virus was PVY found in 11% of samples tested, PVX was next most common in 5.4%, followed by PVA at 2.5%, both PVS and PLRV were under 1%. However, there was also significant variation in virus incidence between regions, varieties, years and seed classes.

PVX was high in the North of the country, PVY incidence was high in the North East Region and PVA incidence was highest in the South West followed by the West region. There was very little PVS incidence across all regions. PLRV incidence was relatively low across all regions with no incidence found in the South East region which may be attributed to higher altitudes.

Rooster and Kerr’s Pink had the highest incidence of PVX, Lady Claire had the highest incidence of PVY and almost all samples that were PVA positive were in the variety Golden Wonder.

Virus incidence was highest in years when there were more days with weather suitable for aphid flight in May, June and July. Those conditions were low wind speeds (<3 km/hr), dry and with temperatures between 13 and 30 °C.

There was significantly higher incidence of virus in later generation seed which highlights the benefit of using high quality seed for the production of potato crops with low virus infection.