## Potato herbicide demonstrations at SPot East, Elveden.

With the loss of linuron a series of demonstration trials into herbicidal control of weeds in potatoes was conducted at Elveden Farms from 2016 to 2018. The emphasis was on residual herbicides. Some post emergence contact herbicides were included to examine both efficacy of control and varietal sensitivity to metribuzin. The soils in all cases were sandy and the main weeds were small nettle, groundsel, fat hen and runch.

**2016**. 12 residual herbicide combinations, using the actives: linuron, pendimethalin, metribuzin, diquat, metobromuron, clomazone, prosulfocarb, flufenacet/metribuzin.

Though control of groundsel was usually poor, most of the treatments were effective. The steering group thought the next step was to look more closely at costs of different residual combinations. With loss of linuron, metribuzin will be increasingly relied on, so knowledge of sensitivity to metribuzin was seen as important.

**2017** 16 residual herbicides (straights and combinations) were applied to 23 varieties.

| | **small nettle** | **groundsel** | **fat hen** | **runch** |
|---|---|---|---|---|
| metribuzin | MS | S | S | S |
| metobromuron | MS | LS | LS | MS |
| pendimethalin | S | - | S | MS |
| clomazone | - | MS | - | - |
| VCS 1717 | S | - | S | S |
| flufenacet | - | - | - | - |

**Table 1**. Comparison of efficacy of actives in 2017. S – susceptible, MS – moderately susceptible, LS – less susceptible

The best combinations from this demonstration were metobromuron + prosulfocarb + metribuzin and metobromuron + pendimethalin + metribuzin.

The value of the demonstration was limited to the weed spectrum on this farm. On different soils some weeds not well represented on this site are severe problems, such as redshank, mayweed, annual meadow grass, black bindweed and knotgrass. The phytotoxicity of metribuzin to many varieties was also less than expected.

**2018**

The aim in 2018 was to conduct a cost:benefit analysis of comparative herbicide combinations. In the very dry season, however, weed growth was weak. Further varieties were tested for sensitivity to metribuzin.

| **Tolerant** | **Low sensitivity** | **Moderate sensitivity** | **High sensitivity** |
|---|---|---|---|
| Vales Sovereign | Royal | Maris Piper | Forza |
| Brooke | Daisy | Leontine | Innovator |
| Marfona | Lanorma | Eurostar | Maris Peer |
| Saxon | Russet Burbank | Melody | VR808 |
| Rooster | Jelly | Nectar | |
| Challenger | Angelique | Performer | |
| Soraya | Bambino | Shepody | |
| Markies | Gemson | Gwenne | |
| | Rooster | Georgina | |
| | Soraya | Iodea | |

**Table 2.** Varietal sensitivity to metribuzin, from 2017 and 2018 trials