

'Audley End Kitchen Garden: Adapting crop selections due to climate change'

(-) Negatives of climate change

- Increased pest issues e.g. rabbits in the garden for the first time, seeking out water and digging up crops to get to roots for moisture
- Increased pest populations in glasshouses – red spider mite, mealybug
- Brassicas (Kale) – increased flea beetle due to dry heat
- Lettuces bolting
- Chard – very bad powdery mildew so all plants had to be cut back hard
- Leeks – pest damage of Allium Leaf Miner (second life cycle around September)
- Runner beans/French beans – poor fruiting earlier on in the season but they did flower later and produce an average crop as a second flush once temps had dropped a little
- Grapes scorched in glasshouse due to heat/sunshine
- Autumn raspberries started and finished early
- Frozen crops turned to mush (due to early snow period in early December 2022): Beetroot, Endive, Celeriac
- Some Parsnip canker due to drought in summer

(+) Positives of climate change

- Good apple harvest
- Crops that did well: Amaranthus, Malabar spinach, Chinese multicolour spinach, Huauzontle (Aztec Broccoli), Shiso (Perilla), Shungiku (Chrysanthemum greens), Summer Squash, Celery, Potatoes, tomatoes (outside)
- Tomatoes grew very well outside

How we have adapted our sowing plan for 2023:

We have adapted our sowing plan for 2023 due to climate change issues when growing certain crops so we will grow more heat resistant salad crops on our **'Future Salads' border** which includes block plantings of: Agretti, Malabar Spinach, Shiso, Huauzontle, Shungiku, Amaranthus, Chinese multicoloured spinach, Purslane etc instead of planting rows of lettuce which have not performed well for us for a couple of years now.

We are adapting our sowing schedule to sow some crops earlier/later depending on pest lifecycles e.g. **Kale and leeks**, for instance:

Leeks: we will crop from leeks earlier instead of leaving them in over winter (we'll crop before September when the leaf miner lifecycle hasn't begun – damage occurs Sept onwards)

Kale: We will sow later to avoid very dry summer heat as we get better yield later in the season (Autumn) when the temperatures have dropped.

We've also developed a **Perennial Vegetable border** which includes hardier crops which should be able to withstand extreme weather conditions and reduce staff resource as they grow year on year.

We are growing a **large number of Climbing French Beans** (some heritage varieties and some modern varieties) to see which ones cope with the long dry summer weather better

We are growing a **local variety of Runner Bean 'Essex Black'** which may cope better due to its adaption to local microclimate (Essex is very dry anyway)

We are growing more **outdoor tomatoes** as they grew very well outside last year

We have developed a **Seed Saving border** to grow crops specifically to save the seed, some heritage/local varieties for the Heritage Seed Library and some newer varieties. We have seen better germination rates from saved seeds as they are fresh (e.g. Agretti) and we hope that future crops will slowly adapt to climate conditions going forward.