Advice Sheet: Leek Problems - Allium leaf miner and Leek Moth
Mike Thurlow, Horticultural Adviser, January 2013

Many gardeners are now having serious problems with the allium leaf miner and leek moth attacking their crops. Up until a few years ago these two pests were mostly confined to the southern and eastern counties but now they are progressively working their way across the country. Only recently allium leaf miner was found on leek plants in the Midlands. All members of the allium family are vulnerable to attack from these pests. In both cases the symptoms appear to be similar. First of all white patches (leek moth) or lines of white dots (leaf miner) appear on the foliage. In the case of the leek moth the white patches are an indication of caterpillar damage following on from their eating and damaging the tissue of the leaves. The lines of white dots on the leaves are a sign that the female leaf miner has arrived on the plant. She punctures the leaves to feed off the sap before she begins to lay her eggs. Both pests will cause secondary damage which will develop into fungal and bacterial infections often leading to the plants rotting. In some instances young leek plants may be killed.

Brief description of the leek moth

The adult leek moth is very small only 6mm-1/4” and brown in colour. The caterpillars are 12mm-1/2” long when fully developed. They are creamy – white with a brown head and have small legs. At first the caterpillars tunnel into the foliage, the older caterpillars eventually bore into the stems of the leeks. The foliage begins to turn yellow with brown patches as the damage increases. The caterpillars eventually emerge from the plants to pupate. The red/brown pupae spin silky net like cocoons on the leek foliage.

The leek moth is capable of having two generations in a summer. The first generation of eggs are laid around April – June according to location. The first generation of caterpillars hatch and feed on the leek foliage from May – July.

The second generation of leek moths lay their eggs during July – August. The caterpillars usually feed until October.

The second generation is larger in number and causes the greatest damage to leeks. The adult moths emerge and look to overwinter in sheltered places. It is vitally important to remove and destroy all plant debris around the garden.

Chemical control is unavailable to the amateur gardener. Covering the crop with horticultural fleece may help. Look for the cocoons and physically squash them. Using crop rotations, raising plants under cover before transplanting the young leeks in the open ground may help. Avoid accepting gifts of plants or buying plants from other sources to reduce the risk of introducing the pest into your garden. Keep the growing site scrupulously clean at all times.
**Brief description of the leaf miner**

The adult fly is 3mm – 1/8” long. It is grey/brown in colour. The larvae/maggots (they are **not** caterpillars) are about 6mm-1/4” long and are a creamy/white colour and are headless **without any legs**. The maggots tunnel into the stems of the host plants for a few weeks until they are fully fed. At this point they are ready to pupate within the stem of the leek. They develop into 3mm/1/8” cylindrical brown pupae. Pupation takes place during the summer and winter and some pupae are able to overwinter in the soil when plants have been allowed to rot or plant debris is left lying around on the soil. If the plants are inspected it is possible to see the pupae embedded in the stems.

Allium leek miner has two generations during the growing season. The **first generation** appears during March – April when the first generation of female flies lay their eggs at the base of the leaves or on the stems of the plants.

The **second generation** develops from the first and they emerge during October – November to lay their eggs at the leaf bases and on the stems of the plants. The second generation pupae will survive the winter on the host plants to emerge in the Spring and continue the cycle.

Chemical control is unavailable to the amateur gardener. Covering the crop with horticultural fleece may help. Use crop rotations, raise plants under cover before transplanting the young leeks in the open ground. Transplanting later after the main threat from the fly has passed and lifting in the early autumn may help. Avoid accepting gifts of plants or buying plants from other sources to reduce the risk of introducing the pest into your garden. Keep the growing site scrupulously clean at all times.