

LEGGY TRANSPLANTS

Transplants that are too tall and tend to fall over are referred to as spindly or leggy. These transplants may have low survival rates in the field. Several factors may cause leggy transplants. Germination conditions should provide seeds 85 to 95 degrees F for at least 48 hours. If the seeds are kept warm past the point where the seeds have germinated, the additional warmth may lead to an increase in seedling height.

Spindly transplants may also be produced under low light conditions. Greenhouse structures that let inadequate light in and cloudy weather could be the culprits. Over watering may lead to spindly plants. Avoid watering or fertilizing seedlings during cloudy weather. Temperature may also cause transplants to be elongated. Hot days and cold nights favor leggy transplants. If night temperatures are equal to or higher than day temperatures, stem elongation will be reduced. It may be sufficient to lower the greenhouse temperatures for a two-hour period starting at dawn. Over fertilization can also lead to spindly transplants. In particular, high levels of phosphorus may cause taller plants. If high P might be a problem, experiment with a fertilizer containing a lower percentage of phosphorus, for instance, try 7-2-3 rather than 6-5-6. It is important to provide adequate P, but not too much; under fertilization with P will produce short plants, but yields will also suffer.

The light environment plays a crucial role in plant growth and development. Besides serving as a source of energy, light provides signals to regulate many complex developmental processes such as seed germination, seedling development, stem elongation, leaf development and flowering through photosynthesis and photomorphogenesis. Spindly or leggy plants tend to be weaker and more susceptible to pests, such as aphids and spider mites, and to other environmental challenges such as wind or water-logged pots or fields. If the plant survives, it will probably be less productive and produce smaller fruit and require staking or caging.

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