**Why grow in a high tunnel in Kentucky?**

There are several reasons a grower might consider high tunnel production. In Kentucky, the last spring frost commonly occurs around the first week of May and the first fall frost can occur in some regions of the state as early as the last week of September. The plastic covering on a high tunnel can retain heat inside the structure. This allows the possibility of planting frost-sensitive plants earlier in spring and harvesting later into the fall compared to open field production. In addition to heat retention, the plastic cover on a high tunnel protects crops from extreme weather, such as rain and wind.

Compared to open-field production, an effectively managed high tunnel can produce higher marketable yields per square foot for select fruit and vegetable crops. Some crops, such as tomatoes, are well suited to high tunnel production and potentially benefit more than other crops such as sweetcorn. Therefore, high tunnel production has the potential to create high yielding, high quality produce earlier or later than the normal season which may lead to greater profit.

See Chapter 6 section 3. – Selecting a Crop for more information on appropriate crop selection for high tunnels.

*Crop quality—photo of HT vs field tomatoes, cut flower example (Resource ###)*

However, it is important to balance those potential benefits with the knowledge that high tunnels can present their own challenges. Use these resources to learn more about the benefits of high tunnel production and how it differs from growing in an open field.

|  |
| --- |
| **Field vs High Tunnel Production** |
|  | **Field Production**  | **High Tunnel Production**  |
| **Growing Season** | **** Limited by weather  | **** Season extension   |
| **In-ground production** | **** | **** |
| **Drip irrigation advantageous** | **** Receives addition of rainfall  | **** Irrigation required  |
| **Soil testing** | **** Salts naturally leach with precipitation | **** Salt buildup after several years of production  |
| **Fertility Program** | **** | **** |
| **Airflow & Ventilation** | **** Natural airflow around crops, crops susceptible to wind damage  | ****  Passive ventilation with wind protection for crops   |
| **Cover cropping** | **** | **** |
| **Equipment Accessibility** | **** Readily accessible by large equipment  | **** Often requires smaller equipment such as a walk-behind tractor  |
| **Crop Rotation** | **** | **** Spatial limits to crop rotation  |
| **Integrated Pest Management** | **** Low winter temperatures aid pest and disease management **** Many options for pesticide products | **** Established pests and diseases can become problematic **** More limited pesticide products available for use |

1. **Season extension**
2. *High Tunnel Overview UK – CCD (Resource ###)*
	* A 7-page introduction to high tunnels including advantages and disadvantages of high tunnel production.
	* <https://berea.box.com/s/0lyqiw99pofl7i6jd03gk4gsur6jcly1>
3. *CCD-UK Season Extension Tools and Techniques: (Resource ###)*
* This 5-page publication from the University of Kentucky describes potential markets for extended season production and techniques for season extension including high tunnels, floating row covers, mulches, and windbreaks.
* <https://berea.box.com/s/dlt8a618bz4tk351qz1za7d3hhq1hrq3>
1. *High Tunnel Planting Calendars and Use Guide (Resource ###)*
	* A two-page guide on the principles of High Tunnel Production for season extension and instructions on how to use high-tunnel planting calendars for this purpose.
	* [*https://berea.box.com/s/tw7llwpin25dgkon1kbwqjxfvxuolp8s*](https://berea.box.com/s/tw7llwpin25dgkon1kbwqjxfvxuolp8s)
2. *High Tunnel Planting Calendar (Region 1—Western KY) - CCD (Resource ###)*
* A planting calendar for high tunnels in Western and far eastern Kentucky
* <https://berea.box.com/s/4d8gdwg4fj635piafinoud44qrd9hmz6>
1. *High Tunnel Planting Calendar (Region 2—Central/Eastern KY) (Resource ###)*
* *A planting Calendar for high tunnels in Central and Eastern KY*
* <https://berea.box.com/s/frgogdo07mzd0ruhses8u3oghuf0zont>
1. *High Tunnel Planting Calendar (Region 3—Eastern KY) (Resource ###)*
* A planting calendar for high tunnels in Eastern Kentucky
* <https://berea.box.com/s/5jaz25225b5r62daj5c7kud9f1czqpuj>
1. **Market Advantage** [links to identifying market]
	1. *High Tunnel Economics UK -CCD (Resource ###)*
		* This 4-page publication from the University of Kentucky Center for Crop Diversification gives an overview of different variables like crop yield, price, market type, construction cost estimates, production costs, and others that those considering high tunnels should consider.
		* <https://www.uky.edu/ccd/sites/www.uky.edu.ccd/files/HT_Econ.pdf>
2. **Other Benefits**
	1. Jeff Howard (Producer Success Story) *(Resource ###)*
	2. High Tunnel Management for Beginners*(Resource ###)*
* A 2-hour recorded webinar introducing high tunnels, season extension (0:00-11:00), high tunnel management (11:00-54:45), and integrated pest management for new High Tunnel farmers(54:45-end).