



# Growing Small Farms

CHATHAM COUNTY CENTER  
NORTH CAROLINA COOPERATIVE EXTENSION

Promoting awareness, understanding, and practice of sustainable agriculture

## Planting and Harvesting Guide for Piedmont Vegetables and Herbs

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**Read First: How to Use this Guide: see page 6**



Planting date if using season extension



Planting date if *not* using season extension



Harvesting date if using season extension



Harvesting date if *not* using season extension

SE = Season Extension

DS = Direct Seed

H = Harvest

TP = Transplant

OW = Overwinter

OS = Oversummer

Crop	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Salad Mix		SE	DS					SE	DS		OW	
	OW	Overwinter Harvest		H		SE				H		SE OW
Lettuce			SE	TP					SE	TP		
					H	SE					H	SE

Crop	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Arugula			DS						DS			
				H						H		SE
Spinach		SE	DS					SE	DS	OW		
	OW	Overwinter Harvest		H						H		SE
Kale			DS or TP						DS or TP			
		Overwinter Harvest		H						H		SE
Mustard			DS						DS			
		Overwinter Harvest		H						H		SE
Crop	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Collards			TP Senposai						DS or TP			
		Overwinter Harvest		H						Senposai		H
Broccoli			TP						TP			
					H						H	SE
Cabbage			TP						TP			
		Overwinter Harvest			H						H	
Pac Choi			SE	TP					TP			
					H						H	SE

CROP	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Brussels Sprouts								SE	TP				
	SE	H										H	SE
Green Onions			SE	TP				TP					
					H					H			
Bulb Onions			SE	TP									
						H green	H mature						
Leeks				DS or TP	T P								
	Overwinter Harvest	H								H		S E	
CROP	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Parsnips				DS					DS				
	Overwinter Harvest									H		S E	
Carrots			DS					SE	D S	O W			
	Overwinter Harvest			H					H		SE		
Beets			SE	DS					SE	D S	O W		
	OW		OW Harvest	H						H		SE	O W
Peas			DS										
					H								

CROP	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Cilantro		DS						SE	DS	OW		
	Overwinter Harvest			H							H	SE
Dill		SE	DS					DS				
				H	Umbels					H	SE	
Parsley		DS or TP						DS or TP				
	OW Harvest			H						OS Harvest	H	SE
Garlic										DS		
					H							
CROP	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Potatoes			DS									
						H						
Chard		SE	DS or TP					DS or TP				
	OW		OW Harvest	H						H	SE	OW
Radish		DS						DS				
				H						H		
Basil					DS or TP							
						H				SE		

CROP	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Tomatoes				SE	TP							
						H				SE		
Peppers				SE	TP							
							H			SE		
Eggplant				SE	TP							
							H			SE		
Snap Beans				SE	DS							
						H				SE		
CROP	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Lambs-quarters					DS							
						H						
Cucumbers					DS or TP							
							H					
Summer Squash					DS or TP							
							H					
Cantaloupe					DS or TP							
							H					
Watermelon					DS or TP							
							H					

CROP	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Winter Squash					DS or TP							
							H					
Sweet Potato					TP							
									H			
Okra					DS or TP							
								H				
CROP	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

## How to Use this Guide

This is a planting and harvesting *guide*, not a schedule. Please use these dates as a starting point and adjust according to the conditions on your farm. These dates are not set in stone! Weather and crop conditions vary from year-to-year, and from farm-to-farm.

Doug Jones, the farm manager for Central Carolina Community College's Sustainable Farming Program in Pittsboro, developed on paper a planting and harvesting guide for his favorite vegetable crops, based on his experiences at the Land Lab. The Land Lab is CCC's five-acre outdoor classroom for research, demonstration, and crop production and is located about 1 mile west of downtown Pittsboro in Chatham County. Debbie recognized Doug's guide as a valuable tool and spent many hours working with him to flesh it out, adding additional crops and also planting and harvesting dates for growers using season extension techniques. Debbie then adapted and formatted the guide to make it easy to read (hopefully!) on the web. Our hope is that local growers will use this guide to try new crops and extend their season so we can produce for our expanding local markets like Chatham Marketplace and our farmers' markets.

The key at the top of the chart explains the colors and abbreviations. You can click on the crop name for more notes and a text description of planting and harvesting dates. Season extension techniques can be used to protect from both cold and heat and include row covers, high tunnels, shade, micro-sprinklers, etc. See below for more information on season extension techniques.

The planting windows and harvest times assume succession plantings - every 1-2 weeks.

## For More Information:

- Learn all about **season extension**:  
<http://chatham.ces.ncsu.edu/growingsmallfarms/SeasonExtensionOctober2005a.pdf>
- **Resources and Suppliers for Season Extension**:  
<http://chatham.ces.ncsu.edu/growingsmallfarms/2005SeasonExtensionResources.pdf>
- Consult the **Vegetable Variety List** for information on recommended varieties:  
<http://chatham.ces.ncsu.edu/growingsmallfarms/varietylist.html>

For more information on crop production, seed sourcing, pest management, marketing, local farms, and much more, visit Chatham County Cooperative Extension's **Growing Small Farms website** at <http://chatham.ces.ncsu.edu/growingsmallfarms>

We would really like your feedback on this guide. We plan to continue fine-tuning and expanding it. Please email Debbie Roos at [debbie\\_roos@ncsu.edu](mailto:debbie_roos@ncsu.edu) with any comments, questions, or suggestions.

## Crop Notes

### Salad Mix

- Mild Salad Mix – lettuces, baby kale, baby chard, baby mild mustard
- Spicy Salad Mix – arugula, cress, spicy mustards
- Direct-seed February 1-March 15 if using season extension techniques, for harvest April 1-June 15 (up until mid-July if season extension techniques such as micro-sprinklers and shade are employed). If not using season extension, plant March 15-May 1. If not using shade cloth, harvest ends around mid-June.
- Direct-seed August 1-October 1 for harvesting September-December. Must use season extension (shade cloth, heat-tolerant varieties, micro-sprinklers) if planting in August. If not using season extension to manage heat, start harvesting in mid-October. Harvest of spicy salad mix ends sooner due to pest pressure unless you use a row cover.
- Extend season of fall planting by using row covers Dec 1-15.
- Direct-seed mix for overwintering in early November and protect with row covers or tunnels or both. Harvest begins Feb. 1 with overwintered salad mix.

### Lettuce (head)

- Transplant February 15-March 15 if using season extension for harvest beginning April 1.
- Transplant March 15-April 15 if not using season extension.
- Harvest period for spring plantings runs April 1-June 1 if using season extension as weather warms. Lettuce harvested after June 1 will be bitter; use shade May 15-June 1.

- For fall lettuce, transplant August 15-September 15 if using season extension; otherwise plant September 15-October 15.
- Harvest September 15-December 15 and use row covers after November 15 (lettuce is semi-hardy).

### **Arugula**

- Direct-seed February 15-April 1 for harvesting April 1-June 1.
- Direct-seed August 1-October 1 for harvesting September 15-January 1 (use season extension after December 15).

### **Spinach**

- Direct-seed February 1-April 1 (use season extension techniques for February plantings) for harvesting April 1-May 15.
- Direct-seed August 15-October 15 for harvesting October 1-December 1 (use season extension like micro-sprinklers for earliest fall plantings).
- Direct-seed spinach for overwintering October 15-November 15 and protect with row covers or tunnels or both. Harvest begins Feb. 1 with overwintered spinach.

### **Kale**

- Direct-seed or transplant February 15-March 15 for harvesting April 1-May 1.
- Direct-seed or transplant August 1-October 1 for harvesting October 1 and on through the winter (with season extension) until April.

### **Mustard**

- Direct-seed or transplant February 15-March 15 for harvesting April 1-May 1.
- Direct-seed or transplant August 1-October 1 for harvesting September 1 and continuing through the winter (with season extension after December 15) until April.

### **Collards**

- We recommend growers try an Asian version of collards called Senposai - it's faster growing, much more tender, equally winter hardy and also heat tolerant. Seed is available from Fedco or Doug Jones.
- Transplant Senposai February 15-March 15 for harvesting April 1-May 15.
- Direct-seed or transplant August 15-September 15 for harvest starting mid-November on through the winter (with season extension). Harvest of Senposai starts earlier, in early October.

## Broccoli

- Transplant February 15-March 15 for harvesting April 15-June 1.
- Transplant August 15-September 15 for harvest October 15-December 15 (use season extension after December 1).
- If plants are well-hardened, may not need row covers in spring; best to use mid-maturing (not earliest, not latest) varieties in both the spring and fall planting windows so crop will mature in time.
- Note: **cauliflower** is a difficult crop for the Piedmont so is not included here. It has a narrower range of heat and cold tolerance than broccoli so it is less reliable. The developing head is not adapted to our extreme temperature fluctuations and the head quality becomes really poor as it warms up.

## Cabbage

- Transplant February 15-April 1 for harvesting May 1-June 15.
- Transplant August 15-September 15 for harvest starting October 15 and on through the winter (use season extension after December 15) up until mid-March.
- If plants are well-hardened, may not need row covers in spring; best to use mid-maturing (not earliest, not latest) varieties in both the spring and fall planting windows so crop will mature in time.

## Pac Choi

- Also called Bok Choy or Pak Choi
- Transplant March 1-April 1 for early March plantings) for harvesting April 15-May 15.
- Transplant August 15--October 1 for harvesting October 1-December 15 (use season extension after November 15).

## Brussels Sprouts

- Transplant July 15-September 1 (use season extension techniques for cooling July 15-August 15).
- If planted July 15-August 15, harvest starts November 15 and continues through the winter (use season extension December 1-February 1).
- If planted in late August, harvest begins in February (use season extension December 1-February 1).

## Green Onions

- Use onion sets (bulbs).
- Transplant February 1-April 1 for harvesting April 15-June 15 (use season extension for February plantings).
- Transplant August 15-September 15 for harvesting October 1-December 1.
- Onions are hardy but season extension gives them earliness.

## **Bulb Onions**

- Transplant February 15-April 1 (use season extension for February plantings).
- Harvest fresh onions (green tops) May 15-June 15; harvest mature onions (dry bulbs) June 15-July 15.
- Onions are hardy but season extension gives them earliness.
- The earlier you get transplants into the ground, the bigger the bulb will be. To grow your own seedlings, direct-seed into flats about two months before planting.

## **Leeks**

- Direct-seed or transplant April 1-May 1; transplant May 1-15. Direct-seeding will present more challenges with weeds.
- Harvest October 1-March 15. Use season extension Dec. 15-March 1. Use hardy varieties for late harvest, summer varieties for early harvest.

## **Parsnips**

- Direct-seed April 15-May 15 for harvest starting in early November (100 day crop). One of the riskiest crops to establish in hot weather - needs 8-10 days to germinate.
- Direct-seed August 15-September 15 for overwintering. For fall planting, use micro-sprinklers to help with germination.
- Harvest starting November 1 and going through the winter until mid-March (use season extension after December 15).
- Parsnips do not develop sweet flavor until the ground is cold so don't rush harvest.

## **Carrots**

- Direct-seed February 1-March 15 for harvesting May 1-June 15.
- Direct-seed August 1-October 1 for harvest starting October 15 and continuing through the winter (with season extension after December 1). For late summer planting, use micro-irrigation and shade to cool crop. Plantings September 15-October 1 will be for overwintering.
- If using season extension, harvest January 15-April 1 (certain varieties bolt earlier than others). Carrot greens are very cold hardy but carrot shoulders will rot if the ground freezes. If you have a good canopy of carrot greens, it will help protect the shoulders; can use heavy row covers or a double layer of lighter weight row cover.

## **Beets**

- Direct-seed February 1-April 15 for harvesting April 1-June 15. Harvest small beets April 1 and full-sized beets April 15. The February plantings will require protection with season extension.
- Direct-seed August 1-October 1 for harvest starting October 1-December 15 (with season extension after November 15). For late summer planting, use micro-irrigation and shade to cool crop. Plantings September 15-October 1 will be for overwintering.
- If using season extension, harvest overwintered crop March 1-April 1.

## Peas

- Direct-seed dwarf varieties like 'Sugar Anne' February 1-April 1 and harvest April 15-June 1.
- Plant trellised varieties like sugar snaps February 15-March 15 for harvest May 15-June 15.
- Peas can be tricky to germinate. Your best bet is to prepare your bed for planting in January and pay attention to the weather forecast. If it calls for 5 or more days with highs around 65° F, then go ahead and plant your peas no matter when it is. You just need to get them to germinate - once they are up and growing, they are quite hardy, even without season extension. If you haven't found a window by late February, go ahead and plant them and cover with clear plastic right on top of the bed. Once they germinate, remove the plastic and use a row cover.

## Cilantro

- Direct-seed February 1-April 1 for harvesting April 1-June 1.
- Direct-seed August 15-October 15 for harvest starting October 1 and continuing through the winter (with season extension after December 15). For late summer planting, use micro-irrigation to cool crop. Plantings October 1-15 will be for overwintering.
- If using season extension, harvest overwintered crop up until April 1.

## Dill

- Direct-seed February 15-April 1 for harvesting April 15-June 1. Harvest umbels (flower heads) for pickling in June. Use season extension to protect plantings February 15-March 15.
- Direct-seed August 1-September 15 for harvesting September 15-December 15 (with season extension after November 15).

## Parsley

- Direct-seed or transplant February 15-March 15 for harvesting April 15-July 1. Use season extension to protect plantings February 15-March 15.
- You can get a good harvest in the fall by bringing the spring-planted parsley through the summer; it's a biennial so it's not going to bolt. Parsley is not harvestable in the summer but it will survive and pick back up in the cool weather and can be harvested again in October.
- Direct-seed or transplant September 1-15 for harvest starting November 15 and continuing through the winter (with season extension after December 15) through to early April.

## Garlic

- Plant October 15-December 1 for harvesting May 15-July 1.
- The first two weeks of harvest are in the green stage (customers love green garlic!).
- Even though the harvest period is six weeks long, garlic stores very well so you can market them for six months. In general, soft-neck garlic stores better than hard-neck garlic.

## **Potatoes**

- Plant potatoes March 15-April 1 for harvesting June 1-July 15.

## **Chard**

- Direct-seed or transplant February 15-April 1 for harvesting April 15-July 1. Use season extension to protect plantings February 15-March 15.
- Direct-seed or transplant August 15-September 15 for harvest October 1-December 15 (use season extension after November 15).
- Protect the crop through the winter and harvest again starting March 1 (overwintered harvest will overlap with harvest from spring plantings).

## **Radish**

- Direct-seed February 15-April 1 for harvesting April 1-May 15.
- Direct-seed or transplant September 1-October 15 for harvest October 1-December 1.

## **Basil**

- Direct-seed or transplant May 1-August 1 for harvesting June 15-November 1 (use season extension after October 15).
- The earliest harvest presumes a transplanted crop.

## **Tomatoes**

- Transplant April 1-June 15 (use season extension for first half of April until weather warms) for harvesting May 15-November 1 (use season extension after October 15).
- Expect yield to decline towards the end of summer.

## **Peppers**

- Transplant April 15-June 15 (use season extension for second half of April until weather warms) for harvesting July 1-November 15 (use season extension after October 15).
- It possible to plant up until June 15 and still get a good crop but yields will generally be greater from earlier plantings.

## **Eggplant**

- Transplant April 15-June 15 (use season extension for second half of April until weather warms) for harvesting July 15-November 1 (use season extension after October 15).
- Later plantings can provide insurance for summer flea beetle problems; need to use row covers on eggplant for first six weeks after planting for protection against flea beetles and potato beetles.

## **Snap Beans**

- Direct-seed April 1-August 15 (use season extension for month of April until weather warms) for harvesting June 1-November 1 (use season extension after October 15).
- The soil needs to be warm for germination. For plantings in April, plant under clear plastic and remove after the beans germinate.

## **Lambsquarters**

- Direct-seed May 1-July 15 for harvesting June 1-September 15.
- This is one of the few greens that tastes delicious and produces through the summer with minimal insect problems. A great summer green!
- Seed available from Seeds of Change, Sow Organic Seed Co.

## **Cucumbers**

- Direct-seed or transplant May 1-August 1 for harvesting June 15-October 15.
- For both cucumbers and summer squash, the most reliable crops are the early ones. Typically productivity declines rapidly after mid-summer. Early plantings produce for about one month; later plantings for shorter periods.

## **Summer Squash**

- Direct-seed or transplant May 1-August 1 for harvesting June 15-October 15.
- For both cucumbers and summer squash, the most reliable crops are the early ones. Typically productivity declines rapidly after mid-summer.

## **Cantaloupe**

- Direct-seed or transplant May 1-July 1 for harvesting July 1-October 15.

## **Watermelon**

- Direct-seed or transplant May 1-July 1 for harvesting July 1-October 15.
- Watermelons tend to be more tolerant of diseases than cantaloupes on average; therefore, watermelons are usually more reliable for a late summer crop.
- Watermelons usually store very well, as long as a month if kept cool.

## **Winter Squash**

- Direct-seed or transplant May 1-July 15 for harvesting July 1-October 15.
- The species *moschata* (butternut) is the most reliable due to vine borer resistance.

## **Sweetpotato**

- Transplant May 15-July 1 for harvesting September 15-November 1.
- Even though the harvest period is six weeks long, sweetpotatoes store very well so you can market them for six months total. You need to cure sweetpotatoes at relatively warm temperatures for a couple of weeks after harvest (can place in a greenhouse).

## **Okra**

- Direct-seed or transplant May 1-June 1 for harvesting August 1-November 1.

For more information on **small farms** and **organic production**,  
visit Chatham County Cooperative Extension's  
**Growing Small Farms website**  
at <http://chatham.ces.ncsu.edu/growingsmallfarms>

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