

Southern Pea (Cowpea)

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Varieties

Blackeye #5, Champion Cream, Colossus, Crowder, Mississippi Silver, Pink Eye Purple Hull, Texas Cream 8, Texas Pinkeye, Zipper Cream

Soil Preferences

Fine Sandy Loam to light sandy clays, with pH 6.0 - 7.5; highly calcareous soils can cause chlorosis which can result in yield reduction.

Optimum Growing Conditions

Warm to hot days (85-95°F) and warm nights (60-65°F), with mean temperature 70-80°F.

Establishment Methods

Planting Method	Direct seeded
Optimum Time	Soil temperature > 65°F and danger of frost is over
Seeding rate	12-40 lbs/acre
Approx seed/oz	200-250
Seeding depth	0.75 - 1.0"
Seedling spacing	2-6" on 36-42" beds (depending on variety grown)

Fertility/Fertilization

Rates presented as actual lbs/acre N₂, P₂O₅, and K₂O (base actual rates applied on soil test results).

Generalized rate: 35-60-70 lb/acre	
N*	20-60 lbs applied pre-plant
P	60-80 lbs band approximately 3" below seed at planting
K	40-100 lbs applied pre-plant with N
Lime	0.5 - 1.0 ton/acre applied in fall (ONLY in East Texas and other areas with pH < 6.0)

* Ammonium nitrate is very stable and least likely to evaporate. Urea and ammonium sulfate evaporate if not incorporated.

Water/Irrigation

10 to 20"; critical demand period is at bloom. Maintain uniform moisture throughout fruit set and pod development, but do not water log soils.

Pest Management

Southern Pea Diseases and Common Name of Fungicidal Controls

DISEASE	FUNGICIDE*	OMRI LISTED FUNGICIDE**
Fusarium wilt	1,3-Dichloropropene, Chloropicrin, Fludioxonil, Potassium Phosphite, Trifloxystrobin	<i>Streptomyces lydicus</i>
Nematode	1,3-Dichloropropene, Chloropicrin, Metam-Potassium, Metam-Sodium, Sesame Oil	Azadirachtin
Powdery mildew/Rust	Copper Sulfate, Paraffinic Oil, Potassium Phosphite, Potassium Salts of Fatty Acids, Pyraclostrobin	<i>Bacillus pumilus</i> , Clove, Rosemary and Thyme Oil, Extract of <i>Reynoutria Sachalinensis</i> , Hydrogen Dioxide, Neem Oil, Potassium Bicarbonate, <i>Streptomyces lydicus</i> , Sulfur
Viruses	Imidacloprid, Paraffinic Oil	

Southern Pea Insect Pests and Common Name of Insecticidal Controls

INSECT	INSECTICIDE*	OMRI LISTED INSECTICIDE**
Aphid	Acephate, Acetamiprid, Bifenthrin, Dimethoate, Endosulfan, Gamma-Cyhalothrin, Imidacloprid, Lambdacyhalothrin, Malathion, Methomyl, Methyl Parathion, Naled, Petroleum Oil, Phorate, Potassium Salts of Fatty Acids, Sodium Tetraborohydrate Decahydrate, Soybean Oil, Thiamethoxam, Zeta-Cypermethrin	Azadirachtin, Garlic Juice Extracts, Pyrethrins
Armyworm	Acephate, Carbaryl, Endosulfan, Esfenvalerate, Gamma-Cyhalothrin, Lambdacyhalothrin, Methomyl, Spinetoram	Azadirachtin, <i>Bacillus thuringiensis</i> , Pyrethrins, Spinosad
Cutworm	Acephate, Beta-Cyfluthrin, Bifenthrin, Carbaryl, Cyfluthrin, Diazinon, Esfenvalerate, Gamma-Cyhalothrin, Lambdacyhalothrin, Zeta-Cypermethrin	Azadirachtin, <i>Bacillus thuringiensis</i>

Looper	Bifenthrin, Endosulfan , Fenpropathrin, Gamma-Cyhalothrin, Lambdacyhalothrin, Methomyl, Naled, Spinetoram, Zeta-Cypermethrin	Azadirachtin, <i>Bacillus thuringiensis</i> , Garlic Juice Extracts, Pyrethrins, Spinosad
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Weeds and Common Name of Herbicidal Controls

WEED	HERBICIDE*	OMRI LISTED HERBICIDE**
Preplant incorporated	Imazethapyr, Metam-Potassium, Metam-Sodium, Metolachlor, Pendimethalin, S-Metolachlor, Trifluralin	Corn Gluten Meal
Preemergence	Clomazone, Ethalfluralin, Halosulfuron-Methyl, Imazethapyr, Oxyfluorfen, Pelargonic Acid	Cinnamon and Clove Oil, Clove Oil, D-Limonene
Postemergence	Carfentrazone-Ethyl, Clethodim, Fomesafen, Glyphosate, Imazamox, Paraquat Dichloride, Pyraflufen Ethyl, Quizalofop P-Ethyl, Sethoxydim	

* The above is a partial listing of controls intended as examples. Some labels may have been revoked since the publication of this guide. Refer to product labels for specifics and use accordingly. Ensure that products with one of the listed active ingredients are registered for the crop it is to be used on. Failure to do the above may result in crop injury, death and/or citation for law violation. Humans, animals and the environment may also be adversely affected by misuse.

** As stated in §205.206 of the National Organic Standards, pest management decisions should follow a hierarchical approach, which should be defined in a farm's organic systems plan. Please ensure that you have followed the appropriate steps and any product to be used in certified organic production systems has been approved by your certifying agent.

Harvest

Days after planting	65-80 days
Normal method	Hand: Green snap stage or dry seed Mechanical: depending on variety
Containers	Field baskets, bulk wagons
Grades	Free from defects, blemishes and insect stings
Packaging/Handling	<ul style="list-style-type: none"> • 24 lb bushel baskets • 40 lb crates • Cardboard boxes containing 12 11-oz cello bags
Anticipated yield/acre	Dry - 600-800 lbs/acre Green - 900-2,000 lbs/acre (15-24 bushels)

Transit Conditions

32°F at 95-98% RH; Shelf-life 1-2 weeks.

Comments/Production Keys

- Winter rye crop prior to planting spring peas aids in reducing nematode problems
- Can be grown as a dry land crop but responds extremely well to irrigation in the form of increased yield and quality
- Best to use a seed inoculant (nitrogen-fixing bacteria), especially on new pea land
- Crop does not respond well to high nitrogen fertilization (increased vine growth and reduced pea yield can result)
- Wet cold conditions at or following planting induce seed rot and seedling damping off
- Frost causes pod injury
- Can be harvested as green snaps, green mature and dry
- Most fields are multiple harvested
- Three year crop rotation is suggested to reduce potential disease and insect problems
- Ship fresh peas under refrigerated conditions