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

<table>
<thead>
<tr>
<th>Planting Method</th>
<th>Direct seeded</th>
</tr>
</thead>
<tbody>
<tr>
<td>Optimum Time</td>
<td>Soil temperature &gt; 65°F and danger of frost is over</td>
</tr>
<tr>
<td>Seeding rate</td>
<td>12-40 lbs/acre</td>
</tr>
<tr>
<td>Approx seed/oz</td>
<td>200-250</td>
</tr>
<tr>
<td>Seeding depth</td>
<td>0.75 - 1.0&quot;</td>
</tr>
<tr>
<td>Seedling spacing</td>
<td>2-6&quot; on 36-42&quot; beds (depending on variety grown)</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Generalized rate: 35-60-70 lb/acre</th>
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<tbody>
<tr>
<td>N*</td>
</tr>
<tr>
<td>P</td>
</tr>
<tr>
<td>K</td>
</tr>
<tr>
<td>Lime</td>
</tr>
</tbody>
</table>

* 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**

<table>
<thead>
<tr>
<th>DISEASE</th>
<th>FUNGICIDE*</th>
<th>OMRI LISTED FUNGICIDE**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fusarium wilt</td>
<td>1,3-Dichloropropene, Chloropicrin, Fludioxonil, Potassium Phosphate, Trifloxystrobin</td>
<td><em>Streptomyces lydicus</em></td>
</tr>
<tr>
<td>Nematode</td>
<td>1,3-Dichloropropene, Chloropicrin, Metam-Potassium, Metam-Sodium, Sesame Oil</td>
<td><em>Azadirachtin</em></td>
</tr>
<tr>
<td>Viruses</td>
<td>Imidacloprid, Paraffinic Oil</td>
<td></td>
</tr>
</tbody>
</table>

**Southern Pea Insect Pests and Common Name of Insecticidal Controls**

<table>
<thead>
<tr>
<th>INSECT</th>
<th>INSECTICIDE*</th>
<th>OMRI LISTED INSECTICIDE**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aphid</td>
<td>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</td>
<td><em>Azadirachtin</em>, Garlic Juice Extracts, Pyrethrins</td>
</tr>
<tr>
<td>Armyworm</td>
<td>Acephate, Carbaryl, Endosulfan, Esfenvalerate, Gamma-Cyhalothrin, Lambdacyhalothrin, Methomyl, Spinetoram</td>
<td><em>Azadirachtin</em>, <em>Bacillus thuringiensis</em>, Pyrethrins, Spinosad</td>
</tr>
<tr>
<td>Cutworm</td>
<td>Acephate, Beta-Cyfluthrin, Bifenthrin, Carbaryl, Cyfluthrin, Diazinon, Esfenvalerate, Gamma-Cyhalothrin, Lambdacyhalothrin, Zeta-Cypermethrin</td>
<td><em>Azadirachtin</em>, <em>Bacillus thuringiensis</em></td>
</tr>
<tr>
<td>WEED</td>
<td>HERBICIDE*</td>
<td>OMRI LISTED HERBICIDE**</td>
</tr>
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</tr>
<tr>
<td><strong>Preplant incorporated</strong></td>
<td>Imazethapyr, Metam-Potassium, Metam-Sodium, Metolachlor, Pendimethalin, S-Metolachlor, Trifluralin</td>
<td>Corn Gluten Meal</td>
</tr>
<tr>
<td><strong>Preemergence</strong></td>
<td>Clomazone, Ethalfuralin, Halosulfuron-Methyl, Imazethapyr, Oxyfluorfen, Pelargonic Acid</td>
<td>Cinnamon and Clove Oil, Clove Oil, D-Limonene</td>
</tr>
<tr>
<td><strong>Postemergence</strong></td>
<td>Carfentrazone-Ethyl, Clethodim, Fomesafen, Glyphosate, Imazamox, Parquat Dichloride, Pyraflufen Ethyl, Quinalofop P-Ethyl, Sethoxydim</td>
<td></td>
</tr>
</tbody>
</table>

* 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

<table>
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<th>Days after planting</th>
<th>65-80 days</th>
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| **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** |  
|                     | - 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