

## CHICKPEA / GARBANZO BEAN

Chickpea stems, leaves and seed pods are covered with small, hairlike glandular structures that secrete malic and oxalic acids. The secretions discourage insects from feeding on the plants. Therefore, insect problems on chickpeas have been minimal and insecticide applications generally have not been necessary. Several viral diseases that are transmitted by aphids have occasionally been reported in chickpea fields from the states of Washington and Idaho. Potential insect pests of chickpea include seedcorn maggots, cutworms, lygus bugs and wireworms.

### Insecticides approved for control of insect pests in Chickpea

INSECTICIDE	DOSAGE IN LB AI/ACRE	PRODUCT PER ACRE	RESTRICTIONS ON USE
<b>beta-cyfluthrin</b> Baythroid XL <i>RUP</i>	0.0125 - 0.025	1.6 - 3.2 fl oz	PHI = 7 days. Maximum of 6.4 fl oz per acre per season. Maximum of 3.2 fl oz per acre between 14-day interval. Minimum application volume is 10 GPA by ground and 2 GPA by air. Do not feed treated vines or hay to livestock. Label include plant bugs, grasshoppers, and other insect pests. For pea aphid, use high rate of 3.2 fl oz/acre for pest suppression only.
<b>bifenthrin + zeta-cypermethrin</b> Hero <i>RUP</i>	0.04 - 0.10	4.0 - 10.3 fl oz	PHI = 3 days. Do not apply more than 0.266 lb ai per acre per season. Do not make applications less than 5 days apart. Except Lygus bugs and wireworms.
<b>cyfluthrin</b> Tombstone Tombstone Helios <i>RUP</i>	0.025 - 0.050	1.6 - 3.2 fl oz	
<b>dimethoate</b> Digon 400 Dimethoate 400	0.25 - 0.5	0.5 - 1 pt	Labeled for aphid control. Peas may be harvested mechanically on day of application. Do not feed treated plants to livestock. Label includes aphids, grasshoppers, leafhoppers and lygus bugs.
<b>esfenvalerate</b> Asana XL <i>RUP</i>	0.02 - 0.03	Low Rate: 3.9 - 5.8 fl oz	PHI = 21 days. The lower rates are for control of first- and second-stage grasshoppers ONLY. The reduced-rate application has a range of 3.9 - 5.8 fl oz. The higher rates are for control of grasshopper nymphs larger than 2 <sup>nd</sup> instar. Do not apply more than 0.2 lb ai/acre per season. Do not feed or graze livestock on treated fields. Apply with a minimum of 2 GPA for air and 10 GPA for ground applications.
<b>GRASSHOPPER ONLY</b>	0.03 - 0.05	High Rate: 5.8-9.6 fl oz	
<b>esfenvalerate</b> Asana XL <i>RUP</i>	0.03 - 0.05	5.8 - 9.6 fl oz	PHI = 21 days. Do not apply more than 0.2 lb ai/acre per season. Do not feed or graze livestock on treated fields. Apply with a minimum of 2 GPA for air and 10 GPA for ground applications.
<b>gamma-cyhalothrin</b> Proaxis <i>RUP</i>	0.01 - 0.015	2.56 - 3.84 fl oz	PHI = 21 days. Label includes aphid, grasshopper, cutworm and others. Proaxis may be used to control grasshoppers in bordering, non-crop areas that are not hayed or grazed.
<b>imidacloprid</b> Nuprid 2F  Controls aphids, leafhoppers, lygus bug only	see label	16 - 24 fl oz	PHI = 21 days. Maximum amount allowed per season 24 fl oz/acre/season. Apply using one of the following methods: 1) Chemigation into root-zone through low-pressure drip, trickle, microsprinkler or equivalent equipment, 2) In-furrow spray during planting directed on or below seed, 3) Narrow band spray at ground cracking directly over the row during hilling covered with 3 In a narrow (2" or less) surface band over seed-line during planting incorporated to a depth of 1 to 1.5 inches with sufficient irrigation within 24 hours following application, 4) In a narrow band directly below the eventual seed row in a bedding operation 7 or fewer days before planting, or 5)As a post-seeding drench, transplant drench, or hill drench. Not for use on crops grown for seed unless allowed by state-specific supplemental labeling.

<b>INSECTICIDE</b>	<b>DOSAGE IN LB AI/ACRE</b>	<b>PRODUCT PER ACRE</b>	<b>RESTRICTIONS ON USE</b>
<b>lambda-cyhalothrin</b> Lambda-Cy <i>RUP</i>	0.02 - 0.03	2.56 - 3.84 fl oz	PHI = 21 days. Label includes aphid, grasshopper, cutworm and others. Warrior may be used to control grasshoppers in bordering, non-crop areas that are not hayed or grazed. Do not apply more than 0.12 lb ai (15.36 fl oz) per acre per season.
<b>lamba-cyhalothrin</b> Taiga Z <i>RUP</i>	0.02 - 0.03	2.56 - 3.84 fl oz	
<b>lambda-cyhalothrin</b> Warrior <i>RUP</i>	0.015 - 0.03	2.56 - 3.84 fl oz	
<b>methomyl</b> Lannate LV <i>RUP</i>	0.45 - 0.9	1.5 - 3 pts	PHI = 1 day. Of the 3 insects mentioned above, the label only includes cutworms.
<b>spinosad (microbial)</b> Spintor 2SC	0.062 - 0.094	4 - 6 fl oz	PHI = 28 days. Do not feed forage or hay to meat or dairy animals. Label includes armyworms and European corn borer.
<b>spinosad (microbial)</b> Success	0.047 - 0.094	3 - 6 fl oz	PHI = 28 days. Do not apply more than a total of 12 fl oz per acre per season.. <b>For control of armyworms, corn borer, loopers, leafminers and thrips only.</b> Treat when pests appear, targeting eggs at hatch or small larvae. Use a higher rate in the rate range for larger larvae or moderate to severe infestations.
<b>zeta-cypermethrin</b> Mustang Max <i>RUP</i>	0.017 - 0.025	2.72 - 4 fl oz	PHI = 21 days. Label includes aphid, grasshopper and plant bugs.

*RUP* - Restricted use pesticide