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Cotton Year-Round IPM Program Annual Checklist

Supplement to UC IPM Pest Management Guideline: Cotton

These practices are recommended for a monitoring-based IPM program that reduces water quality problems related to pesticide use. Track your progress through the year using this form.

Each time a pesticide application is considered, review the Pesticide Application Checklist at the bottom of this form for information on how to minimize water quality problems. This program covers the major pests of cotton. Details on carrying out each practice, information on additional pests, monitoring forms, and additional copies of this annual checklist are available from the UC IPM Pest Management Guidelines: Cotton at <http://www.ipm.ucdavis.edu/PMG>.

Note: Growers using reduced tillage will have to modify some of these practices in this year-round IPM program.

✓ Done	Preplant to planting period activities
	Select your field, considering pest history and surrounding crops.
	Consider rotation crops if field had severe problems last year with root knot nematode, Verticillium wilt, or seedling diseases.
	Consider precision tillage and ripping, if root knot nematodes are a problem.
	Consider a trap-crop interplant of alfalfa, cowpea, or lima bean for lygus management.
	Survey and manage weeds: <ul style="list-style-type: none">• Complete the weed survey form.• Treat** if needed according to PMG.
	Select a variety, considering: <ul style="list-style-type: none">• Local conditions and climate.• Field history of Verticillium wilt and root knot nematode.
	Consider a seed treatment for pests based on field history and according to the PMGs: <ul style="list-style-type: none">• Thrips• Aphids• Seedcorn maggot• Wireworms• Seedling diseases
	Start planning for when to plant around March 5 th by checking 5-day degree-day forecast and taking soil temperature.

✓ Done	Crop emergence to seedling growth period activities
	Begin tracking degree-day accumulations for plant growth as soon as crop emerges.
	Assess stand establishment and identify pests if stand is weak.
	Monitor for spider mites, aphids, and thrips: <ul style="list-style-type: none"> • Locate trouble spots in fields and pay close attention to these areas during early square monitoring.
	Maintain a weed management program: <ul style="list-style-type: none"> • Survey weeds and complete the weed survey form. • Cultivate or apply postemergence herbicides** as suggested in PMG. • Treat** if needed according to PMG.
	Monitor nearby crops, fence rows, and weedy areas for: <ul style="list-style-type: none"> • False chinch bugs

✓ Done	Early squaring period activities
	Begin weekly monitoring of plant growth. <ul style="list-style-type: none"> • Continue tracking degree-day accumulations for plant growth.
	Monitor for armyworms, cabbage loopers. Treat** if needed according to PMG.
	Monitor for spider mites, aphids, and whitefly: <ul style="list-style-type: none"> • Keep records on a monitoring form. • Treat** if needed according to PMG.
	Begin sweep net sampling and square retention monitoring for lygus activity: <ul style="list-style-type: none"> • Keep records on a monitoring form. • Treat** if needed according to PMG.
	Survey and manage weeds. <ul style="list-style-type: none"> • Complete a weed survey form. • Treat** if needed according to PMG.
	Sample for both races of <i>Fusarium</i> if there is evidence of <i>Fusarium</i> in the field, or if you want to plant a variety with unknown resistance.
	Manage alfalfa next to cotton.
	Adjust nitrogen to prevent rank growth.



✓ Done	Bloom to boll development period activities
	<ul style="list-style-type: none"> • Continue tracking degree-day accumulations for plant growth. • Continue weekly monitoring of plant growth.
	Continue monitoring for armyworms: <ul style="list-style-type: none"> • Treat** if needed according to PMGs.
	Start sampling plant terminals for bollworms during the first week in August.
	Continue monitoring for spider mites, aphids, and whitefly: <ul style="list-style-type: none"> • Keep records on a monitoring form. • Treat** if needed according to PMGs.
	Continue sweep net sampling and square/fruit retention monitoring for lygus activity: <ul style="list-style-type: none"> • Keep records on a monitoring form. • Treat** if needed according to PMG.
	Other pests you may see: <ul style="list-style-type: none"> • Saltmarsh caterpillar • Stink bugs • Beet armyworm • Cabbage looper
	Time a layby cultivation.

✓ Done	First open boll to preharvest period activities
	Continue tracking degree-day accumulations for plant growth. <ul style="list-style-type: none"> • Continue weekly monitoring of plant growth.
	Monitor aphids and whitefly, especially when bolls are open: <ul style="list-style-type: none"> • Keep records on a monitoring form. • Treat** if needed according to PMGs.
	Survey weeds before harvest: <ul style="list-style-type: none"> • Complete a weed survey form. • Treat** if needed according to PMGs.
	Schedule defoliation to allow for timely harvest and little regrowth.
	If you have evidence of Verticillium wilt in your field, or if you want to plant a variety with unknown resistance, chose a time between crop maturity and harvest to sample stems for discoloration.



✓ Done	Harvest to postharvest period activities
	<ul style="list-style-type: none"> • Maintain maximum time between harvest and planting whitefly host crops. • Promptly destroy stalks to prevent regrowth and limit additional whitefly buildup.
	Observe local plowdown deadlines and a 90-day host-free period to prevent establishment of pink bollworm.
	Sample plant roots and rate nematode infestation: <ul style="list-style-type: none"> • Complete the rating form. • Treat** if needed according to PMG.

✓ Done	**Pesticide application checklist
	<p>Before a pesticide application is made and when planning for possible applications in an IPM program, review and complete this checklist to minimize water quality and other problems.</p> <ul style="list-style-type: none"> • Follow each practice in the year-round IPM program. • Identify target pest, treatment threshold, trigger, or justification for treatment. • Consider nonchemical alternatives. • Identify important natural enemies that might be impacted by pesticide application. • Choose a pesticide from the UC IPM Pest Management Guidelines for the target pest, considering impact on natural enemies and consulting UC IPM Watertox Database for water quality concerns. Select an alternative chemical or nonchemical treatment when risk is high. • Consider chemical class if pesticide resistance is an issue. • Identify sensitive areas (for example, waterways or riparian areas) surrounding your application site. • Identify practices or mitigation measures to be used to reduce pesticide movement off site. • Choose sprayers and application methods that minimize off-site movement. • Review and follow pesticide handling, storage, and disposal guidelines. • After an application is made, record application date, product used, rate, and location of application. Follow up to confirm that treatment was effective.

