

2016 Updates to the New England Small Fruit Management Guide (4/5/16)

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Crop	Product Name	Active Ingredient (ai)	Target Pest(s)	RAC Group ¹	REI (hrs)	PHI (days)	Rate/A	Comments
STRAWBERRY								
Add								
Insecticides	φ Azera	<i>azadirachtin plus pyrethrins</i>	Aphids Spittle Bug Tarnished Plant Bug Thrips	3A	12	0	1.0 to 3.5 pt	Do not apply during bloom; avoid contact with bees. φ OMRI Listed
	Courier SC	<i>buprofezin</i>	Leafhopper Whiteflies	16	12	3	9 to 13.6 oz	Apply when nymphal population level reaches threshold of 1/leaf in 50 leaves and/or leaf curl is evident. Apply using at least 80 gallons of water/acre for thorough coverage. Make no more than 2 applications per crop cycle. Apply no more than 27.2 oz/A per crop cycle.
	Rimon 0.83EC	<i>novaluron</i>	Sap Beetle Tarnished Plant Bug Thrips	15	12	1	6 to 12 oz	Apply post-bloom when population levels reach threshold to target hatching eggs and young nymphal stages.

¹ Resistance Group, IRAC – Insecticides, FRAC – Fungicides, HRAC - Herbicides

*Indicates Restricted Use Material. φ Indicates OMRI listed material for Organic Production.

Fungicides	Fracture	<i>Banda de Lupinus albus doce (BLAD)</i>	Botrytis Powdery Mildew	M12	4	1	20.5 to 36.6 oz	Fracture fungicide represents a new chemistry and establishes a new resistance management group. It is a contact fungicide with penetration properties. BLAD is the active ingredient, which degrades the fungal chitin. See label for additional information
	Miltrex 10SC	<i>cyflufenamid</i>	Powdery Mildew	U6	4	0	3.4 oz	Apply at first sign of disease symptoms. Do not make more than 2 applications per year w/ minimum interval of 14 days. Do not exceed 6.8 oz/A per year.
	Rendition	<i>hydrogen peroxide + peroxyacetic acid</i>	Angular Leaf Spot, Botrytis Gray Mold, Leaf Spots, Powdery Mildew	--	1	0	1 to 3 pt	Apply as foliar spray prior to disease onset when weather conditions favor disease development. Use higher rate in fields with history of high disease pressure. Use sufficient water for thorough coverage (30 – 100 gallons/A)
	Sanoma 40WSP	<i>myclobutanil</i>	Powdery Mildew, Leaf Spot, Leaf Blight	3	24	0	2.5 to 5.0 oz	Apply as foliar spray prior to disease onset when weather conditions favor disease development or when first sign of disease appears. Use higher rate in fields with history of high disease pressure.
	Torino	<i>cyflufenamid</i>	Powdery Mildew	U6	4	0	3.4 oz	Apply at first sign of disease symptoms. Do not make more than 2 applications per year w/ minimum interval of 14 days. Do not exceed 6.8 oz/A per year.

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Herbicides	Devrinol 2XT Devrinol DF-XT	<i>napropamide</i>	Annual Grasses & Small Seeded Broadleaf Weeds	15	24	30	2XT - 2 gal DF-XT - 8 lbs	Pre-emergence herbicide; new formulations added ; apply after spring mulch removal or prior to laying winter mulch. ²
	Satellite HydroCap	<i>pendimethalin</i>	Annual Grasses & Small Seeded Broadleaf Weeds	3	24	35	1.5 to 3.0 qt	Pre-emergence herbicide; apply during dormant season or at renovation prior to regrowth of foliage or as directed spray to row middles using caution not to contact green foliage.
	Spur	<i>clopyralid</i>	Broadleaf Weeds & Select Woody Brush Species	4	12	Post harvest only	0.66 pt	Selective post-emergence herbicide; make only 1 application per crop year after harvest; do not tank mix with other herbicides registered for use on strawberries. Same as Stinger which is not registered for this use in New England.
Plant Growth Regulators	ϕ ProGibb LV Plus	<i>gibberellic acid</i>	Increases runner production	--	4	0	7.5 to 12.5 oz	Make single application to mother plants 10-30 days after planting. Treatment not shown effective on plants set out after mid-May. OMRI Listed for use in organic operations.
Remove								
Insecticides	Belt SC	<i>flubendiamide</i>	Cutworm and other Lepidoptera	28	12	8	2.0 to 2.4 oz	EPA has requested the manufacturer of Belt (Bayer) to pull this product. The status is still pending but growers should be aware that it may be discontinued. No information is currently available on how existing product will be handled.

² See label for additional application instructions and restrictions

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	* Thionex	<i>endosulfan</i>	Cyclamen Mite	2A	12 days	12		For perennial (matted row) strawberries these materials can be bought only until May 31, 2016 and can only be used until July 31, 2016. Restricted Use Material
	Vetica	<i>flubendiamide + buprofezin</i>	Leafrollers and other Lepidoptera pests	28/16	12	3	12.0 to 18.5 oz	Apply using at least 100 gallons of water/acre. Make no more than 2 applications per crop cycle. Apply no more than 37 oz/A per crop cycle.
Herbicides	Devrinol 10G	<i>napropamide</i>	Annual Grasses & Small Seeded Broadleaf Weeds	--	--	--	--	This formulation has been discontinued. Other formulations remain available.
Change								
Plant Growth Regulators	Apogee	<i>prohexadione calcium</i>	Runner suppression					BASF will not support this label at this time
HIGHBUSH BLUEBERRY								
Add								
Insecticides	^φ Azera	<i>azadirachtin plus pyrethrins</i>	Aphids Spittle Bug Tarnished Plant Bug Thrips	3A	12	0	1.0 to 3.5 pt	Do not apply during bloom; avoid contact with bees. OMRI Listed

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	φ Grandevo	<i>chromobacterium subtsugae</i>	Aphids Fruitworms Thrips Spotted Wing Drosophila (suppression)	UN	4	0	1 to 3 lb	Biological insecticide. Use when pest populations are low and/or in younger growth stages for best efficacy OMRI Listed
	* Hero	<i>zeta- cypermethrin plus bifenthrin</i>	Aphids Blueberry Maggot Fruitworms Leafhoppers Plum Curculio Leafrollers Spanworms Twospotted Spider Mite	3/4A	12	1	4.0 10.3 oz	Use higher rate for mite control. Do not make applications closer than 7 days apart. See additional restrictions related to seasonal use of active ingredients found in other products. Restricted Use Material
	* Triple Crown	<i>bifenthrin plus zeta- cypermethrin plus imidacloprid</i>	Aphids Blueberry Maggot Japanese Beetle Spotted Wing Drosophila (SWD)	3/4A	12	3	4.5 to 10.3 oz 6.4 to 10.3 oz	Do not apply pre-bloom or during bloom or when bees are actively foraging. Do not exceed 5 applications per crop year. Do not apply more than 31.0 oz/A per crop year. Minimum application interval 7 days. See additional restrictions related to seasonal use of active ingredients found in other products. Restricted Use Material
Fungicides	φ Cueva	<i>copper octanoate</i>	Botrytis	M	4	0	0.5 to 2.0 gal	Apply at onset of bloom when weather conditions favor disease development. OMRI Listed

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	<p>φ Double Nickel 55</p> <p>φ Double Nickel LC</p>	<i>Bacillus amylolique</i>	Anthracnose Botrytis Mummyberry	44	4	0	0.25 to 3 lb 0.5 to 6 qt	May improve postharvest fruit quality. For Mummyberry suppression only. OMRI Listed
	Rendition	<i>hydrogen peroxide plus peroxyacetic acid</i>	Botrytis Anthracnose	--	4	0	48 oz	Apply during bloom when weather conditions favor disease development.
Herbicides	Casoron CS	<i>dichlobenil</i>	Perennial and annual broadleaf weeds	20	12	Not specified	1.4 to 2.8 gal	Pre-emergence herbicide material. Do not apply until 1 year after planting. New microencapsulated formulation with reduced leaching potential.
	Cheetah	<i>glufosinate ammonium</i>	Broadleaf Weeds, Grasses, Biennial & Perennial Weeds	10	12	14	48 to 82 oz	Post-emergence herbicide material. Avoid contact with green bark tissue or damage may occur. Same active ingredient as Rely. See label for additional instructions and restrictions.
	Devrinol 2XT Devrinol DF-XT	<i>napropamide</i>	Annual Grasses & Small Seeded Broadleaf Weeds	15	24	30	2XT - 2 gal DF-XT - 8 lb	Pre-emergence herbicide; new formulations added ; apply after spring mulch removal or prior to laying winter mulch. ³

³ See label for additional application instructions and restrictions

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	Lifeline	<i>glufosinate ammonium</i>	Broadleaf Weeds, Grasses, Biennial & Perennial Weeds	10	12	14	48 to 82 oz	Post-emergence herbicide material. Avoid contact with green bark tissue or damage may occur. Same active ingredient as Rely. See label for additional instructions and restrictions.
	Solida	<i>rimsulfuron</i>	Annual Broadleaf Weeds And Suppression Of Some Annual Grasses	2		21	4 oz	Pre-emergence herbicide material with some post-emergence activity. Only one application per crop year is allowed. Same herbicide class as Sandea so cannot be used in the same year that Sandea is used.
	Trellis	<i>isoxaben</i>	Annual Broadleaf Weeds	21	12	1 year	0.66 to 1.33 lb	Pre-emergence herbicide material. See label for specific application instructions. Use only in non-bearing plantings.
	Zeus XC	<i>sulfentrazone</i>	Annual grasses and some broadleaf weeds	14	12	3	8 to 12 oz	Pre-emergence herbicide material with some post-emergence activity on some weeds at early stages of growth. Some activity on sedges. <i>Registered in all New England States except MA.</i>
	Zeus Prime XC	<i>carfentrazone-ethyl plus sulfentrazone</i>	Annual Broadleaf Weeds and Grasses and Nutsedge	14	12	3	7.7 to 15.2 oz	Pre-emergence herbicide material with some post-emergence activity on some weeds at early stages of growth. Some activity on sedges. <i>Registered in all New England States except MA</i>

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Change								
Herbicides	Callisto Herbicide	<i>mesotrione</i>	Annual broadleaf weeds	27	12	--	3 to 6 oz	Replaces Callisto 4F
BRAMBLES/CANE BERRIES								
Add								
Insecticides	φ Azera	<i>azadirachtin plus pyrethrins</i>	Aphids Spittle Bug Tarnished Plant Bug Thrips	3A	12	0	1.0 to 3.5 pt	Do not apply during bloom; avoid contact with bees. OMRI Listed
	φ Grandevo	<i>chromobacterium subsugae</i>	Aphids Fruitworms Thrips Spotted Wing Drosophila (suppression)	UN	4	0	1 to 3 lb	Biological insecticide. Use when pest populations are low and/or in younger growth stages for best efficacy OMRI Listed
	* Hero	<i>zeta-cypermethrin plus bifenthrin</i>	Leafrollers Root Weevils Black Vine Weevil Twospotted Spider Mite Raspberry Crown Borer	3/4A	12	3	4.0 10.3 oz	Use higher rate for mite control. Do not make applications closer than 7 days apart. See additional restrictions related to seasonal use of active ingredients found in other products. Use higher rate for Crown Borer control using a drench application to base of the plants. Restricted Use Material

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	* Triple Crown	<i>Bifenthrin plus zeta-cypermethrin plus imidacloprid</i>	Aphids, Fruitworms, Spotted Wing Drosophila (SWD)	3/4A	12	3	6.4 to 10.3 oz	Do not apply pre-bloom or during bloom or when bees are actively foraging. Do not exceed 5 applications per crop year. Do not apply more than 31.0 oz/A per crop year. Minimum application interval 7 days. See additional restrictions related to seasonal use of active ingredients found in other products. Restricted Use Material
Fungicides	ϕ Cueva	<i>copper octanoate</i>	Botrytis	M	4	0	0.5 to 2.0 gal	Apply at onset of bloom when weather conditions favor disease development. OMRI Listed
	Rendition	<i>hydrogen peroxide + peroxyacetic acid</i>	Botrytis, Downy Mildew, Powdery Mildew	--	1	0	1 to 3 pt	Apply during bloom when weather conditions favor disease development.
	Sonoma 40WSP	<i>myclobutanil</i>	Powdery Mildew, Leaf Spot, Leaf Blight	3	24	0	2.5 to 5.0 oz	Apply as foliar spray prior to disease onset when weather conditions favor disease development or when first sign of disease appears. Use higher rate in fields with history of high disease pressure.

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Herbicides	Solida	<i>rimsulfuron</i>	Annual Broadleaf Weeds And Suppression Of Some Annual Grasses	2		21	4 oz	Pre-emergence herbicide material with some post-emergence activity. Only one application per crop year is allowed. Same herbicide class as Sandea so cannot be used in the same year that Sandea is used.
	Trellis	<i>isoxaben</i>	Annual Broadleaf Weeds	21	12	1 year	0.66 to 1.33 lb	Pre-emergence herbicide material. See label for specific application instructions. Use only in non-bearing plantings.
	Zeus XC	<i>sulfentrazone</i>	Annual grasses and some broadleaf weeds	14	12	3	8 to 12 oz	Pre-emergence herbicide material with some post-emergence activity on some weeds at early stages of growth. Some activity on sedges. <i>Registered in all New England States except MA.</i>
	Zeus Prime XC	<i>carfentrazone-ethyl plus sulfentrazone</i>	Annual Broadleaf Weeds and Grasses and Nutsedge	14	12	3	7.7 to 15.2 oz	Pre-emergence herbicide material with some post-emergence activity on some weeds at early stages of growth. Some activity on sedges. <i>Registered in all New England States except MA</i>
Change								
Herbicides	Callisto Herbicide	<i>mesotrione</i>	Annual broadleaf weeds	27	12		3 to 6 oz	Replaces Callisto 4F

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CURRENT & GOOSEBERRY

Add

Insecticides	Rimon 0.83EC	<i>novaluron</i>	Blueberry Spanworm Cranberry Fruitworm Leafrollers Blueberry Maggot Plum Curculio Spotted Wing Drosophila (SWD)	15	12	8	20 to 30 oz	Some phytotoxicity may be observed when applied under high temperatures and/or drought conditions, particularly to new shoot growth. Such phytotoxicity will not occur on future growth, nor affect fruiting or yields. Higher spray volumes and lower spray concentration will minimize the risk of transient phytotoxic symptoms on newly expanded foliage. Long Pre-harvest Interval (PHI) makes use against SWD impractical.
	* Triple Crown	<i>Bifenthrin plus zeta-cypermethrin plus imidacloprid</i>	Aphids Fruitworms Japanese Beetle Plum Curculio Spotted Wing Drosophila (SWD)	3/4A	12	3	4.5 to 10.3 oz 6.4 to 10.3 oz	Do not apply pre-bloom or during bloom or when bees are actively foraging. Do not exceed 5 applications per crop year. Do not apply more than 31.0 oz/A per crop year. Minimum application interval 7 days. See additional restrictions related to seasonal use of active ingredients found in other products. Restricted Use Material

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Fungicides	ϕ Cueva	<i>copper octanoate</i>	Powdery Mildew	M	4	0	0.5 to 2.0 gal	Apply at onset of bloom when weather conditions favor disease development. OMRI Listed
	ϕ Double Nickel 55	<i>Bacillus amylolique</i>	Anthraco nose Botrytis Mummyberry	44	4	0	0.25 to 3 lb 0.5 to 6 qt	May improve postharvest fruit quality. For Mummyberry suppression only. OMRI Listed
	ϕ Double Nickel LC							
	Rendition	<i>hydrogen peroxide plus peroxyacetic acid</i>	Botrytis Anthraco nose	--	4	0	48 oz	Apply during bloom when weather conditions favor disease development.
Herbicides	Cheetah	<i>glufosinate ammonium</i>	Broadleaf weeds, grasses, biennial & perennial weeds	10	12	14	48 to 82 oz	Post-emergence herbicide material. Avoid contact with green bark tissue or damage may occur. Same active ingredient as Rely. See label for additional instructions and restrictions.
	Devrinol 2XT Devrinol DF-XT	<i>napropamide</i>	Annual Grasses & Small Seeded Broadleaf Weeds	15	24	30	2XT - 2 gal DF-XT - 8 lbs	Pre-emergence herbicide; new formulations added ; apply after spring mulch removal or prior to laying winter mulch. ⁴
	Lifeline	<i>glufosinate ammonium</i>	Broadleaf weeds, grasses, biennial & perennial weeds	10	12	14	48 to 82 oz	Post-emergence herbicide material. Avoid contact with green bark tissue or damage may occur. Same active ingredient as Rely. See label for additional instructions and restrictions.

⁴ See label for additional application instructions and restrictions

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	Trellis	<i>isoxaben</i>	Annual Broadleaf Weeds	21	12	1 year	0.66 to 1.33 lb	Pre-emergence herbicide material. See label for specific application instructions. Use only in non-bearing plantings.
Change								
Herbicides	Callisto Herbicide	<i>mesotrione</i>	Annual broadleaf weeds	27	12	--	3 to 6 oz	Replaces Callisto 4F
GRAPE								
Add								
Insecticides	* Triple Crown	<i>Bifenthrin plus zeta-cypermethrin plus imidacloprid</i>	Cutworms Grape Mealybug Leafhoppers Sharpshooters Spotted Wing Drosophila (SWD)	3/4A	12	30	5.0 oz	Do not apply more than 10.2 oz/A per crop year. Minimum application interval 14 days. See additional restrictions related to seasonal use of active ingredients found in other products. The 30 day PHI restriction makes use of this material for controlling SWD or other vinegar flies impractical. Restricted Use Material

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Fungicides	Aprovia	<i>benzovindiflupyr</i>	Powdery Mildew, Black Rot, Phomopsis, Anthracnose	7	12	21	8.6 to 10.5 oz	The addition of a spreading/penetrating type adjuvant such as organo-silicon blends with either non-ionic surfactants (NIS) or vegetable based crop oils (COC); or vegetable based COC (not mineral); or NIS with at least 90% concentration is recommended. Take special care to avoid spray drift to aquatic areas. <i>See label for specific timing recommendations.</i>
	Fracture	<i>Banda de Lupinus albus doce (BLAD)</i>	Botrytis Powdery Mildew	M12	4	1	20.5 to 36.6 oz	Fracture fungicide represents a new chemistry and establishes a new resistance management group. It is a contact fungicide with penetration properties. BLAD is the active ingredient which degrades the fungal chitin. See label for additional information
	Torino	<i>cyflufenamid</i>	Powdery Mildew	U6	4	3	3.4 oz	Apply at first sign of disease symptoms. Do not make more than 2 applications per year w/ minimum interval of 14 days. Do not exceed 6.8 oz/A per year.

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Herbicides	Alion	<i>indaziflam</i>	Annual Broadleaf Weeds	29	12	14	3.5 to 5.0 oz	Preemergent herbicide material for use on annual broadleaf weeds. Do not use on grapes less than 5 yrs old. Do not apply to vines that have exposed roots near soil surface; hill soil around vines if roots are exposed. Rate is dependent on organic matter content of soil. See label for additional instructions.
	Casoron CS	<i>dichlobenil</i>	Perennial and annual broadleaf weeds	20	12	Not specified	1.4 to 2.8 gal	Pre-emergence herbicide material. Do not apply until 1 year after planting. New microencapsulated formulation with reduced leaching potential.
	Cheetah	<i>glufosinate ammonium</i>	Broadleaf weeds, grasses, biennial & perennial weeds	10	12	14	48 to 82 oz	Post-emergence herbicide material. Avoid contact with green bark tissue or damage may occur. Same active ingredient as Rely. See label for additional instructions and restrictions.
	Devrinol 2XT Devrinol DF-XT	<i>napropamide</i>	Annual Grasses & Small Seeded Broadleaf Weeds	15	24	30	2XT - 2 gal DF-XT - 8 lbs	Pre-emergence herbicide; new formulations added ; apply after spring mulch removal or prior to laying winter mulch. ⁵

⁵ See label for additional application instructions and restrictions

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	Lifeline	<i>glufosinate ammonium</i>	Broadleaf weeds, grasses, biennial & perennial weeds	10	12	14	48 to 82 oz	Post-emergence herbicide material. Avoid contact with green bark tissue or damage may occur. Same active ingredient as Rely. See label for additional instructions and restrictions.
	Satellite HydroCap	<i>pendimethalin</i>	Annual Grasses & Small Seeded Broadleaf Weeds	3	24	Post-harvest	3.2 to 6.3 qt	Pre-emergence herbicide; apply during dormant season or at renovation prior to regrowth of foliage or as directed spray to row middles using caution not to contact green foliage.
	Solida	<i>rimsulfuron</i>	Annual Broadleaf Weeds And Suppression Of Some Annual Grasses	2		21	4 oz	Pre-emergence herbicide material with some post-emergence activity. Only one application per crop year is allowed. Same herbicide class as Sandea so cannot be used in the same year that Sandea is used.
	Venue	<i>pyraflufen</i>	Annual and perennial broadleaf weeds		12	0	1.0 to 4.0 oz (3.0 to 4.0 oz for sucker management)	Non-selective contact herbicide for post-emergence control of perennial broadleaf weeds. Do not allow contact with green bark. See label for additional restrictions.
	Zeus XC	<i>sulfentrazone</i>	Annual grasses and some broadleaf weeds	14	12	3	8 to 12 oz	Pre-emergence herbicide material with some post-emergence activity on some weeds at early stages of growth. Some activity on sedges. <i>Registered in all New England States except MA.</i>

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	Zeus Prime XC	<i>carfentrazone-ethyl plus sulfentrazone</i>	Annual Broadleaf Weeds and Grasses and Nutsedge	14	12	3	7.7 to 15.2 oz	Pre-emergence herbicide material with some post-emergence activity on some weeds at early stages of growth. Some activity on sedges. <i>Registered in all New England States except MA</i>
Remove								
Insecticides	Belt	<i>flubendiamide</i>	Climbing cutworm, Grape Berry Moth, Leafrollers, Orange Tortix	28	12	7	3 to 4 oz	Bayer is expected to remove Grapes from the label for this product.
Fungicides	Rubigan IEC	<i>fenarimol</i>	Powdery Mildew	3	12	21	5 oz	This product is no longer manufactured.

*Not all material formulations are listed. Always read and follow label instructions and restrictions. **The label is the law.***

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