

Redheaded flea beetle - life stage predictions for South, Central, and Northern New Jersey with material considerations

Calendar date predictions for target range as of 4/7/2022

Information compiled by Dr. Timothy J. Waller - Rutgers Cooperative Extension (2021)

Growth Stage	Gen.	GDD50 TARGET RANGE <i>-LOW-</i> <i>-HIGH-</i>	GDD50 TARGET RANGE	SOUTH		CENTRAL		NORTH		NOTES (high infestation locations) <i>Systemic (S) - Contact (C) - Biologicals (B) - Herbicides (H)</i>	Material / Compound Considerations (Examples = no endorsements implied) [IRAC GROUP #]
				Upper Deerfield (NJ50)		Howell (NJ10)		High Point (NJ59)			
				LOW (DATE)	HIGH (DATE)	LOW (DATE)	HIGH (DATE)	LOW (DATE)	HIGH (DATE)		
Egg hatch - larvae	1	242	600	4-May	30-May	10-May	5-Jun	28-May	20-Jun	(S) Initiate systemic treatments 1-month prior to adult activity (S) Systemic granular or granular incorporation @ planting is effective (C) Contact materials may be used to knock-down larvae (B) Some bio-rational / logicals are effective on larvae - Look for larval activity on the outside of root balls - Larvae may be active prior to this GDD50 timeframe	SYSTEMIC DRENCHES Cyantraniliprole [28] (Mainspring) Chlorantraniliprole [28] (Acelepryn) Organophosphates [1B] - Acephate (Orthene, Acephate 97UP) Neonicotinoids [4A] - Dinotefuran (Safari 20SC) ; Thiomethoxam (Flagship 25 WG) ; Imidacloprid (Imidacloprid 2F, Marathon 1%G, Marathon II)
Adults (feeding / laying eggs)	1	517	1028	25-May	18-Jun	31-May	24-Jun	15-Jun	11-Jul	(S/C/B) Start adult contact sprays - continue systemic treatments (H) Control weeds - adults will hide-in and feed-on them - Adult feeding damage will be apparent - Scout to determine best time for applications - Use of agitator compounds may drive adults from hiding	GRANULAR APPLICATIONS and INCORPORATIONS Neonicotinoids [4A] Imidacloprid (Marathon 1%G, Coretect tablets, Mallet 0.5G) <i>(Initiate systemic treatments 1-month prior to adult activity)</i>
				POTENTIAL OVERLAP OF GENERATIONS / STAGES							
Egg hatch - larvae	2	1570	1860	8-Jul	17-Jul	16-Jul	26-Jul	5-Aug	19-Aug	(S) Continue systemic treatments (C/B) Contact materials to target larvae AND adults - Potential for considerable overlap of larvae - adult stages (H) Control weeds - adults will hide in and feed on them	CONTACT Bifenthrin [3A] (UP Star SC, Talstar Select) Clyfluthrin [3] (Decathalon 20WP) - Rotation partner Carbamates [1A] - Carbaryl (Sevin SL) Tolfenpyrad [21A] (Hachi-Hachi SC) Cyclaniliprole [28] (Sarisa) + Fonicamid [29] (Pradia)
Adults (feeding / laying eggs)	2	1878	2318	19-Jul	3-Aug	27-Jul	13-Aug	20-Aug	16-Sep	(C/B) Adult contact sprays (S) * If pest pressure is high * - continue systemic materials (H) Control weeds - adults will hide-in and feed-on them - Adult feeding damage will be apparent - Use of agitator compounds may drive adults from hiding	BIOLOGICAL / BIORATIONAL Azadirachtin (Aza-Direct, Azatin-O) Beneficial nematodes (Millennium) Entomopathogenic fungi (Ancora, BotaniGuard) Adult Agitator (Captiva Prime)
* A third generation of larvae and feeding adults is possible in the southern and central regions *				<small>Estimated using USPEST.org, 3.5-month CFSv2 based seasonal climate forecast, simple average growing degree-days, min temp: 50F, max temp: 95F.</small>							
				<small>Insect development growing degree-day ranges based on trials by Dr. Kunkel - Extension Specialist - University of Delaware - subject to change</small>							

SYSTEMIC DRENCHES

- Cyantraniliprole [28] (Mainspring)
- Chlorantraniliprole [28] (Acelepryn)
- Organophosphates [1B] - Acephate (Orthene, Acephate 97UP)
- Neonicotinoids [4A]- Dinotefuran (Safari 20SC) ; Thiomethoxam (Flagship 25 WG) ; Imidacloprid (Imidacloprid 2F, Marathon 1%G, Marathon II)

CONTACT

- Bifenthrin [3A] (UP Star SC, Talstar Select)
- Clyfluthrin [3] (Decathalon 20WP) - Rotation partner
- Carbamates [1A] - Carbaryl (Sevin SL)
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GRANULAR APPLICATIONS and INCORPORATIONS

- Neonicotinoids [4A]
- Imidacloprid (Marathon 1%G, Coretect tablets, Mallet 0.5G)
- (Initiate systemic treatments 1-month prior to adult activity)

BIOLOGICAL / BIORATIONAL

- Azadirachtin (Aza-Direct, Azatin-O)
- Beneficial nematodes (Millennium)
- Entomopathogenic fungi (Ancora, BotaniGuard)
- Adult Agitator (Captiva Prime)