

# Birds and Industrial Hemp: potential for bird damage or opportunities as a decoy crop for sunflower

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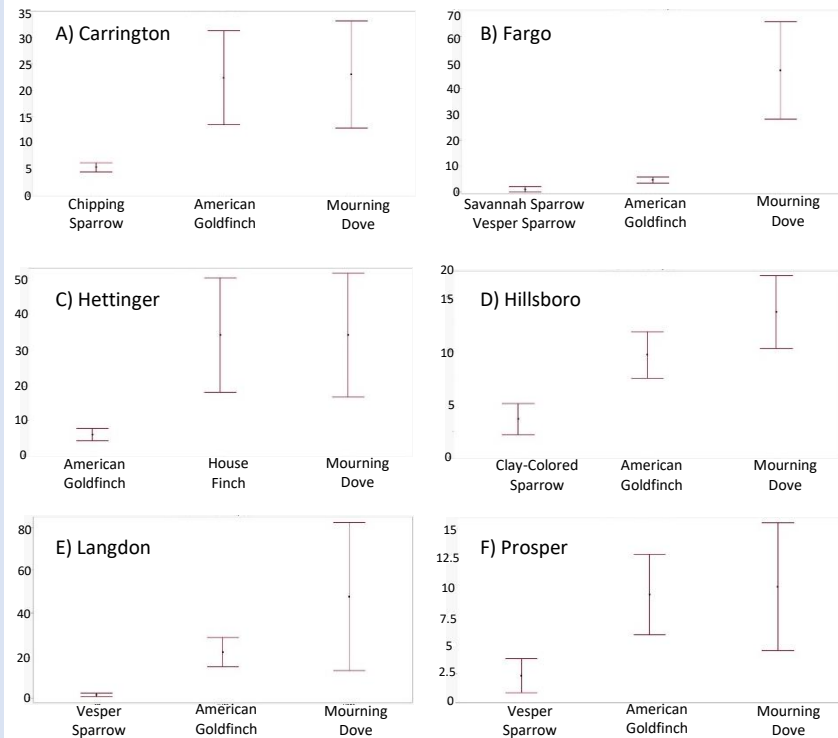


## Species Diversity

Site	Site Diversity	Field Diversity
Carrington	7	5
Fargo	16	10
Hettinger	9	6
Hillsboro	10	5
Langdon	7	5
Prosper	14	11



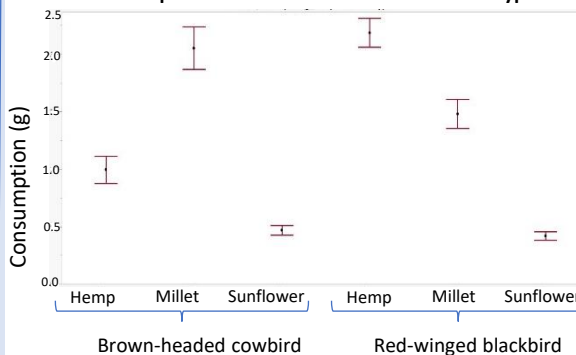
## Mourning doves and American goldfinches are in the top three at every site.



**Fig. 1:** Abundances of the 3 most prevalent species at A) Carrington, B) Fargo, C) Hettinger, D), Hillsboro, E) Langdon, and F) Prosper, ND USA.

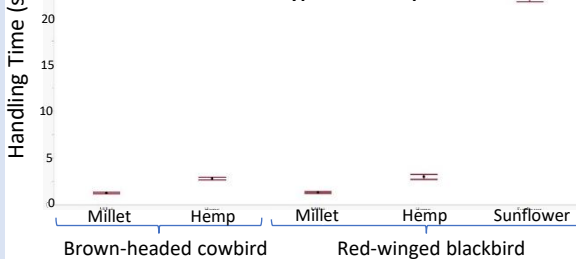
## Seed Consumption

Red-winged blackbirds prefer hemp and Brown-headed cowbirds prefer millet when offered three seed types.

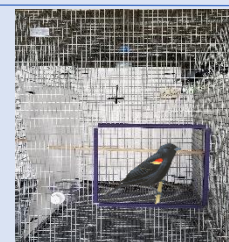


**Fig. 2:** Consumption for millet > hemp > sunflower for BHCO (KW/Steel-Dwass,  $p < 0.0001$ ). RWBL consumed more hemp than millet (KW/S-D,  $p = 0.002$ ) and sunflower (KW/S-D,  $p < 0.0001$ ). Consumption was significantly different when comparing RWBL and BHCO for hemp (KW,  $p < 0.0001$ ) and millet (KW,  $p = 0.01$ ) but not sunflower (KW,  $p = 0.46$ ).

Seed handling did not differ between species but differed with seed type for both species.



**Fig. 3:** RWBL and BHCO had similar handling times for hemp (KW,  $p = 0.90$ ) and millet (KW,  $p = 0.08$ ). BHCO did not readily consume sunflower. Handling times for hemp > millet for BHCO (KW,  $p < 0.0001$ ). Handling times varied with seed type for RWBL (sunflower > hemp > millet (KW/S-D,  $p < 0.0001$ )).



Sunflower



42% oil

Hemp



32% oil

Millet



4% oil

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