

# ANNUAL REPORT - UNLISTED PESTICIDE USE for the year 2024

Golf Course: Keystone Links Golf and Country Club

GC IPM #: 11-690

Address: 2402 Clifford Line Cavan Monaghan Ontario K9J 6Z9

Email Address: keystonelinks@gmail.com

Tel: 705-876-8061

IPM Certified Agent(s): Tara DeBlois, Chris Wilkinson

IPM Agent(s) Certification Number(s): 2845, 3056

Unlisted Pesticide Ingredient	Reason for Use	Total Quantity Unlisted Pesticide Ingredient Used (kg)		Reason for Increase/Decrease from Previous Calendar Year
		2023	2024	
chlorpyrifos	Not used	1.08	.000	Product no longer licensed for use
tebuconazole	Dollar spot	2.4	4.800	Product rotation (Mirage Stressguard)
fludioxonil	Snow mould	1.8	1.800	No change
carfentrazone-ethyl	Moss	0.016	.106	Higher impact of moss on putting surface in current season



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Unlisted Pesticide Ingredient	Reason for Use	Total Quantity Unlisted Pesticide Ingredient Used (kg)		Reason for Increase/Decrease from Previous Calendar Year
		2023	2024	
chlorantraniliprole	Japanese beetle	0.11	.120	Very small difference, slightly expanded greens coverage
trifloxystrobin	Dollar spot	0.25	.125	Product rotation (Exteris Stressguard)
fluopyram	Dollar spot	0.25	.125	Product rotation (Exteris Stressguard)
lambda-cyhalothrin	Ants	0.001	.008	Replacement for chlorpyrifos to control ants



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benzovindiflupyr	Snow mould	0.18	.180	No change
trinexapac-ethyl	Dollar spot, other disease	0.306	1.341	Effective in past season, program to regulate turf growth and increase nutrition to support density and reduce need for direct disease control.
fluoxastrobin	Not used	0.672	.000	Product (Disarm) ineffective in previous season
chlorothalonil	Fusarium Patch /Microdochium Patch, Dollar spot	10	9,900	Fusarium patch/ microdochium patch not treated previous year, product rotaion for dollar spot control



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		2023	2024	
propiconazole	Not used	0.78	.000	Product Rotation (Banner MAXX)
Isofetamid	Dollar spot	0.6	.640	Similar use: Kabuto 400 SC Fungicide effective in past season
Fluazinam	Dollar spot	1.2	.640	Product rotation (Secure Fungicide)
2,4-D	Dandelion, clover, other broadleaf weeds	NA	6.460	Treated areas over threshold, yearly assessment and rotation of target areas to control perennial weeds in worst affected areas based on scouting



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		2023	2024	
dicamba	Dandelion, clover, other broadleaf weeds	NA	.612	Treated areas over threshold, yearly assessment and rotation of target areas to control perennial weeds in worst affected areas based on scouting
mecoprop	Dandelion, clover, other broadleaf weeds	NA	3.400	Treated areas over threshold, yearly assessment and rotation of target areas to control perennial weeds in worst affected areas based on scouting
Delamethrin	Ants	NA	.045	New product as chlorpyrifos no longer in use
thiophanate-methyl	Dollar spot	NA	5.000	New product (Renovo Fungicide) in rotation for late season disease control



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**Golf Course:**

Keystone Links Golf and Country Club

**Please upload map(s) of the golf course showing the locations where unlisted pesticides were applied, and identify use by unlisted pesticide ingredient or by product type (fungicide, insecticide, herbicide, growth regulator)**

Please explain how practicing integrated pest management (IPM) and maintaining IPM accreditation with the IPM Council of Canada minimized the use of pesticides on your golf course and how it will minimize use in this current calendar year.

As in past years, our 2024 program continued to focus on greens quality. Based on member feedback and our observed results in the 2023 season, we co-ordinated of our nutrition and growth regulation programs to optimize results on density, focusing the regulation program on the early high growth months of the season and eliminating regulation in the later part of the summer to improve the plant's ability to recover from disease and stress when daylight hours decreased. We also increased these regulation treatments on our driving range in response to increased player demand. We were also able further improve our control moisture on the greens through the updated irrigation computer system resulting in decreased stress due to drought or untimely watering. We retained a similar verti-cutting, aeration, and nutrition application schedule as in 2023, however increased the frequency of heavy rolling in the mornings in addition to the regular green mowing, resulting in approximately 20% disease stress on days when the heavy rolling was added. Fungal disease is our biggest challenge affecting greens quality. The introduction of weather analysis apps that track conditions supporting dollar spot growth was a valuable new tool for us in the 2024 season. Paired with our own scouting data, we were able to use the weather pattern analysis to time our product applications to greatest effect and apply only when needed. Japanese beetle was again reduced on the greens due to an even earlier treatment for the pest, however customer and staff feedback indicates a significant pest presence in many areas of the rough. We will continue to reduce insect breeding habitat by continuing to mow areas previously maintained as tall links style fescue. Infiltration of moss continued onto the greens in 2023 and the planned broad treatment using Quicksilver herbicide had a positive effects and will likely continue in future years. Aeration of moss plaques was again completed to attempt to improve airflow to the root zones, however as in 2023 had little effect. We continued to repair affected areas with topdressing and seeding to introduce competitive turf into the dead plaque zones. Perennial weed control continues to be a rotating program targeting only those areas with a high percentage of weed cover or where play is most impacted. Perennial weed control occurred exclusively in the rough in 2024. Fairways and tees will require treatment in 2025 as the remaining control from 2021 and 2022 seasons has decreased above threshold. Frequent mowing during peal bloom periods reducing seed dispersion and maintained the pest under threshold. Overall the strategy of our program aimed to identify areas where conditions were deficient and synchronize cultural practices, irrigation, nutrition and pest control applications to build healthy turf in key areas of play. Improvements in quality were again noticed by customers and we will continue adapting our program into future seasons.

*We, the undersigned, attest that the above information is accurate and inclusive of all pesticide products applied on our golf course for the entire year. We are aware that it is an offence under the Pesticides Act: 17(6) to include false or misleading information in any document or data required to be created, stored or submitted under the Act.*

**Primary IPM Certified Agent signature:**



**Date:** 16-January-2025

**Owner's representative name & position:**

Keyla Wight - Owner

**Signature:**



Print hard copy for signatures. Signed Annual Reports must be scanned and uploaded in My IPM area of IPM Council of Canada website.