Delayed development of resistance to QoI fungicides in *Venturia inaequalis* in Israeli apple orchards and improved apple scab management using fungicide mixtures

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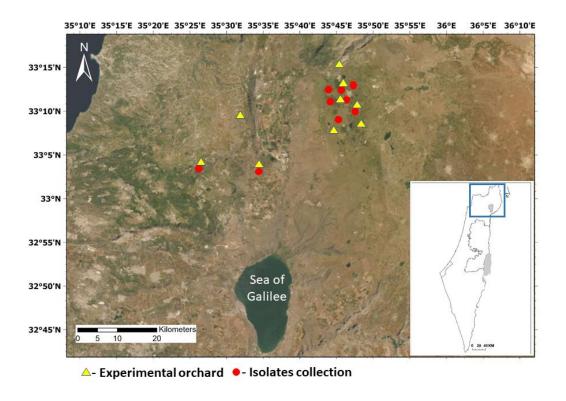


Figure S1. Map of Israel (right bottom corner) with the current study area highlighted in blue. Magnification of the Galilee and Golan regions with the experimental orchards (yellow triangle) and sites of isolates collection (red circles).

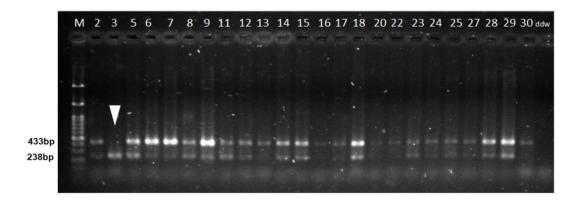


Figure S2. PCR of the 24 out of 28 apple scab isolates collected. All isolates show a band at 238 bp, confirming that these are isolates of *V. inaequalis*. Most isolates, except number 3 (marked with a white arrow), shows a band at 433 bp, confirming their resistance to strobilurins and the sensitivity of isolate 3 to QoI.

Table S1. Isolates of *Venturia inaequalis* from apple orchards that were used in this study. Isolates were collected from infected apple fruits and leaves of cv. Red Delicious Starking in nine different orchards in Northern Israel (The Golan, Upper Galilee and Hula Valley), the main growing region in Israel.

Isolate number	Isolate code	Location	Plant organ
1	V.i-Sk-Alb-f	Alonei-Ha'bashan	Fruit
2	V.i-ER-f	El-Rom	Fruit
3	V.i-Bq-No-l-d	Buq'ata	Leaf
4	V.i-AL-1-d	Alonei-Ha'bashan	Leaf
5	V.i-HV-f	Varda mountain	Fruit
6	V.i-Ym-l-u	Yesud HaMa'ala	Leaf
7	V.i-Ym-l-d	Yesud HaMa'ala	Leaf
8	V.i-ER-l-d	El-Rom	Leaf
9	V.i-HV-Flint-f	Varda mountain	Fruit
10	V.i-Bq-Gs-l-d	Buq'ata	Leaf
11	V.i-HV-Flint-l-u	Varda mountain	Leaf
12	V.i-HV-T+C-l-u	Varda mountain	Leaf
13	V.i-Bq-Gs-f	Buq'ata	Fruit
14	V.i-AL-f	Alonei-Ha'bashan	Fruit
15	V.i-Stk-HV-l-d	Varda mountain	Leaf
16	V.i-AL-l-u	Alonei-Ha'bashan	Leaf
17	V.i-HV-l-d	Varda mountain	Leaf
18	V.i-Stk-HV-f	Varda mountain	Fruit
19	V.i-Ym-f	Yesud HaMa'ala	Fruit
20	V.i-HV-l-u	Varda mountain	Leaf
22	V.i-Bq-Fau-l-u	Buq'ata (Fauzi)	Leaf
23	V.i-HV-Flint-l-d	Varda mountain	Leaf
24	V.i-Bq-Gs-l-u	Buq'ata	Leaf

25	V.i-Mat-l-u	Matityahu Experimental Station	Leaf
27	V.i-Mat-l-d	Matityahu Experimental Station	Leaf
28	V.i-Bq-Mn-l-d	Buq'ata (Mansur)	Leaf
29	V.i-HV-T+C-l-d	Varda mountain	Leaf
30	V.i-Bq-No-l-u	Buq'ata	Leaf
31	V.i-Sh-f	Sha'al	Fruit