

The Spornado is a passive spore trapping device for airborne pathogens that are prevalent in Western Canadian crops. Results assist in making fungicide application decisions.

GETTING STARTED

INSTALLATION

1. Required: ½ inch pipe with NPT thread. Select the proper height so the funnel of the Spornado sits about 1 foot above the plant canopy.
For ease of use, push a reinforcing bar (rebar) into the ground and set the pipe on top.
2. Screw the brass cap of the Spornado to the top of the pipe until snug.

Use 1 Spornado per field/quarter section (approx.160 acres)

FIELD LOCATION

Place the Spornado into the field in an open area away from windbreaks, trees, or buildings. Avoid placing the Spornado right next to a field edge or gravel road. Place the Spornado where there has been past disease issues in the field, or in low lying wet areas of the field, and in a spot where the Spornado will catch the most wind blowing over the field.

HEIGHT

Position the Spornado approximately 1 foot above the plant canopy. Consider changing the height through the growing season as the plant canopy gets taller.



INSERTING THE CASSETTE

1. Place the cassette through the bottom of the Spornado. The wider part of the cassette will face towards the front of the unit.
2. Snap in the cassette through the bottom of the Spornado until you hear it click in place.
If the cassette doesn't fit right, gently push the two halves of the cassette together.

REGISTER ONLINE

3. A link is sent to you by email from 20/20 Seed Labs. Select the link and **complete the online cassette form**.

REMOVING THE CASSETTE

1. Reach into back of Spornado, press down on the rim of cassette, and pop it out of the bottom. Be careful not to touch the membrane of the cassette with your fingers.
2. **Write** the date of removal and pathogen tests required directly on the cassette bag provided.

REGISTER ONLINE

3. **Complete the online cassette form** (from the URL link sent to you by email from 20/20 Seed Labs).

SHIPPING TO THE LAB

Drop off the cassette at the lab OR place the cassette in a padded envelope and ship by overnight courier (such as Purolator) to the Nisku lab. A cooler is not required.

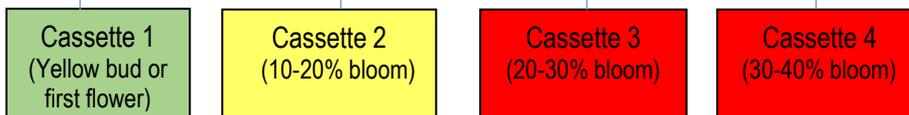
20/20 Seed Labs Inc.

507 – 11 Avenue
Nisku, AB T9E 7N5

TESTING RECOMMENDATIONS

Sclerotinia Stem Rot of Canola (*Sclerotinia sclerotiorum*)

Source: NDSU



Cassette 1 (optional): test the cassette at the **yellow bud stage** or when the canola starts to flower. The result of this test will give you an indication if there are Sclerotinia spores in the field.

Cassette 2: test the next cassette 2-4 days later at **10%-20% bloom** to see if there is any progression of Sclerotinia spore load in the field from when the initial test was completed. If the result comes back as “Detected”, begin to assess your disease risk and management options.

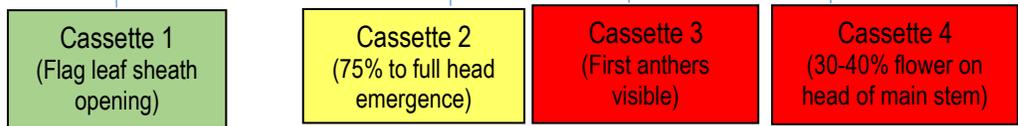
Cassette 3: test the next cassette 2-4 days later at **20%-30% bloom stage**. This will be your prime start of fungicide application if the result comes back as “Detected” and the weather conditions are favorable for disease. Fungicide applied at this stage will coat the flower petals and provide important coverage below the plant canopy. Ideally, Sclerotinia fungicide is applied on the earlier side of crop flowering, when there is the most open flowers and before the petals begin to drop, around 30% bloom (Canola Council of Canada, 2015).

Cassette 4: test the next cassette 2-4 days later at **30%-40% bloom stage**, if you haven’t seen any spore results from previous tests. If the test result is positive, and you are at **50% bloom stage**, you are still in the window for a fungicide application if weather conditions are favorable.

Fusarium Head Blight of Common and Durum Wheat (*Fusarium graminearum*)



Source: Sask Wheat



Cassette 1 (optional): test the cassette after the **flag leaf sheath opens**. The result of this test will give you an indication if there are Fusarium spores in the field.

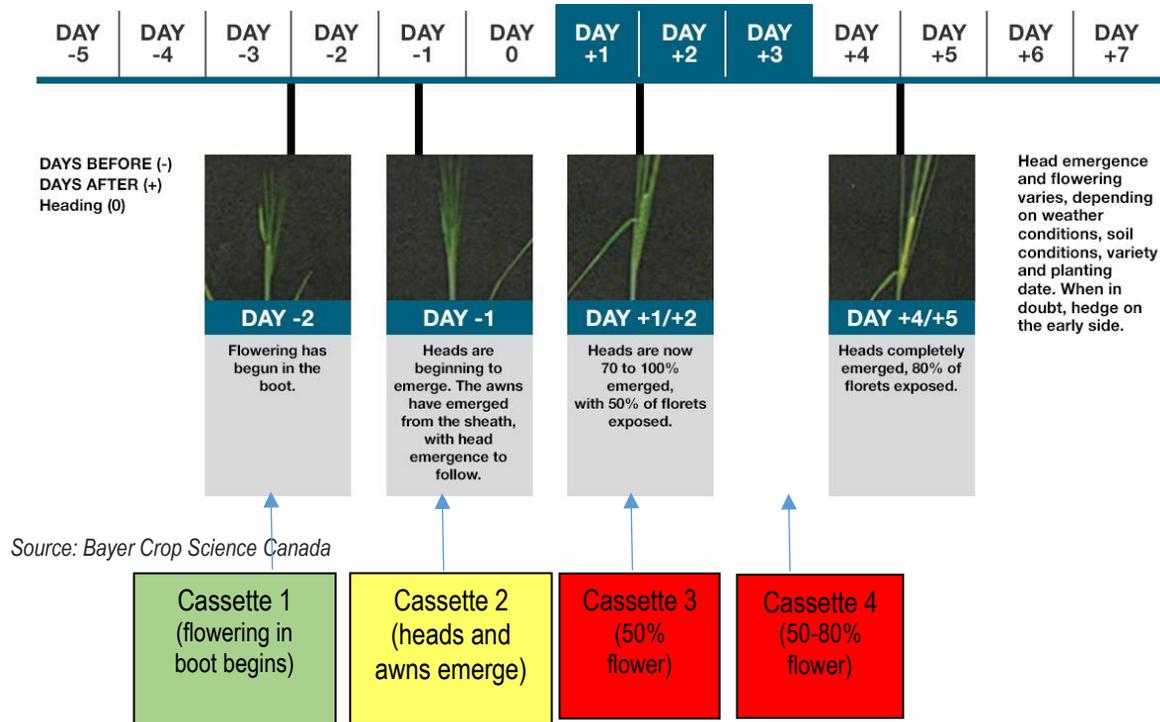
Cassette 2: test the next cassette 2-4 days later at **75% to full wheat head emergence** on the main stem. If the result comes back as “Detected”, begin to assess your disease risk and management options.

Cassette 3: test the next cassette 2-4 days later when **flowering begins** and yellow anthers are visible on the head of the main stem. This will be your prime start of fungicide application if the result comes back as “Detected” and the weather conditions are favorable for disease.

Cassette 4: test the next cassette 2-4 days later when the wheat head on the main stem is at **30-40% flower** if you haven’t seen any spore results from previous tests.

- If the test result is positive, and you are at **50% flower**, you are still in the window for a fungicide application if weather conditions are favorable. Once the anthers on the wheat head have turned white, testing for a fungicide application will provide less economic benefit as you are at the end of your window for spray timing

Fusarium Head Blight of Barley (*Fusarium graminearum*)



Cassette 1 (optional): test the cassette as barley begins to **flower in the boot**, or when the awns start to poke through. The result of this test will give you an indication to see if there are Fusarium spores in the field.

Cassette 2: test the next cassette 2-4 days later when **heads and awns start to emerge** from the sheath. If the result comes back as “Detected”, begin to assess your disease risk and management options.

Cassette 3: test the next cassette 2-4 days later when barley heads are fully emerged and at **50% flower**. This will be your prime start of fungicide application if the result comes back as “Detected” and the weather conditions are favorable for disease.

Cassette 4: test the next cassette 2-4 days later if you haven’t seen any spore results from previous tests, when the barley head on the main stem is at **50-80% flower**. This is the last stage of the fungicide application window.

Late Blight of Potatoes (*Phytophthora infestans*)



Source: AAFC

Testing Start
(emergence)

Testing End
(top kill)

Cassette Testing: test the cassette **2 times per week** from **crop emergence** (plants 12 cm-15 cm tall) to **top kill**, or until the end of fungicide application timing and favourable weather conditions.

CONTACT US

If you have any questions please contact us!

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2020seedlabs.ca/Spornado

References:

Canola Council of Canada. *10%, 20% and 50% flower*. 2015,

www.canolacouncil.org/canola-watch/2015/07/02/10-20-and-50-flower/#:~:text=Canola%20can%20reach%2020%20per,10%20days%20after%20first%20flower