#### UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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SYNGENTA CROP PROTECTION AG, Petitioner,

v.

UPL LTD, Patent Owner.

Case PGR2023-00017 Patent 11,445,727

DECLARATION OF CAIO PRATES OF SYNGENTA CROP PROTECTION AG



Case PGR2023-00017 U.S. Patent No. 11,445,727

I, Caio Prates, hereby declare as follows:

1. My name is Caio Prates and I am an employee of Syngenta Crop

Protection AG, where I have worked for almost 12 years. My current position is

Fungicides Technical Manager at Syngenta Crop Protection AG, São Paulo, Brazil.

2. I make this declaration based upon personal knowledge. I am over the age

of 21 and otherwise competent to make this declaration.

3. My responsibilities at Syngenta Corp Protection AG ("Syngenta") are

management of the fungicide team and also being responsible for new fungicides

development. This involves a lot trials and methods involved in testing chemical

compounds to determine if they exhibit relevant fungicidal activity.

4. Syngenta attempted to duplicate the tests in U.S. Patent 11,445,727, as

well as other combinations claimed in the '727 Patent. The protocol was as

follows.

Field Test - 1 (2020/2021)

5. A field test was prepared with the following materials and methods:

Varieties:

M8372 IPRO, NS7667 IPRO, NA5909 RR

Trial Design:

Compl. rand. Blocks in 4 reps; plot size 18 m<sup>2</sup>

**Equipment:** 

Backpack: 150L/ha, flat nozzle, 30 lbs.



## **Application Timing:**

A – Canopy pre closure (42 DAE of average)

B-14 days after application A

C – 14 days after application B

### **Assessment:**

% Severity – at 0, 7, 14, 21, 28, 35, 42 and 49 DAAA % Phytotoxicity – 7, 14 Days after all applications

% Defoliation

Yield (kg/ha)

6. The trial program is summarized in Table 1.

#### Table 1

| # | Place (Brazil) | Variety     | Planting<br>Date | Target        |  |
|---|----------------|-------------|------------------|---------------|--|
| 1 | Area 1         | M 8372 IPRO | Dec-08-2020      | P. pachyrhizi |  |
| 2 | Area 2         | NS7667 IPRO | Nov-25-2020      | P. pachyrhizi |  |
| 3 | Area 3         | NA 5909 RR  | Dec-21-2020      | P. pachyrhizi |  |
| 4 | Area 4         | M 8372 IPRO | Dec-05-2020      | P. Pachyrhizi |  |

<sup>\*\*</sup> Trial 4 contained *E. Piffusa* as an additional target.

7. Treatments were applied as described in Table 2, below. Solo applications (A1-A3 and A5-A7) were used to calculated synergy.



# Table 2

| ш   | Active           | Rate        | % Control |  |
|-----|------------------|-------------|-----------|--|
| #   | Ingredient       | (g a.i./ha) |           |  |
| A1  | Benzovindiflupyr | 30          | 36        |  |
| A2  | Prothioconazole  | 70          | 65        |  |
| A3  | Mancozeb         | 900         | 48        |  |
| A 1 | Benzovindiflupyr | 30          |           |  |
| A4  | Prothioconazole  | 70          | 74        |  |
|     | Mancozeb         | 900         |           |  |
| A5  | Benzovindiflupyr | 200         | 55        |  |
| A6  | Prothioconazole  | 150         | 71        |  |
| A7  | Mancozeb         | 1500        | 55        |  |
| A8  | Benzovindiflupyr | 200         |           |  |
| Ao  | Prothioconazole  | 150         | 79        |  |
|     | Mancozeb         | 1500        |           |  |
|     | Benzovindiflupyr | 33.8        |           |  |
| A9  | +                | +           | 75        |  |
| AJ  | Prothioconazole  | 67.5        | 13        |  |
|     | Mancozeb         | 900         |           |  |
|     | Benzovindiflupyr | 30          |           |  |
|     | +                | +           |           |  |
| A10 | Prothioconazole  | 70          | 74        |  |
|     | +                | +           |           |  |
|     | Mancozeb         | 900         |           |  |

8. Table 3 summarizes results of the testing.



# Table 3

| #   | Active<br>Ingredient                                      | Rate<br>g a.i<br>/ha          | Isolated A.I. % Control for Expected Action Calculation | Expected<br>Action<br>(by<br>Colby) | Rust<br>(%Control<br>Observed) | Difference<br>Between<br>Observed<br>and<br>Expected |
|-----|---|-------------------------------|---|-------------------------------------|--------------------------------|--|
| A4  | Benzovindiflupyr + Prothioconazole + Mancozeb             | 30<br>+<br>70<br>+<br>900     | 36<br>64<br>48  | 89                                  | 74                             | -15  |
| A9  | Benzovindiflupyr + Prothioconazole + Mancozeb             | 33.8<br>+<br>67.5<br>+<br>900 | 36<br>64<br>48  | 89                                  | 75                             | -14  |
| A10 | Benzovindiflupyr<br>+<br>Prothioconazole<br>+<br>Mancozeb | 30<br>+<br>70<br>+<br>900     | 36<br>64<br>48  | 89                                  | 74                             | -15  |
| A8  | Benzovindiflupyr + Prothioconazole + Mancozeb             | 200<br>+<br>150<br>+<br>1500  | 55<br>71<br>55  | 94                                  | 79                             | -15  |



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