

Soil fumigation updates

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Nursery Soil Fumigant Usage – 2015-18

| Time of Fumigation | 2018 Data | 2017 Data | 2016 Data | 2015 Data |
|--------------------|--------------|--------------|--------------|--------------|
| Fall | 23 nurseries | 20 nurseries | 14 nurseries | 25 nurseries |
| Spring | 9 nurseries | 6 nurseries | 9 nurseries | 14 nurseries |
| Avg Acreage | 20 acres | 23 acres | 26 acres | 18 acres |
| Total Acreage | 639 acres | 461 acres | 508 acres | 528 acres |

| Fumigant MBr/Chl | 2018 | 2017 | 2016 | 2015 | Rates |
|---------------------------|------|------|------|------|----------------------|
| 98/2 | 0 | 0 | 1 | 2 | 300 - 400 lbs / acre |
| 80/20 | 27 | 26 | 16 | 19 | 240 - 450 lbs / acre |
| 67/33 | 4 | 3 | 3 | 5 | 350 - 400 lbs / acre |
| TriFecta / Telone / Pic + | 1 | 1 | 3 | 13 | 275 - 350 lbs / acre |

| Plastic | 2018 | 2017 | 2016 | 2015 |
|---------|------|------|------|------|
| TIF | 87% | 81% | 82% | 98% |
| HDPE | 10% | 6% | 17% | 1% |
| LDPE | 3% | 13% | 1% | 1% |

Current Nursery AI Usage: 2013-2018

| | Active Ingredient lbs/acre Southwide US | | | | | |
|------|---|-------|------|--------|-------|--|
| | MBr | Chlor | DMDS | Telone | Other | |
| 2013 | 214 | 69 | 170 | 77 | 0 | |
| 2014 | 234 | 72 | 162 | 79 | 340 | |
| 2015 | 239 | 85 | 220 | 107 | 353 | |
| 2016 | 246 | 89 | 0 | 15 | 0 | |
| 2017 | 266 | 78 | 0 | 0 | 0 | |
| 2018 | 258 | 74 | 0 | 96 | 0 | |

Current Nursery Usage: 2013-201

| | Total Soil Fumigant Used Ibs/Year | | | | | | |
|------|-----------------------------------|--------|------|--------|-------|--|--|
| | MBr | Chlor | DMDS | Telone | Other | | |
| 2013 | 118,532 | 36,553 | 1595 | 3180 | 0 | | |
| 2014 | 130,101 | 40,043 | 3363 | 4459 | 1020 | | |
| 2015 | 109,660 | 37,776 | 2200 | 6003 | 3585 | | |
| 2016 | 124,716 | 44,952 | 0 | 7620 | 0 | | |
| 2017 | 188,755 | 50,054 | 0 | 0 | 0 | | |
| 2018 | 206,448 | 43,129 | 0 | 96 | 0 | | |

EPA / USDA / MeBTOC

- No contacts from APHIS, USDA, EPA or MeBTOC concerning regarding pre-shipment and quarantine (QPS) or any other soil fumigant.
 - The current Administration and Cabinet Leaders will result in little to no changes in labels or Re-registration over the next two years.
 - Quietest phone in 2 years with respect to chemistry concerns.



So . . . For now

O SFNMC

- Collect soil fumigant usage and soil fumigant concerns annually – Spring 2019 and Fall 2019.
- Compile and respond to requests from EPA as they appear on Federal Register.
- Federal Register Schedule for RED's way behind.
- O Keep Advisory group informed.

Triadimefon - Bayleton

- 2016 Bayer CropScience requested a voluntary cancellation to EPA that the label for triadimeter be pulled from the market.
- 30-day comment period if users were to be affected.
- O Discontinuing the production Bayleton on a global level that would cease its production by Bayer at the end of 2020.
- Significant costs associated with generating data required by EPA for Registration Review and significant capital investment required to upgrade our manufacturing facility to continue production of this molecule.
- There is a possibility that a 3rd party would pick up the registration/production of triadimefon but, based on the better environmental impacts of newer generation DMI fungicides, doubtful that someone would pick up the costs.
- O Bayer will no longer be authorized to produce or sell Triadimefon-based products after December 31, 2020. Time frame in which Distributors can distribute and End Users can apply the product differs by state.
- Dayer CropScience can advocate within company to keep the federal registration active to prolong the use of the product to stockpile Bayleton for use past 2020. Would be up to the states to allow its continued use.
- O Bayer is working diligently to close the gap created by the exit of Triadimefon through development and commercialization of new solutions designed to meet disease management needs.

Fusiform Rust Control

- O Continue to use tridimefon, as a seed treatment. Lower costs per a.i.
- Use Proline as a foliar spray.
- O Currently testing two new rust fungi in the field. Two years of good results when challenged with basidiospores in the greenhouse, both are labeled for use in nurseries.
- Currently testing two new rust fungi at the Rust Screening Laboratory in Asheville, NC.
- Possible that nurseries will have new rust control chemistries in 2021.