



Rapportbilaga  
Appendix

# Efficacy testing of hymexazol in sugar beets, Sweden 2014

HUSEC project code: HU-1402

NBR project code: 424-2014

Försöksdata och resultatstabeller  
Trial data and tables of results

Denna publikation innehåller försöksdata och resultat i tabeller och figurer. Det kan förekomma mindre fel och inkonsekvenser i språk och layout. Alla sidor är inte alltid utskriftsvänliga. Vid frågor eller kommentarer är du alltid välkommen att kontakta författaren nedan.

The appendix comprises documentations from the research project. Minor mistakes in language and lack of adjustments in layout may occur. Questions may be addressed to the project manager.

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**Betning mot jordburna svampsjukdomar i sockerbeter. GEP**  
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**Syfte/Aim:** Att prova Tachigaren i olika doser mot *Aphanomyces cochlioides*.  
Efficacy test of hymexazol against *A. cochlioides*

**Trial plan**

| Treatm. | Product    | Fungicide | Hymexazol   | Thiram      | Insecticid   | g a.i./unit |
|---------|------------|-----------|-------------|-------------|--------------|-------------|
|         |            |           | g a.i./unit | g a.i./unit |              |             |
| 1       | Untreated  |           | 0           | 0           | Imidacloprid | 60          |
| 2       | Tiram      |           | 0           | 7           | Imidacloprid | 60          |
| 3       | Tachigaren | Hymexazol | 7           | 0           | Imidacloprid | 60          |
| 4       | Tachigaren | Hymexazol | 14          | 0           | Imidacloprid | 60          |
| 5       | Tachigaren | Hymexazol | 18          | 0           | Imidacloprid | 60          |
| 6       | Tachigaren | Hymexazol | 28          | 0           | Imidacloprid | 60          |

| Series | Försöks nr/Trial no | Försöksvärd (namn och telefon)/Trial host (name and no)          |
|--------|---------------------|--|
| 424    | 21 Skibaröd         | Sten Olsson, Skibaröds gård, 241 62 Löberöd 0709-36 76 98        |
| 424    | 22 Vallåkra         | Göran Svensson, Wideröra gård 292, 253 42 Vallåkra 0708-35 02 80 |
| 424    | 23 Västergård       | Lars Håkansson, Västergård 1067, 268 75 Tågarp 0705-14 03 39     |

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**21 Skibaröd**

|      |      |      |      |      |      |
|------|------|------|------|------|------|
|      |      |      |      |      |      |
| 6    | 1    | 3    | 5    | 4    | 2    |
| 4113 | 4114 | 4115 | 4116 | 4117 | 4118 |

III

|      |      |      |      |      |      |
|------|------|------|------|------|------|
|      |      |      |      |      |      |
| 1    | 2    | 4    | 6    | 5    | 3    |
| 4101 | 4102 | 4103 | 4104 | 4105 | 4106 |

I

|      |      |      |      |      |      |
|------|------|------|------|------|------|
|      |      |      |      |      |      |
| 3    | 4    | 6    | 2    | 1    | 5    |
| 4119 | 4120 | 4121 | 4122 | 4123 | 4124 |

IV

|      |      |      |      |      |      |
|------|------|------|------|------|------|
|      |      |      |      |      |      |
| 4    | 5    | 1    | 3    | 2    | 6    |
| 4107 | 4108 | 4109 | 4110 | 4111 | 4112 |

II

**22 Vallåkra**

|     |      |      |      |      |      |      |
|-----|------|------|------|------|------|------|
|     |      |      |      |      |      |      |
| 6   | 1    | 5    | 2    | 3    | 4    |      |
| IV  | 4149 | 4150 | 4151 | 4152 | 4153 | 4154 |
|     |      |      |      |      |      |      |
| 3   | 4    | 2    | 5    | 6    | 1    |      |
| III | 4143 | 4144 | 4145 | 4146 | 4147 | 4148 |
|     |      |      |      |      |      |      |
| 1   | 2    | 6    | 3    | 4    | 5    |      |
| II  | 4137 | 4138 | 4139 | 4140 | 4141 | 4142 |
|     |      |      |      |      |      |      |
| 4   | 5    | 3    | 6    | 1    | 2    |      |
| I   | 4131 | 4132 | 4133 | 4134 | 4135 | 4136 |

**23 Tågarp**

|     |      |      |      |      |      |      |
|-----|------|------|------|------|------|------|
|     |      |      |      |      |      |      |
| 1   | 3    | 2    | 5    | 6    | 4    |      |
| IV  | 4179 | 4180 | 4181 | 4182 | 4183 | 4184 |
|     |      |      |      |      |      |      |
| 4   | 6    | 5    | 2    | 3    | 1    |      |
| III | 4173 | 4174 | 4175 | 4176 | 4177 | 4178 |
|     |      |      |      |      |      |      |
| 2   | 4    | 3    | 6    | 1    | 5    |      |
| II  | 4167 | 4168 | 4169 | 4170 | 4171 | 7172 |
|     |      |      |      |      |      |      |
| 5   | 1    | 6    | 3    | 4    | 2    |      |
| I   | 4161 | 4162 | 4163 | 4164 | 4165 | 4166 |

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**Skibaröd**

| <b>Analyser och bedömningar</b>                  | <b>Tid</b> | <b>PM</b> | <b>Kommentarer</b>                                 | <b>Utförare</b> | <b>Datum</b> | <b>Signatur</b> |
|--|------------|-----------|--|-----------------|--------------|-----------------|
| Analysis and evaluations                         | Time       | PM        | Comments   | Responsible     | Date         | Signature       |
| Generalprov 6                                    |            | 2.6.1     |  | HS              | 7-jan        | JM              |
| Svampprov  | jan-febr   | 2.6.1     | Soil test for DSI<br>(L. Eriksson)                 | HS              | 7-jan        | JM              |
| Utstakning i fält                                |            | 2.4.1     |  | HS              | 1-apr        | JM              |
| Parcellvis sådd                                  |            | 2.4.2     |  | HS              | 17-apr       | JL NJH          |
| Planträkning 20                                  |            | 2.5.4     |  | HS              | 30-apr       | HH RM           |
| Planträkning 50                                  |            | 2.5.4     |  | HS              | 2-maj        | MN RM           |
| Planträkning max                                 |            | 2.5.4     |  | HS              | 18-juni      | RM TT           |
| Planträkning slutl                               |            | 2.5.4     |  | HS              | 25-sep       | MN RM           |
| Rotbrandsbed. 1                                  | BBCH 10-11 | 2.5.8     | In sampling area                                   | HS              | 13-maj       | JL MI RM        |
| Rotbrandsbed. 2                                  | BBCH 14-15 | 2.5.8     | In sampling area. Two weeks after first evaluation | HS              | 27-maj       | NJH MI          |
| <b>Försöket ska hållas rent från bladsvamp 1</b> |            |           | Comet 0,5 l/ha                                     | HS              | 1-aug        | Sten Olsson     |
| Bladsvampsbehandling 2                           |            |           |  | HS              | 21-aug       | Sten Olsson     |
| Bladsvampsbehandling 3                           |            |           |  | HS              | 11-sep       | Sten Olsson     |
| Besiktning inför skörd                           |            |           |  | NBR             |              |                 |
| Skörd  |            | 2.4.7     |  | HS              | 3-nov        | JMY NJH JL      |
| Leverans till provtvätt                          |            | 2.4.7     |  | HS              | 5-nov        | JL              |
| Svampangrepp efter skörd                         |            | 2.5.10    |  | NBR HS          | 9-nov        | MNI             |
| Analys av skördevariabler                        |            | -         |  | NS              | 9-nov        | MNI             |

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Vallåkra

| Analyser och bedömningar                       | Tid        | PM     | Kommentarer  | Utförare    | Datum     | Signatur  |
|--|------------|--------|--|-------------|-----------|-----------|
| Analysis and evaluations                       | Time       | PM     | Comments   | Responsible | Date      | Signature |
| Generalprov 6                                  |            | 2.6.1  |  | HS          | 13-jan    | JM        |
| Svampprov                                      | jan-febr   | 2.6.1  | Soil test for DSI (L. Eriksson)                    | HS          | 13-jan    | JM        |
| Utstakning i fält                              |            | 2.4.1  |  | HS          | 13-jan    | JM        |
| Parcellvis sådd                                |            | 2.4.2  |  | HS          | 23-apr    | JMY HH    |
| Planträkning 20                                |            | 2.5.4  |  | HS          | 1-maj     | JM        |
| Planträkning 50                                |            | 2.5.4  |  | HS          | 3-maj     | JM RM     |
| Planträkning max                               |            | 2.5.4  |  | HS          | 4-juni    | RM MN     |
| Planträkning slutl                             |            | 2.5.4  |  | HS          | 30-juni   | RM TT     |
| Rotbrandsbed. 1                                | BBCH 10-11 | 2.5.8  | In sampling area                                   | HS          | 15-maj    | JM MNI    |
| Rotbrandsbed. 2                                | BBCH 14-15 | 2.5.8  | In sampling area. Two weeks after first evaluation | HS          | 3-juni    | MI JO     |
| <b>Försöket ska hållas rent från bladsvamp</b> |            |        | Comet 0,5 l/ha                                     | HS          |           |           |
| Bladsvampsbehandling 1                         |            |        |  | HS          | 8-aug     | JL        |
| Bladsvampsbehandling 2                         |            |        |  | HS          | Ej utförd |           |
| Besiktning inför skörd                         |            |        |  | NBR         |           |           |
| Skörd  |            | 2.4.7  |  | HS          | 16-sep    | JM JMY JO |
| Leverans till provtvätt                        |            | 2.4.7  |  | HS          | 17-sep    | JO        |
| Svamptangrepp efter skörd                      |            | 2.5.10 |  | NBR         | 18 sept   | MNI       |
| Analys av skördevariabler                      |            | -      |  | NS          | 18 sept   | NS        |

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Västregård

| Analyser och bedömningar                       | Tid        | PM     | Kommentarer  | Utförare    | Datum                          | Signatur  |
|--|------------|--------|--|-------------|--------------------------------|-----------|
| Analysis and evaluations                       | Time       | PM     | Comments   | Responsible | Date                           | Signature |
| Generalprov 6                                  |            | 2.6.1  |  | HS          | 8-jan                          | JM        |
| Svampprov                                      | jan-febr   | 2.6.1  | Soil test for DSI<br>(L. Eriksson)                 | HS          | 8-jan                          | JM        |
| Utstakning i fält                              |            | 2.4.1  |  | HS          | 2-apr                          | JM        |
| Parcellvis sådd                                |            | 2.4.2  |  | HS          | 5-apr                          | MN JL JM  |
| Planträkning 20                                |            | 2.5.4  |  | HS          | 22-apr                         | JM RM     |
| Planträkning 50                                |            | 2.5.4  |  | HS          | 25-apr                         | JM RM     |
| Planträkning max                               |            | 2.5.4  |  | HS          |                                |           |
| Planträkning slutl                             |            | 2.5.4  |  | HS          |                                |           |
| Rotbrandsbed. 1                                | BBCH 10-11 | 2.5.8  | In sampling area                                   | HS          | 9-maj                          | JM BN MNI |
| Rotbrandsbed. 2                                | BBCH 14-15 | 2.5.8  | In sampling area. Two weeks after first evaluation | HS          | 27-maj                         | JM MNI RM |
| <b>Försöket ska hållas rent från bladsvamp</b> |            |        | Comet 0,5 l/ha                                     | HS          | Ej svampbehandlat              |           |
| Bladsvampsbehandling 1                         |            |        |  | HS          |                                |           |
| Bladsvampsbehandling 2                         |            |        |  | HS          |                                |           |
| Besiktning inför skörd                         |            |        |  | NBR         |                                |           |
| Skörd  |            | 2.4.7  |  | HS          | Ej skördat för lågt plantantal |           |
| Leverans till provtvätt                        |            | 2.4.7  |  | HS          |                                |           |
| Svamptangrepp efter skörd                      |            | 2.5.10 |  | NBR         | -                              | -         |
| Analys av skördevariabler                      |            | -      |  | NS          | -                              | -         |

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**Fertilizer and plant protection**

**Ogräsbekämpning / Weed control**

| Plats / Site | Datum<br>date | Produkt och dos / Product and dose<br>G = Goltix, B = Betanal, P = Pyramin, S = Safari, E= Ethosat, O = olja |
|--------------|---------------|--|
| Skibaröd     | 29-04-2014    | 1,5 G + 0,6 BP + 0,05 E + 0,5 O  |
|              | 12-05-2014    | 2,0 G + 0,6 BP + 0,05 E + 0,5 P + 0,5 O  |
|              | 24-05-2014    | 1,0 G + 0,6 BP + 30 g S + 0,5 O  |
| Vallåkra     | 2014-05-08    | 1,5 Goltix + 0,6 Betanal Power + 0,5 olja  |
|              | 2014-05-18    | 1,5 Goltix + 0,6 Betanal Power + 0,5 Pyramin + 0,05 Ethosat + 0,5 olja                                       |
|              | 2014-05-31    | 1,5 Goltix + 0,6 Betanal Power + 0,5 Pyramin + 0,1 Ethosat + 0,5 olja  |
| Västergård   | -             | -  |
|              | -             | -  |
|              | -             | -  |

**Gödning / Fertilization**

| Plats / Site | Datum<br>date | Produkt och giva / Product and dose |
|--------------|---------------|-------------------------------------|
| Skibaröd     | 2014-03-28    | 700 kg/ha Probeta NPK               |
| Skibaröd     | 2014-06-15    | 1,0 Mantrac + 1,0 Bor               |
| Vallåkra     | 2014-04-01    | Probeta NPK 700 kg/ha               |
| Västergård   | 2014-04-05    | Probeta NPK 700 kg/ha               |

**Bladsvampar / Leaf diseases**

| Plats / Site | Datum<br>Date | Produkt och giva / Product and dose |
|--------------|---------------|-------------------------------------|
| Skibaröd     | 2014-08-01    | 0,3 L/ha Comet Pro                  |
| Skibaröd     | 2014-08-21    | 0,3 L/ha Comet Pro                  |
| Skibaröd     | 2014-09-11    | 0,3 L/ha Comet Pro                  |
| Vallåkra     | 2014-08-08    | Comet 0,5 L/ha                      |
| Västergård   |               | Ej svampbehandlat                   |

**Försöksinformation / Trial information**

| Plats / Site | År förfrukt<br>Year precrops | Förfrukt<br>Precrops | Sockerbetor:<br>Sugar beet: | Radavstånd<br>Row spacing | Antal frö/m<br>Seed distance |
|--------------|------------------------------|----------------------|-----------------------------|---------------------------|------------------------------|
| Skibaröd     | Höstvete                     | Höstvete             | Enl plan                    | 50                        | 5,4                          |
| Vallåkra     | Höstvete                     | Höstvete             | Enl plan                    | 48                        | 5,3                          |
| Västergård   | Höstvete                     | Höstvete             | Enl plan                    | 48                        | 5,4                          |

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**Jordanalys / Soil analyses**

|                       |                    | Skibaröd     | Vallåkra     | Västergård   |
|-----------------------|--------------------|--------------|--------------|--------------|
|                       |                    | <i>Klass</i> | <i>Klass</i> | <i>Klass</i> |
| pH-värde              |                    | 6,8          | 7,1          | 7,4          |
| P-AL* (mg/100 g jord) |                    | 11           | 10           | 7,0          |
| K-AL (mg/100 g jord)  |                    | 6,8          | 6,0          | 16           |
| Mg-AL (mg/100 g jord) |                    | 6,3          | 4,5          | 7,8          |
| K/Mg-kvot             |                    | 1,1          | 1,3          | 2,1          |
| Ca-AL (mg/100g jord)  |                    | 160          | 280          | 290          |
| Mullhalt (%)          | Organic matter (%) | 3,0          | 3,6          | 2,7          |
| Lerhalt (%)           | Clay (%)           | 11           | 18           | 24           |
| Sand + grovmo (%)     | Sand+fine sand (%) | 60           | 46           | 40           |
| Jordart               | Soil type          | mmh IMo      | moLL         | moLL         |

\*AL= ammonium lactate extractabel nutrients

**Particle size**

|        |                            |
|--------|----------------------------|
| Sand   | Sand = 2-0,2 mm            |
| Grovmo | Fine sand = 0,02-0,06 mm   |
| Finmo  | Coarse silt = 0,06-0,02 mm |
| Mjäla  | Silt = 0,02-0,002          |
| Lera   | Clay = <0,002 mm           |
| Finler | Fine clay = <0,0006        |

**Soil type**

nmhISa = medium humus rich light sand  
 mmhISa = humus rich light sand  
 mmhIMo = humus rich fine sand soil  
 mmh moLL = humus rich loam soil  
 mfsaLL = humus poor sandy loam soil  
 mflSa = humus poor clay sand soil  
 mf IMo = humus poor fine sand  
 mf moLL = humus poor loam soil  
 nmhsaLL = medium humus rich sandy loam soil  
 mr ML = humus rich clay



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**Plant number and vigour**

| Treatment       | Hym<br>g a.i. | Tiram<br>g a.i. | PIh, 1000/ha |      |        |
|-----------------|---------------|-----------------|--------------|------|--------|
|                 |               |                 | 20%          | 50%  | 100%   |
| <b>Skibaröd</b> |               |                 |              |      |        |
| 1 Untreated     | 0             | 0               | 20,6         | 42,2 | 78,3   |
| 2 Tiram         | 0             | 7               | 17,8         | 44,7 | 86,9   |
| 3 Hymexazol     | 7             | 0               | 19,2         | 41,1 | 84,4   |
| 4 Hymexazol     | 14            | 0               | 20,8         | 48,3 | 78,6   |
| 5 Hymexazol     | 18            | 0               | 21,1         | 49,7 | 91,4   |
| 6 Hymexazol     | 28            | 0               | 23,6         | 46,1 | 87,8   |
| $R^2$           |               |                 | 45,1         | 34,1 | 53,8   |
| CV              |               |                 | 17,8         | 12,5 | 7,9    |
| LSD             |               |                 | -            | -    | 10,1   |
| Prob            |               |                 | ns           | ns   | 0,0822 |
| <b>Vallåkra</b> |               |                 |              |      |        |
| 1 Untreated     | 0             | 0               | 25,5         | 57,6 | 81,9   |
| 2 Tiram         | 0             | 7               | 28,6         | 63,1 | 89,7   |
| 3 Hymexazol     | 7             | 0               | 24,9         | 59,0 | 85,6   |
| 4 Hymexazol     | 14            | 0               | 23,1         | 62,8 | 87,7   |
| 5 Hymexazol     | 18            | 0               | 20,8         | 59,6 | 90,9   |
| 6 Hymexazol     | 28            | 0               | 16,2         | 56,1 | 87,4   |
| $R^2$           |               |                 | 56,6         | 19,4 | 28,1   |
| CV              |               |                 | 31,8         | 13,1 | 8,4    |
| LSD             |               |                 | -            | -    | -      |
| Prob            |               |                 | ns           | ns   | ns     |
| <b>Tågarp</b>   |               |                 |              |      |        |
| 1 Untreated     | 0             | 0               | 28,1         | 55,8 | -      |
| 2 Tiram         | 0             | 7               | 23,7         | 51,8 | -      |
| 3 Hymexazol     | 7             | 0               | 25,5         | 51,8 | -      |
| 4 Hymexazol     | 14            | 0               | 22,9         | 50,9 | -      |
| 5 Hymexazol     | 18            | 0               | 28,1         | 55,8 | -      |
| 6 Hymexazol     | 28            | 0               | 28,4         | 57,9 | -      |
| $R^2$           |               |                 | 17,7         | 10,4 |        |
| CV              |               |                 | 30,8         | 26,5 |        |
| LSD             |               |                 | -            | -    |        |
| Prob            |               |                 | ns           | ns   |        |

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**Plant number and vigour**

| Treatment            | Hym<br>g a.i. | Tiram<br>g a.i. | PIh, 1000/ha    |           |        |
|----------------------|---------------|-----------------|-----------------|-----------|--------|
|                      |               |                 | 20%             | 50%       | 100%   |
| <b>3 trials</b>      |               |                 | <i>2 trials</i> |           |        |
| 1 Untreat.           | 0             | 0               | 24,7            | 51,9      | 80,1   |
| 2 Tiram              | 0             | 7               | 23,4            | 53,2      | 88,3   |
| 3 Hymexazol          | 7             | 0               | 23,2            | 50,6      | 85,0   |
| 4 Hymexazol          | 14            | 0               | 22,3            | 54,0      | 83,1   |
| 5 Hymexazol          | 18            | 0               | 23,3            | 55,1      | 91,1   |
| 6 Hymexazol          | 28            | 0               | 22,7            | 53,4      | 87,6   |
| <i>R<sup>2</sup></i> |               |                 | 10,9            | 33,9      | 26,5   |
| <i>CV</i>            |               |                 | 31,3            | 16,9      | 8,0    |
| <i>LSD</i>           |               |                 | -               | -         | 7,0    |
| <i>Prob</i>          |               |                 | <i>ns</i>       | <i>ns</i> | 0,0388 |

## Efficacy testing of hymexazol in sugar beet, Sweden 2014

| Treatment       | Hym    | Tiram  | Damping off |        |
|-----------------|--------|--------|-------------|--------|
|                 | g a.i. | g a.i. | DSI I       | DSI II |
| <b>Skibaröd</b> |        |        |             |        |
| 1 Untreat.      | 0      | 0      | 40          | 70     |
| 2 Tiram         | 0      | 7      | 41          | 69     |
| 3 Hymexazol     | 7      | 0      | 42          | 76     |
| 4 Hymexazol     | 14     | 0      | 46          | 74     |
| 5 Hymexazol     | 18     | 0      | 47          | 75     |
| 6 Hymexazol     | 28     | 0      | 43          | 73     |
| R2              |        |        | 54          | 60     |
| CV              |        |        | 10          | 6      |
| LSD             |        |        | 6,3         | 6,8    |
| Prob            |        |        | 0,1867      | 0,1583 |
| <b>Vallåkra</b> |        |        |             |        |
| 1 Untreat.      | 0      | 0      | 40          | 77     |
| 2 Tiram         | 0      | 7      | 32          | 72     |
| 3 Hymexazol     | 7      | 0      | 34          | 67     |
| 4 Hymexazol     | 14     | 0      | 31          | 66     |
| 5 Hymexazol     | 18     | 0      | 36          | 58     |
| 6 Hymexazol     | 28     | 0      | 35          | 54     |
| R2              |        |        | 61          | 56     |
| CV              |        |        | 13          | 14     |
| LSD             |        |        | 7,1         | 14,2   |
| Prob            |        |        | 0,1382      | 0,0329 |
| <b>Tågarp</b>   |        |        |             |        |
| 1 Untreat.      | 0      | 0      | 43          | 61     |
| 2 Tiram         | 0      | 7      | 44          | 59     |
| 3 Hymexazol     | 7      | 0      | 43          | 55     |
| 4 Hymexazol     | 14     | 0      | 41          | 60     |
| 5 Hymexazol     | 18     | 0      | 43          | 60     |
| 6 Hymexazol     | 28     | 0      | 41          | 58     |
| R2              |        |        | 54          | 48     |
| CV              |        |        | 15          | 5      |
| LSD             |        |        | 9,7         | 4,7    |
| Prob            |        |        | 0,9729      | 0,1375 |

**Betning mot jordburna svampsjukdomar i sockerbetor. GEP**  
**Efficacy testing of hymexazol in sugar beet, Sweden 2014**

424-2014

| Treatment      | Hym<br>g a.i. | Tiram<br>g a.i. | Damping off |           |
|----------------|---------------|-----------------|-------------|-----------|
|                |               |                 | DSI I       | DSI II    |
| <b>Average</b> |               |                 |             |           |
| 1 Untreat.     | 0             | 0               | 41,0        | 69,2      |
| 2 Tiram        | 0             | 7               | 38,7        | 66,4      |
| 3 Hymexazol    | 7             | 0               | 39,4        | 66,0      |
| 4 Hymexazol    | 14            | 0               | 39,3        | 66,7      |
| 5 Hymexazol    | 18            | 0               | 42,1        | 64,3      |
| 6 Hymexazol    | 28            | 0               | 39,7        | 61,7      |
| <i>R2</i>      |               |                 | 29,5        | 42,5      |
| <i>CV</i>      |               |                 | 16,1        | 11,6      |
| <i>LSD</i>     |               |                 | -           | -         |
| <i>Prob</i>    |               |                 | <i>ns</i>   | <i>ns</i> |

**Betning mot jordburna svampsjukdomar i sockerbeter. GEP**  
**Efficacy testing of hymexazol in sugar beet, Sweden 2014**

424-2014

| Treatment                 | Hym<br>g a.i. | Tiram<br>g a.i. | Damping off |           |
|---------------------------|---------------|-----------------|-------------|-----------|
|                           |               |                 | DSI I       | DSI II    |
| <b>9 trials 2012-2014</b> |               |                 |             |           |
| 1 Untreat.                | 0             | 0               | 30          | 54        |
| 2 Tiram                   | 0             | 7               | 29          | 51        |
| 3 Hymexazol               | 7             | 0               | 30          | 50        |
| 4 Hymexazol               | 14            | 0               | 30          | 51        |
| 5 Hymexazol               | 18            | 0               | 30          | 50        |
| 6 Hymexazol               | 28            | 0               | 31          | 49        |
| <i>R</i> <sup>2</sup>     |               |                 | 94,6        | 94,1      |
| <i>CV</i>                 |               |                 | 8,3         | 7,8       |
| <i>LSD 5%</i>             |               |                 | -           | -         |
| <i>Prob</i>               |               |                 | <i>ns</i>   | <i>ns</i> |

**Betning mot jordburna svampsjukdomar i sockerbetor. GEP**  
**Efficacy testing of hymexazol in sugar beet, Sweden 2014**

424-2014

**Skörd / Yield**

| Treatment       | PIh    |        | Roots   |           | Sugar     |           | Amino-N K+Na |           | Clean-ness |           |
|-----------------|--------|--------|---------|-----------|-----------|-----------|--------------|-----------|------------|-----------|
|                 | Hym    | Tiram  | final   |           |           |           | mg/100       | mM/100    |            |           |
|                 | g a.i. | g a.i. | 1000/ha | t/ha      | %         | t/ha      | Rel          | g beet    |            | g beet    |
| <b>Skibaröd</b> |        |        |         |           |           |           |              |           |            |           |
| 1 Untreat.      | 0      | 0      |         | 77,56     | 16,52     | 12,83     | 100          | 15        | 3,98       | 89,45     |
| 2 Tiram         | 0      | 7      |         | 76,33     | 16,74     | 12,78     | 100          | 16        | 3,85       | 89,39     |
| 3 Hymexazol     | 7      | 0      |         | 78,68     | 16,72     | 13,13     | 102          | 13        | 3,93       | 89,04     |
| 4 Hymexazol     | 14     | 0      |         | 77,93     | 16,74     | 13,07     | 102          | 14        | 3,93       | 88,18     |
| 5 Hymexazol     | 18     | 0      |         | 80,32     | 16,86     | 13,55     | 106          | 14        | 3,80       | 89,43     |
| 6 Hymexazol     | 28     | 0      |         | 80,64     | 16,76     | 13,51     | 105          | 14        | 3,91       | 88,84     |
| <i>R2</i>       |        |        |         | 40,5      | 36,7      | 40,2      | -            | 58,9      | 43,8       | 62,4      |
| <i>CV</i>       |        |        |         | 6,1       | 1,5       | 6,6       | -            | 10        | 3,89       | 0,93      |
| <i>LSD</i>      |        |        |         | -         | -         | -         | -            | -         | -          | -         |
| <i>Prob</i>     |        |        |         | <i>ns</i> | <i>ns</i> | <i>ns</i> | -            | <i>ns</i> | <i>ns</i>  | <i>ns</i> |
| <b>Vallåkra</b> |        |        |         |           |           |           |              |           |            |           |
| 1 Untreat.      | 0      | 0      |         | 67,91     | 16,90     | 11,48     | 100          | 10        | 4,52       | 90,07     |
| 2 Tiram         | 0      | 7      |         | 68,89     | 17,11     | 11,78     | 103          | 10        | 4,47       | 90,72     |
| 3 Hymexazol     | 7      | 0      |         | 71,43     | 17,04     | 12,17     | 106          | 10        | 4,51       | 89,65     |
| 4 Hymexazol     | 14     | 0      |         | 70,76     | 17,00     | 12,03     | 105          | 11        | 4,53       | 89,66     |
| 5 Hymexazol     | 18     | 0      |         | 73,50     | 16,96     | 12,46     | 109          | 10        | 4,59       | 90,59     |
| 6 Hymexazol     | 28     | 0      |         | 73,07     | 17,02     | 12,44     | 108          | 10        | 4,39       | 90,29     |
| <i>R2</i>       |        |        |         | 59,7      | 15,1      | 56,9      | -            | 24,8      | 8,9        | 34,5      |
| <i>CV</i>       |        |        |         | 5,0       | 1,6       | 5,6       | -            | 12,9      | 6,4        | 1,6       |
| <i>LSD</i>      |        |        |         | -         | -         | -         | -            | -         | -          | -         |
| <i>Prob</i>     |        |        |         | <i>ns</i> | <i>ns</i> | <i>ns</i> | -            | <i>ns</i> | <i>ns</i>  | <i>ns</i> |

**Betning mot jordburna svampsjukdomar i sockerbetor. GEP**  
**Efficacy testing of hymexazol in sugar beet, Sweden 2014**

424-2014

**Skörd / Yield**

| Treatment       | Hym    |        | Tiram     |           | Roots     |     | Sugar     |           | Amino-N   | K+Na   | Clean-ness |
|-----------------|--------|--------|-----------|-----------|-----------|-----|-----------|-----------|-----------|--------|------------|
|                 | Hym    | Tiram  |           |           |           |     |           |           | mg/100 g  | mM/100 |            |
|                 | g a.i. | g a.i. | t/ha      | %         | t/ha      | Rel | beet      | g beet    | %         |        |            |
| <b>2 trials</b> |        |        |           |           |           |     |           |           |           |        |            |
| 1 Untreat.      | 0      | 0      | 72,7      | 16,7      | 12,2      | 100 | 12        | 4,25      | 89,8      |        |            |
| 2 Tiram         | 0      | 7      | 72,6      | 16,9      | 12,3      | 101 | 13        | 4,16      | 90,1      |        |            |
| 3 Hymexazol     | 7      | 0      | 75,7      | 16,9      | 12,8      | 105 | 11        | 4,22      | 89,5      |        |            |
| 4 Hymexazol     | 14     | 0      | 75,0      | 16,9      | 12,7      | 104 | 12        | 4,23      | 89,1      |        |            |
| 5 Hymexazol     | 18     | 0      | 76,1      | 16,9      | 12,9      | 106 | 12        | 4,19      | 90,0      |        |            |
| 6 Hymexazol     | 28     | 0      | 76,9      | 16,9      | 13,0      | 107 | 12        | 4,15      | 89,6      |        |            |
| <i>R2</i>       |        |        | 53,3      | 35,3      | 43,8      |     | 71,8      | 71,4      | 21,4      |        |            |
| <i>CV</i>       |        |        | 6,6       | 1,5       | 7,2       |     | 13,1      | 5,4       | 1,5       |        |            |
| <i>LSD</i>      |        |        | -         | -         | -         |     | -         | -         | -         |        |            |
| <i>Prob</i>     |        |        | <i>ns</i> | <i>ns</i> | <i>ns</i> |     | <i>ns</i> | <i>ns</i> | <i>ns</i> |        |            |

**Betning mot jordburna svampsjukdomar i sockerbeter. GEP**  
**Efficacy testing of hymexazol in sugar beet, Sweden 2014**

424-2014

**Skörd / Yield**

| Treatment                  | g a.i. | DSI 1  | DSI 2  | PIh final | Roots  |        | Sugar  |     | Amino-N          | K+Na             | Clean-ness |
|----------------------------|--------|--------|--------|-----------|--------|--------|--------|-----|------------------|------------------|------------|
|                            |        | 0-100  | 0-100  | 1000/ha   | t/ha   | %      | t/ha   | Rel | mg/100 g<br>beet | mM/100<br>g beet | %          |
| <b>32 trials 2004-2014</b> |        |        |        |           |        |        |        |     |                  |                  |            |
| 1 Untreated                | 0      | 31     | 38     | 88,8      | 64,44  | 17,45  | 11,29  | 100 | 12               | 4,15             | 89,9       |
| 2 Hymexazol                | 14     | 29     | 35     | 94,3      | 65,84  | 17,54  | 11,58  | 103 | 12               | 4,12             | 90,0       |
| 3 Hymexazol                | 18     | 28     | 36     | 94,5      | 66,25  | 17,49  | 11,62  | 103 | 11               | 4,10             | 90,2       |
| 4 Hymexazol                | 30     | 30     | 35     | 94,9      | 65,57  | 17,52  | 11,52  | 102 | 11               | 4,10             | 90,4       |
| <i>R</i> <sup>2</sup>      |        | 96,4   | 94,4   | 85,8      | 96,4   | 99,3   | 97,4   | -   | 95,5             | 98,2             | 96,8       |
| <i>CV</i>                  |        | 9,2    | 9,9    | 4,8       | 3,0    | 0,6    | 3,1    | -   | 5,9              | 2,1              | 0,9        |
| <i>LSD</i>                 |        | 1,3    | 1,8    | 2,2       | 1,0    | 0,1    | 0,2    | -   | 0,3              | -                | 0,4        |
| <i>Prob</i>                |        | 0,0056 | 0,0002 | 0,0000    | 0,0026 | 0,0061 | 0,0013 | -   | 0,0144           | ns               | 0,0416     |



## Betning mot jordburna svampsjukdomar i sockerbeter. GEP

424-2014

### Efficacy testing of hymexazol in sugar beet, Sweden 2014

#### Skörd / Yield

| Treatment  | g a.i. | DSI 1     | DSI 2     | PIh final   | Roots        |              | Sugar        |     | Amino-N          | K+Na             | Clean-ness  |
|--|--------|-----------|-----------|-------------|--------------|--------------|--------------|-----|------------------|------------------|-------------|
|  |        | 0-100     | 0-100     | 1000/ha     | t/ha         | %            | t/ha         | Rel | mg/100 g<br>beet | mM/100<br>g beet | %           |
| <b>11 trials 2004-2010 with low or no infestation of <i>A. cochlioides</i></b> |        |           |           |             |              |              |              |     |                  |                  |             |
| <b>Average all treatments</b>  |        | <b>30</b> | <b>33</b> | <b>96,6</b> | <b>66,30</b> | <b>17,67</b> | <b>11,76</b> |     | <b>11</b>        | <b>4,1</b>       | <b>89,8</b> |
| 1 Untreated  | 0 + 0  | 31        | 35        | 94,6        | 66,42        | 17,64        | 11,76        | 100 | 11               | 4,1              | 89,8        |
| 2 Fludioxonil + Hymexazol  | 6 + 14 | 29        | 31        | 96,7        | 66,59        | 17,72        | 11,84        | 103 | 11               | 4,1              | 89,7        |
| 3 Fludioxonil + Hymexazol  | 6 + 18 | 28        | 34        | 97,6        | 66,29        | 17,64        | 11,74        | 102 | 11               | 4,1              | 89,7        |
| 4 Fludioxonil + Hymexazol  | 6 + 30 | 31        | 33        | 97,4        | 65,88        | 17,69        | 11,70        | 102 | 11               | 4,1              | 89,7        |
| <i>R</i> <sup>2</sup>  |        | 97,8      | 93,0      | 94,4        | 94,4         | 99,5         | 97,8         | -   | 97,3             | 96,4             | 99,0        |
| CV   |        | 9,2       | 9,9       | 2,9         | 2,6          | 0,6          | 2,7          | -   | 6,1              | 2,0              | 0,8         |
| LSD  |        | 2,4       | 2,9       | 2,5         | 1,5          | 0,1          | 0,3          | -   | 0,6              | 0,1              | 0,6         |
| Prob   |        | 0,0497    | 0,0815    | 0,0655      | 0,7949       | 0,3289       | 0,7481       | -   | 0,5235           | 0,9964           | 0,9816      |
| <b>21 trials 2004-2014 with high infestation of <i>A. cochlioides</i></b>      |        |           |           |             |              |              |              |     |                  |                  |             |
| <b>Average all treatments</b>  |        | <b>29</b> | <b>37</b> | <b>91,3</b> | <b>65,12</b> | <b>17,41</b> | <b>11,37</b> |     | <b>12</b>        | <b>4,1</b>       | <b>90,3</b> |
| 1 Untreated  | 0 + 0  | 30        | 40        | 85,8        | 63,41        | 17,35        | 11,04        | 100 | 12               | 4,2              | 89,9        |
| 2 Fludioxonil + Hymexazol  | 6 + 14 | 29        | 37        | 93,0        | 65,45        | 17,45        | 11,44        | 104 | 12               | 4,1              | 90,2        |
| 3 Fludioxonil + Hymexazol  | 6 + 18 | 28        | 37        | 92,8        | 66,22        | 17,41        | 11,56        | 105 | 11               | 4,1              | 90,5        |
| 4 Fludioxonil + Hymexazol  | 6 + 30 | 29        | 36        | 93,6        | 65,41        | 17,43        | 11,43        | 104 | 11               | 4,1              | 90,8        |
| <i>R</i> <sup>2</sup>  |        | 94,8      | 94,9      | 81,0        | 97,2         | 99,1         | 97,5         | -   | 93,8             | 98,6             | 90,8        |
| CV   |        | 9,4       | 9,8       | 5,4         | 3,0          | 0,6          | 3,1          | -   | 5,8              | 2,2              | 0,9         |
| LSD  |        | 1,7       | 2,3       | 3,0         | 1,2          | 0,1          | 0,2          | -   | 0,4              | 0,1              | 0,5         |
| Prob   |        | 0,1426    | 0,0016    | <0,0001     | 0,0001       | 0,0159       | 0,0001       | -   | 0,0063           | 0,0259           | 0,0067      |