

**INTERIM PROGRESS REPORT TO THE MAIZE TRUST  
2010 (6 month report)**

**(a) Identification of the project and the project leader.**

Title: Isolation of the neurotoxin from *Stenocarpella (=Diplodia) maydis* which is responsible for diploidosis in ruminants.

Project leader: R A Schultz [Schultzra@arc.agric.za](mailto:Schultzra@arc.agric.za)  
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Tel. 012 5299261.

**(b) The actions that have been taken with regard to the project.**

- Extracting dipionine to enable purification and characterization of the neurotoxin.
- Optimization of the extraction procedure.
- Compile a manuscript on the isolation of the neurotoxin.

**(c) The progress that has been made with the project.**

- Dipionine was extracted from crude extracts of *S. maydis* cultures (previously provided by Dr B C Flett, ARC-Grain Crop Institute, Potchefstroom).
- Progress was made in optimizing the extraction process of dipionine.
- Progress was made in writing a paper on the isolation of the neurotoxin.

**(d) The results that have been achieved.**

- A small amount of dipionine was sent to Professor Robert Vlegaar (UP Chemistry Dept. Pretoria) to characterize this neurotoxin.
- The extraction process of dipionine was optimized and reproducible results were obtained.
- A paper on the isolation of the neurotoxin, dipionine, has been finalised and will be submitted to the International Journal 'Neurotoxicology and Teratology' to be evaluated for publication. The financial support of The Maize Trust was acknowledged in the paper.

**(e) Any problems that have been encountered with the project.**

- The extraction process is complicated by the fact that dipionine is a labile compound.
- The current extraction process is not suitable to yield sufficient amounts of the mycotoxin to induce diploidosis in the target animal.
- A very competent technician, that played an active role in the isolation procedures of dipionine, resigned from the Institute and has not been replaced.

**(f) Milestones that have not been achieved and the reasons for that.**

The current extraction process is reproducible but not suitable to obtain large amounts of dipionine and is complicated by the fact that this mycotoxin is labile.

**(g) An assessment of the adequacy of the funding to complete the execution of the project in the form of an expenditure statement.**

Financial support (R100,000.00) requested from Gauteng Dept of Agriculture & Rural Development (GDARD) for 2010 has not yet been allocated.  
Available funding was spent (see attached statement).

**(h) The estimated duration of the project until completion.**

It will take at least another year (end 2011) to accumulate sufficient dipionine to conduct the studies envisaged.

# Budget Control By Budget Control Groups

Financial Year 2009/2010

YTD Totals as on 07/04/2010

Cumulative Total March

Period: 12

Budget Control Sheet For Costcentre : 10/04/P001 ISOLATION OF THE NEUROTOXIN FROM DIPLDIA MAYDIS

A/Item	Budget	Actual	Commit	Variance	Budget	Actual	Variance	Budget	Actual	Variance	Avail
424 Private research institutions/farmers	52596.00	0.00	0.00	52596.00	52596.00	0.00	52596.00	4383.00	0.00	4383.00	52596.00
450 Research consumables	64260.00	4290.70	0.00	59969.30	64260.00	4290.70	59969.30	5355.00	0.00	5355.00	59969.30
452 Stationery	900.00	0.00	0.00	900.00	900.00	0.00	900.00	75.00	0.00	75.00	900.00
453 Printing / Binding	0.00	1200.00	0.00	-1200.00	0.00	1200.00	-1200.00	0.00	0.00	0.00	-1200.00
455 Plants / Livestock / Products	5076.00	0.00	0.00	5076.00	5076.00	0.00	5076.00	423.00	0.00	423.00	5076.00
457 Chemicals	0.00	630.16	0.00	-630.16	0.00	630.16	-630.16	0.00	0.00	0.00	-630.16
493 Analytical services (external)	0.00	69914.60	0.00	-69914.60	0.00	69914.60	-69914.60	0.00	0.00	0.00	-69914.60
<b>Totals For Group OC</b>	<b>122832.00</b>	<b>76035.46</b>	<b>0.00</b>	<b>46796.54</b>	<b>122832.00</b>	<b>76035.46</b>	<b>46796.54</b>	<b>10236.00</b>	<b>0.00</b>	<b>10236.00</b>	<b>46796.54</b>
920 Manpower Individual	227190.00	595.92	0.00	226594.08	227190.00	595.92	226594.08	16793.00	0.00	16793.00	226594.08
<b>Totals For Group RM</b>	<b>227190.00</b>	<b>595.92</b>	<b>0.00</b>	<b>226594.08</b>	<b>227190.00</b>	<b>595.92</b>	<b>226594.08</b>	<b>16793.00</b>	<b>0.00</b>	<b>16793.00</b>	<b>226594.08</b>
<b>Expense Totals</b>	<b>350022.00</b>	<b>76631.38</b>	<b>0.00</b>	<b>273390.62</b>	<b>350022.00</b>	<b>76631.38</b>	<b>273390.62</b>	<b>27029.00</b>	<b>0.00</b>	<b>27029.00</b>	<b>273390.62</b>
660 Contract research	-29400.00	0.00	0.00	-29400.00	-29400.00	0.00	-29400.00	-2450.00	0.00	-2450.00	-29400.00
663 Sundry	0.00	-77163.67	0.00	77163.67	0.00	-77163.67	77163.67	0.00	0.00	0.00	77163.67
681 Analytical services (external)	-108000.00	0.00	0.00	-108000.00	-108000.00	0.00	-108000.00	-9000.00	0.00	-9000.00	-108000.00
<b>Totals For Group OI</b>	<b>-137400.00</b>	<b>-77163.67</b>	<b>0.00</b>	<b>-60236.33</b>	<b>-137400.00</b>	<b>-77163.67</b>	<b>-60236.33</b>	<b>-11450.00</b>	<b>0.00</b>	<b>-11450.00</b>	<b>-60236.33</b>
<b>Income Totals</b>	<b>-137400.00</b>	<b>-77163.67</b>	<b>0.00</b>	<b>-60236.33</b>	<b>-137400.00</b>	<b>-77163.67</b>	<b>-60236.33</b>	<b>-11450.00</b>	<b>0.00</b>	<b>-11450.00</b>	<b>-60236.33</b>
<b>Totals for Costcentre</b>	<b>212622.00</b>	<b>-532.29</b>	<b>0.00</b>	<b>213154.29</b>	<b>212622.00</b>	<b>-532.29</b>	<b>213154.29</b>	<b>15579.00</b>	<b>0.00</b>	<b>15579.00</b>	<b>213154.29</b>
<b>Grand Totals</b>	<b>212622.00</b>	<b>-532.29</b>	<b>0.00</b>	<b>213154.29</b>	<b>212622.00</b>	<b>-532.29</b>	<b>213154.29</b>	<b>15579.00</b>	<b>0.00</b>	<b>15579.00</b>	<b>213154.29</b>

Rolled over 17 163.67  
 Maize Trust 60 000.00  
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 77 163.67  
 Actual. 76 035.46  
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 1 128.21