

Dow AgroSciences Australia Limited
ACN 003 771 659
20 Rodborough Road
Frenchs Forest NSW 2086
Locked Bag 502
PO Frenchs Forest NSW 1640



Date 21 August 2007

Dow AgroSciences submission to the New South Wales Review of the *Gene Technology (GM Crop Moratorium) Act 2003*.

This submission to the review of the NSW Government's *Gene Technology (GM Crop Moratorium Act 2003* [The Act] supports the submission made by CropLife Australia, of which Dow AgroSciences is a member.

Dow AgroSciences LLC, based in Indianapolis, Indiana, USA, is a global leader in providing pest management, biotechnology and crop products that improve the quality and quantity of the earth's food supply and contribute to improving the health and quality of life of the world's growing population. Dow AgroSciences has approximately 5,500 people in more than 50 countries dedicated to its business, and has worldwide sales of U.S. \$3.4 billion. Dow AgroSciences is a wholly owned subsidiary of The Dow Chemical Company that has global sales of \$49 billion.

Dow AgroSciences is dedicated to serving the world's growing population via revolutionary solutions. Innovation to do so can come from every corner of the globe, and international collaboration is important to turn science into solutions. This international collaboration extends to Australia. Dow AgroSciences and Dow have current investments in Australian universities and government research organisations. The extent of this collaboration has the potential to significantly expand if there is a clear path to market for genetically modified crops. While the State moratoria are in place there is currently no clear path to market, hence investment is hindered.

Dow AgroSciences has a large investment in biotechnology either through natural breeding or genetic modification as can be seen from the range of innovative seed technology available to farmers in other countries.

1. Nutra-Clear NT™, a "next generation" Omega-9 Canola Oil, is made from naturally bred NEXERA™ canola seeds developed by Dow AgroSciences. These Omega-9 Oils are the "next generation" in cooking oils due to their package of superior taste, health and performance. Many major fast food chains around the world, including in Australia, have moved to using these oils. The global capacity to provide more than two billion kilograms of



Omega-9 Canola Oil enables the immediate conversion by foodservice and food processing companies to a zero trans fat alternative.

2. Sunflower high-oleic oil from the Mycogen[®] brand hybrid varieties that have resistance to all the known races of downy mildew in the United States.
3. The Herculex[®] grain corn hybrids contain several stacked-trait hybrids including HERCULEX[®] XTRA *Insect Protection*, LibertyLink[®] and Roundup Ready[®] technologies.
4. Silage-Specific[™] corn hybrids. Industry-leading line-up of Silage-Specific BMR corn hybrids gives lower lignin content for the highest fibre digestibility and higher dry matter intake to give more milk. Many of these corn hybrids are available with HERCULEX[®] XTRA *Insect Protection* that provide in-plant insect protection against corn rootworm, European corn borer, western bean cutworm and black cutworm. All HERCULEX hybrids contain the LibertyLink[®] trait and many are available with Roundup Ready[®] Corn 2 technology for multiple herbicide options.
5. Supercede[™] HE High Energy corn hybrids deliver more oil per hectare for higher energy and profitability in swine and poultry production. Advanced breeding techniques provide solid agronomics for consistent and competitive yields to make Supercede HE a better feeding alternative to conventional corn hybrids. Several Supercede HE corn hybrids are available with HERCULEX[®] I *Insect Protection*.
6. Mycogen[®] brand alfalfa provide excellent yield potential, high-quality forage, disease and pest resistance, and herbicide tolerance technology.
7. Mycogen[®] brand sorghum hybrids are bred with favourable characteristics to adapt to a range of environments such as drought tolerance.
8. Atlas brand soybean products are available with the latest advancements in trait technology. Tolerant to over-the-top applications of Roundup[®] herbicide.

The State moratoria that are in place in Australia is a disincentive for Dow AgroSciences and Dow to bring its in-depth global expertise and technologies listed above, to assist in developing improved varieties of crops important above to Australian farmers.

In light of changes and growth in the global marketplace for genetically modified crops, the purpose of the Act should be reviewed and the Act repealed. The uptake of GM crops around the world has grown as has their share of international trade over the last decade. All the evidence from this global experience shows that customer requirements can be met through co-existence of GM crops with conventional ones. Australian farmers have to date moved cautiously in their support of gene technology for food crops. However, their associations are now embracing the technology due to Australian agriculture now having the necessary safeguards in place to grow GM

crops in co-existence with conventional crops and responsibly harness the opportunities offered by gene technology.

It is no longer just the global technology providers who are calling for an end to the State moratoria as is claimed by the opponents of GM technology. It is also the farmers themselves. To quote from a recent media release.

The National Farmers' Federation (NFF) says Australian farmers have been 'left behind' by an international marketplace that has already embraced GM as a safe and viable science. Australian farmers are now being 'held back' from cutting-edge farm techniques, based on out-dated hysteria. "What was once a prudent 'wait and see' policy, is no longer viable," NFF President David Crombie said. "The science is in... the world has moved on from the traditional and overtly emotional arguments against GM crops. Australia now must play catch up – and do so quickly – to ensure we win a much greater share of world markets, opportunities which until the GM moratoria are scrapped, will continue to pass us by.

"Farmers must have the opportunity to adopt the method of production best suited to their customers' needs – be that GM, conventional, organic or any combination of these methods... points of differentiation they can pursue to meet marketplace desires.

"It is the marketplace – both domestic and international – that is demanding the introduction of GM crops. The 'status quo' will not do. State and Territory Governments must not arbitrarily deny farmers pursuing sensible, scientifically-proven and time-tested methods of production.

"Australian farmers are well-placed to responsibly harness the enormous opportunities gene technology offers... reducing use of pesticides and herbicides, maximising water efficiency, resilience in adverse growing conditions and boosting production yields."

While pushing for the State moratoria to be lifted, the NFF says the production decisions of one farmer should not unreasonably impinge on the ability of other farmers in meeting the requirements and expectations of the market they chose to meet.

"As with any new technology, it is vital that producers identify and thoroughly assess potential risks, and implement strategies to appropriately manage them," Mr Crombie added. "The NFF is satisfied appropriate Australian safeguards exist to ensure food safety and the sustained integrity of organic and conventional food production.

"In fact, Australia's Gene Technology Act 2000 establishes standards regarded as the world's most stringent for assessing GM plants for human and environmental safety. Australia's rigorous gene technology regulatory system, and the careful process required to meet commercialisation, means that, with the exception of cotton and canola, new GM plant varieties are unlikely to be ready for another seven years –highlighting just how far behind Australian farmers are in the world market.

“The moratoria had their day. Uptake of gene technology will result in substantial benefits for Australian farmers, the environment, consumers and Australia’s place in the international economy.”

The CropLife Australia submission outlines an initiative for industry to self-manage canola. The principles within this initiative are also applicable to other GM crops and if necessary could become an industry managed code of practice. If governments wish to underpin this code of practice by government legislation further consultation with affected stakeholders would be required.

While GM crop moratoria are in place, even when an approval is obtained from the OGTR, each State may impose a moratorium on growing the crop based on political whim. There is no incentive for technology providers to conduct the 3-5 years (minimum) preliminary work on Australian crop varieties required to commercialise technology already in place elsewhere if a Federal approval can be overridden by a State Government. Removing the moratorium on canola only does not remove the disincentive for investment in other crops.

Dow AgroSciences has a number of areas where it may invest in Australia if there was a clear path to market, however this information is commercially sensitive. This information is appended as confidential information and Dow AgroSciences requests that the committee treat this information as commercial-in-confidence.

Concern has been raised about the agreements between the technology providers and growers unfairly penalising farmers if they fail to meet the terms of the agreement. Agreements are not a disincentive to growers as approximately 10 million farmers in 22 other countries have embraced this technology and agreed to these conditions. Each technology provider has a different business model for seed supply which provides diversity and competition in the marketplace for farmers. An example of the corn agreement Dow AgroSciences uses in the USA is appended and is also available, along with other supporting documents at <http://www.dowagro.com/herculex/index.htm>. These agreements can also vary by crop and the one for cotton (WideStrike™ Insect Protection) can be found at <http://www.dowagro.com/widestrike/resource/>

Concern has also been raised about the technology providers restricting the availability of analytical methods to test for the presence of GM sequences in seed-lines. These methods are made available under confidential contracts to bonafide analytical laboratories that have the capacity to use these methods and interpret the results.

Dow AgroSciences supports the CropLife Australia position on the Act and in particular recommends that the:

- The Act be repealed and be replaced by a code of practice that allows industry to responsibly manage the commercialisation of GM crops. This code of practice would require the broad supply chain to agree to the introduction of a particular crop and if there is a substantiated objection by a sector of the supply chain then

commercialisation would not proceed until the objection was resolved. It is envisaged that an organisation such as NACMA would have a leading role to play in the oversight of this code of practice. If government wished to give the code of practice legislative support then further consultation with the affected stakeholders would be required.

- Should the Act be retained an exemption process must be put in place to allow a transparent science based decision on the commercialisation of crops approved by the OGTR.
- Dow AgroSciences, while not an immediate participant as a GM canola seed supplier, supports the repeal of the canola regulations currently preventing its commercialisation. Commercialisation of GM canola would allow farmers to choose improved varieties and also demonstrate the ability of the industry to self-manage the co-existence of GM crops without direct government intervention.

Yours sincerely



Matthew Cahill PhD
Product Technology Leader
Dow AgroSciences Australia Limited.

Technology User Agreements

Full information about the growing of HERCULEX® Insect Protection Bt Corn including the Product Use Guide can be found at <http://www.dowagro.com/herculex/index.htm>.

The following agreement only covers the use of the seed for growing of the crop it does not cover the harvested crop. The primary purpose of the agreement is to ensure that growers adhere to the insect resistance management strategy (outlined in the Product Use Guide) mandated by the EPA.



HERCULEX® INSECT PROTECTION Bt CORN GROWER AGREEMENT

000000



This Agreement grants Grower a limited license in the United States to use Dow AgroSciences HERCULEX I, HERCULEX RW* and HERCULEX XTRA* *Insect Protection Bt* corn technologies (as well as future HERCULEX *Insect Protection Bt* corn technologies from Dow AgroSciences*) (collectively the "HERCULEX Products" or the "HERCULEX Technologies").

*Subject to such products having appropriate regulatory approvals and being offered commercially in the United States by Dow AgroSciences.

Please direct any questions about this Agreement or HERCULEX *Insect Protection* to Grower's seed provider or to Dow AgroSciences at 1-877-4-TRAITS (1-877-487-2487). For additional information, visit www.HERCULEX.net.

GROWER INFORMATION – Complete Section A OR Section B – PLEASE PRINT CLEARLY

Section A – For Individual (Sole Proprietorship) Grower	Section B – For Business Entity Grower
Grower Name – Last First MI	Business Name
Farming or "Doing Business As" (d/b/a) Name	Business Type (Check One): <input type="checkbox"/> Corporation <input type="checkbox"/> Partnership <input type="checkbox"/> Limited Liability Company (LLC) <input type="checkbox"/> Other
Full Address	Authorized Representative's Name & Title
City State ZIP	Full Address
Phone	City State ZIP
E-mail Address	Phone
	E-mail Address

By signing this HERCULEX *Insect Protection Bt* Corn Grower Agreement ("Agreement") with Dow AgroSciences LLC ("Dow AgroSciences"), the person signing below hereby affirms that he/she is duly authorized to sign on behalf of the grower/grower entity identified above (the "Grower") and that the Grower intends to be legally bound by the terms and conditions set forth herein.

Grower's Authorized Signature:

By: _____ Date: _____

Printed Name & Title of Person Signing

Name of Submitting Seed Dealer (optional): _____ Phone: (____) _____

In consideration of this license granted herein and other good and valuable consideration, Grower agrees:

1. **Patent License.** HERCULEX Technologies are protected under one or more of the following U.S. Patents: 6,573,240; 6,737,273; 6,218,188; 5,538,880; 5,538,877; 5,489,520; 5,550,318; 5,484,956; 5,919,675; 6,331,665; 5,510,474; 6,020,190; 6,127,180; 6,548,291; 6,624,145; 6,340,593; 6,893,872; 6,083,499; 6,900,371; and 6,943,282. Upon Dow AgroSciences', or its authorized agent's, receipt and acceptance of this Agreement, unaltered and fully executed by Grower, Grower is granted a revocable limited license to use the HERCULEX Products solely to produce single commercial corn crops upon the terms set forth herein.

2. **Restrictions on Use of Seed.** Grower acknowledges and agrees that **GROWER MAY NOT:**

- supply, license or sublicense any seed containing HERCULEX Technologies to any other person or entity for planting or any other purpose;
- save any seed produced from seed containing HERCULEX Technologies for replanting by Grower or any other person or entity; or
- use seed or other plant material containing HERCULEX Technologies, or provide such seed plant material to any other person or entity, for research, breeding or seed production.

This Agreement covers only the United States and does not authorize planting HERCULEX Products in the United States which have been purchased in another country or planting in another country seed containing HERCULEX Technologies which has been purchased in the United States.

3. **Product Use Guide.** A key component of this Agreement and proper stewardship of the HERCULEX Products is complying with the



Improving Quality of Life.

provisions of the **HERCULEX Product Use Guide ("Product Guide")**. Grower must obtain, read and comply with all provisions of the most current Product Guide, including **Insect Resistance Management ("IRM")** practices and refuge requirements. As long as Grower has a valid Agreement for HERCULEX in effect, Dow AgroSciences will use reasonable commercial efforts to provide Grower with the current Product Guide and any updates relating to **HERCULEX Insect Protection** corn. Grower's use of any HERCULEX Products after receipt of a revised Product Guide constitutes Grower's acceptance of the provisions of such Product Guide.

4. Term and Termination. This Agreement shall remain in effect until terminated by either Grower or Dow AgroSciences. Either party may terminate this Agreement at any time for any reason by sending written notice of termination to the other party at the address for such party specified below. In the case of termination by Grower, such notice of termination must include Grower's full name and address. Upon the termination of this Agreement, Grower may no longer purchase or use HERCULEX Products; however, Grower's obligations that arose under this Agreement prior to the termination will continue in effect.

5. Limited Warranties and Disclaimers. Dow AgroSciences warrants that the HERCULEX Products licensed hereunder will conform to the applicable written description in the applicable Product Use Guide and on the Dow AgroSciences approved HERCULEX seed tag affixed to the seed bag. This warranty applies only to HERCULEX Products that have been purchased from a seed company licensed by Dow AgroSciences, or such seed company's authorized dealers or distributors, and planted from the original sealed bag. Dow AgroSciences makes no other warranties of any kind and disclaims all other warranties, oral or written, expressed or implied, including any implied warranties of fitness for particular purpose and merchantability.

6. Limitation of Remedies and Liability. Grower's exclusive remedy and the limit of the liability of Dow AgroSciences or any seller to any party for any and all losses, injury or damages arising from or relating to the use or handling of a HERCULEX Product or the HERCULEX Technologies (including claims based in contract, negligence, product liability, strict liability or other theories of liability) shall be limited to the price paid by the Grower for the quantity of the HERCULEX Product involved. In no event shall Dow AgroSciences or any seller be liable for any indirect, incidental, consequential, special, exemplary or punitive damages.

7. Product Claims Notice Requirements. As a condition precedent to Grower, or any other person with an interest in Grower's crop, asserting a claim or commencing an action against Dow AgroSciences and/or any seller of seed in any way relating to or arising from the HERCULEX Technologies, Grower must provide prompt and timely notice to Dow AgroSciences (regarding performance or nonperformance of the gene technologies) and/or the seller of any seed (regarding performance or nonperformance of the seed) within sufficient time to allow an in-field inspection of the crop(s) about which any controversy, claim, action or dispute is being asserted. The notice shall include the Grower's name, address, FSA number, a description of the claim, and the variety and lot number of the HERCULEX Product at issue.

8. Dow AgroSciences Remedies. If Grower violates the terms of this agreement, in addition to all other remedies available to Dow AgroSciences Grower's license hereunder may be immediately terminated by Dow AgroSciences and Grower may forfeit any right to use the HERCULEX Technologies from Dow AgroSciences in the future. Additionally, Grower shall pay Dow AgroSciences any and all costs and expenses, including reasonable attorneys' fees and court costs, incurred by Dow AgroSciences in connection with (i) its successful enforcement of any term or condition of this Agreement relating to Grower's actual or threatened breach of this Agreement; and (ii) Grower's infringement of any patents covering HERCULEX *Insect Protection* technology.

9.0 General Provisions.

9.01 Grower agrees to communicate all applicable terms, conditions and restrictions applicable to HERCULEX Products purchased by Grower whether under this Agreement, a Product Guide or otherwise to all persons and entities possessing or taking an interest in Grower's HERCULEX Products corn crop(s).

9.02 Grower agrees to provide Grower's reasonable cooperation to Dow AgroSciences and its representatives in connection with their efforts to verify Grower's compliance with any and all IRM requirements, including completing written and oral IRM questionnaires and surveys. Grower further consents to Dow AgroSciences and its representatives (i) entering upon any land where Grower has planted or is growing any HERCULEX Products as well as the refuge corn therefore for purposes of examining the land, Grower's crop and taking samples thereof; (ii) reviewing FSA crop reporting information and corresponding aerial photographs; and (iii) obtaining copies of invoices of Grower's seed and chemical transactions from Grower's seed and chemical dealer.

9.03 Grower's rights under this Agreement may not be transferred to anyone else without the written consent of Dow AgroSciences. If Grower's rights are transferred with Dow AgroSciences' consent or by operation of law, this Agreement shall be binding on the person or entity receiving such transferred rights.

9.04 This Agreement is governed by the laws of the state of Indiana without regard to its choice of laws provisions.

9.05 If any provision of this Agreement is determined to be void or unenforceable, the remaining provisions shall remain in full force and effect.

9.06 The failure of Dow AgroSciences to exercise one or more of its rights under this Agreement on one or more occasions shall not be deemed a waiver on the part of Dow AgroSciences to exercise such right or rights on one or more subsequent occasions.

9.07 If Grower's information provided to Dow AgroSciences herein or otherwise in connection with the HERCULEX Products changes, Grower agrees to promptly provide Dow AgroSciences with Grower's updated information to Grower's HERCULEX Products seed dealer or to the Dow AgroSciences address below.

9.08 Return your signed Grower Agreement to the seed company where you purchased corn hybrids containing Dow AgroSciences HERCULEX Products. The seed company will forward it to:

Dow AgroSciences, Attn: Traits Administrator, P.O. Box 220928, Charlotte, NC 28222-0928



®HERCULEX is a trademark of Dow AgroSciences LLC
©2007 Dow AgroSciences LLC

530-D2-198-07 - EG
B39-208-003 (1/07) BR.
010-16253 BR.

HERCULEX *Insect Protection* technology by Dow AgroSciences and Pioneer Hi-Bred.



Improving Quality of Life.

This Page is intentionally left blank