



COMPETITION TRIBUNAL OF SOUTH AFRICA

Case No: LM030May16

In the matter between:

DowDuPont Inc.

Primary Acquiring Firm

and

The Dow Chemical Company

E.I. Du Pont De Nemours and Company

Primary Target Firms

Panel	: AW Wessels (Presiding Member)
	: Prof. Imraan Valodia (Tribunal Member)
	: Medi Mokuena (Tribunal Member)
Heard on	: 19 July 2017 and 04 August 2017
Last Submission Received	: 16 August 2017
Order Issued on	: 17 August 2017
Reasons Issued on	: 27 September 2017
Non-confidential Reasons Issued On	: 03 November 2017

Reasons for Decision (Non-confidential)

Conditional Approval

- [1] On 17 August 2017, the Competition Tribunal ("Tribunal") conditionally approved the proposed transaction between DowDuPont Inc ("DowDuPont") and The Dow Chemical Company ("Dow") and E.I. Du Pont De Nemours and Company ("DuPont"). The approval of the proposed transaction is subject to both a structural (i.e. divestiture) remedy in certain markets and a behavioural (i.e. licensing) remedy in other markets, as explained below.

- [2] The reasons for conditionally approving the proposed transaction follow.

Parties to the proposed transaction

Primary acquiring firm

- [3] The primary acquiring firm is DowDuPont, a company incorporated in terms of the laws of the United States of America. DowDuPont is a newly incorporated holding company for the purposes of the proposed transaction. DowDuPont is controlled by Dow and DuPont.
- [4] DowDuPont in turn has incorporated two wholly-owned non-trading subsidiaries, Diamond Merger Sub and Orion Merger Sub. Pursuant to the proposed transaction, Dow and DuPont will merge with Diamond Merger Sub and Orion Merger Sub, respectively, such that Dow and DuPont will survive those mergers as wholly-owned subsidiaries of DowDuPont.

Primary target firms

- [5] The primary target firms are Dow and DuPont. They are public corporations incorporated in accordance with the company laws of the United States of America and are listed on the New York Stock exchange. Neither Dow nor DuPont is controlled by any single firm.
- [6] Dow is a diversified chemicals company headquartered in the USA. It is the ultimate parent company of the Dow group, which is broadly active in the research, development, production and distribution of plastics and chemicals, agricultural sciences and hydrocarbon and energy products and services.
- [7] DuPont is also headquartered in the USA and is the ultimate parent company of the DuPont group. The DuPont group researches, develops, produces, distributes and sells a variety of chemical products, polymers, agrochemicals, seeds, food ingredients and other materials.
- [8] Dow and DuPont are active in South Africa through a number of wholly-owned subsidiaries.

- [9] Dow's activities in South Africa include the distribution of sunflower seeds, the distribution of insecticides, herbicides and fungicides (collectively referred to as "agrochemicals"), the distribution of material science products (i.e. elastomers, ion exchange resins and low density polyethylene), as well as the distribution of food texturisers, specifically purified carboxymethylcellulose ("CMC"). Dow does not locally manufacture any of these products but imports them into South Africa from its manufacturing operations in different parts of the world.
- [10] Dow operates in South Africa through the following subsidiaries:
- Dow South Africa Holdings (Pty) Ltd;
 - Dow Southern Africa (Pty) Ltd;
 - Dow AgroSciences Southern Africa (Pty) Ltd;
 - Cisvaal (Pty) Ltd;
 - Predate Properties (Pty) Ltd;
 - Rohm and Haas South Africa (Pty) Ltd;
 - Sentrachem Limited; and
 - Union Carbide South Africa (Pty) Ltd.
- [11] DuPont's activities in South Africa include the distribution of various seeds including maize and sunflower seeds. DuPont is also involved in the distribution of agrochemicals i.e. insecticides, herbicides and fungicides. Further DuPont distributes material science products such as ethylene vinyl acetate, acrylate co-polymers, acid co-polymers and compounded/formulated solutions. DuPont also supplies purified CMC in South Africa from its manufacturing plant in China.
- [12] DuPont operates in South Africa through the following wholly-owned subsidiaries:
- DuPont Protein Technologies Internal Sales LLC ta/a Solae;
 - Pioneer Hi-Bred RSA (Pty) Ltd;
 - Pioneer Hi-Bred Research RSA (Pty) Ltd;
 - Danisco South Africa (Pty) Ltd;
 - Three Diamonds Trading 304 (Pty) Ltd;
 - Innovation Ingredients (Pty) Ltd;
 - Pannar Industrial Holdings (Pty) Ltd;
 - Pannar International (Pty) Ltd;

- Pannar Seed (Pty) Ltd;
- Pannar Research Farm (Pty) Ltd;
- Pannar Seed Holdings (Pty) Ltd;
- DuPont South Africa Holdco (Pty) Ltd; and
- DuPont de Nemours South Africa (Pty) Ltd.

Proposed transaction and rationale

- [13] The parties to the proposed transaction are DowDuPont, Dow and DuPont. They have entered into an Agreement and Plan of Merger through which Dow and DuPont will combine in what has been termed a "*merger of equals*".
- [14] Dow and DuPont have incorporated a new holding company, DowDuPont, which in turn has incorporated two subsidiaries, Diamond Merger Sub and Orion Merger Sub. Dow and DuPont will merge with Diamond Merger Sub and Orion Merger Sub, respectively, such that Dow and DuPont will survive those mergers as wholly-owned subsidiaries of DowDuPont.
- [15] The current shareholders of Dow and DuPont will be compensated through the right to receive shares in DowDuPont such that each party's shareholders will own approximately 50% of the shares (on a fully diluted basis, excluding preferred shares).
- [16] The merging parties submitted that the proposed transaction will create value and efficiencies due to their complementary product offerings. This is reflected by the merging parties' intention to create three separate public listed entities with distinct focuses i.e. an agriculture business, a material science business and a speciality products business.
- [17] We note that the proposed transaction is an international transaction that has been notified in various jurisdictions throughout the world.

Impact on competition

- [18] The Competition Commission ("Commission") found horizontal overlaps between the activities of the merging parties with respect to (i) the distribution of crop protection chemicals including fungicides, herbicides and insecticides; (ii) the distribution of High Pressured Ethylene Derivatives ("HIPED"); and (iii) the distribution of purified CMC.

[19] The Commission furthermore considered a loss of potential competition as a result of the proposed transaction in the production and distribution / sale of maize seed in South Africa.

[20] The Commission assessed the competition effects of the proposed transaction in the following markets:

- (i) a national market for the distribution of sunflower seeds;
- (ii) a national market for the distribution of purified CMC;
- (iii) a national market for the distribution of HiPEDs;
- (iv) various regional markets for the distribution of herbicides;
- (v) various regional markets for the distribution of fungicides;
- (vi) various regional markets for the distribution of insecticides; and
- (vii) a national market for:
 - i. the development and supply of biotechnology traits;
 - ii. hybrid maize breeding; and
 - iii. the production and distribution of commercial maize seed.

[21] We first discuss the markets ((i) to (v) above) in which the Commission found no substantial competition concerns resulting from the proposed transaction. We then turn our focus to the markets in which the Commission found significant competition concerns ((vi) and (vii) above) and recommended structural and behavioural remedies to address those concerns.

Distribution of sunflower seeds

[22] With respect to the national market for the distribution of sunflower seeds, the Commission found that although the merged entity will post-merger have a high market share, the structure of the market will not meaningfully change as a result of the proposed transaction. This is because DuPont has been the largest player in this market with Dow being virtually absent in this market in South Africa. The merged entity will also still face competition in this market from rivals such as Syngenta and Agricol among others. The Commission furthermore concluded that since the proposed transaction does not meaningfully alter the structure of the sunflower seed market in South Africa it is unlikely that this merger itself is likely to create or enhance anti-competitive coordination. We have no reason to disagree with this conclusion.

Distribution of purified CMC

- [23] With respect to the national market for the distribution of purified CMC, the Commission found that the merged entity will have a post-merger market share of less than 25%. Competitors in this market include players such as Ashland Industries Europe GmbH, CK Kelco and Akzo Nobel South Africa among others. The Commission further found it unlikely that coordinated conduct could be sustained post-merger given the presence of several alternative global suppliers. The Commission therefore concluded that the proposed transaction is unlikely to lead to a substantial prevention or lessening of competition in the national market for the distribution of purified CMC. We have no reason to disagree with this conclusion.

Distribution of HiPEDs

- [24] With respect to the national market for the distribution of HiPEDs, the Commission found that the merged entity will have a post-merger market share of less than 5%. Sasol is the largest player in this market and the market is further characterised by a large portion of imports into South Africa. Importers include companies such as ExxonMobil, Sinopec and LyondellBasell. The Commission therefore concluded that the proposed transaction is unlikely to lead to a substantial prevention or lessening of competition in the national market for the distribution of HiPEDs. We concur with this finding.

Distribution of herbicides

- [25] With respect to the regional markets for herbicides, the Commission found that the merged entity will have post-merger market shares of less than 15% both for (i) herbicides for oilseeds; and (ii) herbicides for winter cereals in each regional market. The remainder of the market shares in both product markets will be held by reputable competitors such as Adama/Syngenta, BASF, Bayer and Villa Crop.
- [26] Based on the above, the Commission concluded that the proposed transaction is unlikely to lead to a substantial prevention or lessening of competition in the regional markets for herbicides for oilseeds (in Mpumalanga, the Free State, North West, Limpopo and KwaZulu-Natal) and herbicides for winter cereal (in the Northern Cape, the Western Cape, Free State, Limpopo and the North West). We have no reason to disagree with this conclusion.

Distribution of fungicides

- [27] With respect to the regional markets for the distribution of fungicides, the Commission found that the merged entity will have post-merger market shares of less than 15% for fungicides for grapes, less than 30% for fungicides for oilseeds, less than 20% for fungicides for tomatoes and less than 30% for fungicides for cucurbits in the various affected regional markets. The Commission further found that the merged entity will still face competition post-merger from reputable firms such as Adama, Syngenta, BASF, Bayer and Villa Crop.
- [28] Based on the above, the Commission concluded that the proposed transaction is unlikely to lead to a substantial prevention or lessening of competition in the markets for fungicides for grapes (in the Western Cape, the Northern Cape and Limpopo), oilseeds (in Mpumalanga, the Free State, KwaZulu-Natal and Limpopo), tomatoes (in Limpopo, Mpumalanga and the Eastern Cape) and cucurbits (in the Western Cape, the Eastern Cape, the Free State and KwaZulu-Natal). We have no reason to disagree with this conclusion.

Coordinated effects in the agrochemicals markets

- [29] The Commission also considered whether the proposed transaction could lead to coordinated effects in the various agrochemicals markets affected by the proposed transaction (i.e. insecticides, herbicides and fungicides) because of *inter alia* cross licensing arrangements between players operating in the upstream layer of the development and production of agrochemicals.
- [30] The Commission however concluded that the proposed transaction is unlikely to create or enhance coordinated effects given the limited impact of the proposed transaction on the above markets, barring the insecticides market (discussed below).
- [31] In the instance of insecticides where there is indeed a significant structural market change arising from the proposed transaction, there appears, according to the Commission's investigation, to be no observable mechanism for coordinated conduct.
- [32] We have no reason to doubt the Commission's finding on coordinated effects in this case and do not deal with this issue any further in these reasons.

Distribution of insecticides

- [33] With respect to insecticides, the Commission found that the merged entity will have a post-merger market share of more than 90% in the market for the distribution of insecticides for chewing insects. The remainder of the market shares are held by Syngenta and Arysta.
- [34] The Commission said that the post-merger near monopoly position suggests that the merged entity will likely exercise market power in the supply of chewing insecticides for various uses since there are no viable alternative suppliers in these product markets. Importantly, the market power of the merged entity derives from the fact that the merging parties are the only two major producers of these products - even at a global level. The Commission found it likely that the market power that would be exercised at the upstream manufacturing level (which takes place in the USA) will also be leveraged at the distribution layer in other jurisdictions such as South Africa. This competition concern was also identified in other jurisdictions such as the USA and the European Union.
- [35] The Commission also found that barriers to entry into this market are high, especially at the development and production level such that entry at the distribution level is unlikely to occur in a timely and sufficient fashion.
- [36] The Commission was further concerned about the post-merger bundling of products by the merged entity. [REDACTED]
[REDACTED]
[REDACTED] The Commission concluded that this concern is real and credible and found it conceivable that the merged entity would combine insecticides with other products in its portfolio (such as seed) and offer comprehensive solutions (such as a full spray programme to farmers) which may not be effectively mimicked by the merged entity's rivals in South Africa.
- [37] Based on the above, the Commission concluded that the proposed transaction is likely to lead to a substantial prevention or lessening of competition in the markets for insecticides for chewing insects for citrus (in Limpopo, the Western Cape, Mpumalanga, the Eastern Cape, KwaZulu-Natal and the Northern Cape), deciduous fruits (in the Western Cape, the Northern Cape, the North West and Limpopo),

vegetables (nationally) and tomatoes (in Limpopo, Mpumalanga and the Eastern Cape).

- [38] Given these competition concerns, the Commission invited the merging parties to provide remedies to address its concerns. The merging parties then submitted a global remedy comprising a divestiture settlement agreement reached with the European Commission (EC) aimed at addressing concerns arising in the EC. The merging parties submitted that once the divestiture agreement is implemented, it will also address the concerns arising in South Africa.
- [39] The global remedy ultimately includes a divestment of the identified active ingredients, which is the subject of the merger of equals between the parties, leaving only the existing Dow portfolio. More importantly, the divestiture also includes the R&D business associated with the development of the affected active ingredients such that the remedy will also apply at the upstream layer where the market power originates from.
- [40] The global remedy has been revised in this instance to 'carve out' the global insecticides that apply specifically to South Africa, such that all the assets and related business ultimately supplying the products to South Africa will be divested to a third party, thus ensuring that there is a continuation of supply to the South African market.
- [41] The Commission found that the merging parties' proposed divestiture remedy removes the product overlap arising on insecticides in South Africa and addresses the unilateral effects concerns arising in the regional markets in South African on insecticides.
- [42] We have suggested certain changes to the Commission's and merging parties' comprehensive divestiture remedy to enhance the remedy and its monitoring by the Commission.
- [43] The imposed remedy requires *inter alia* that the merging parties shall divest the Divestment Business insofar as it relates to South Africa after the approval of the proposed transaction to a purchaser approved by the Commission. The Divestment Business refers to the relevant insecticide division or part of business and applicable research and development (R&D) activities in South Africa (if any) of DuPont and includes *inter alia* the personnel, the related registrations and relevant patents as applicable to the relevant insecticide products.

- [44] We are satisfied that the final set of divestiture conditions adequately addresses the concerns arising from the proposed transaction in relation to the distribution of insecticides in various regional markets in South Africa. The divestiture conditions as imposed are attached hereto as **Annexure "A"**.

Maize seed

- [45] The Commission also identified (potential) competition concerns arising from the proposed transaction in relation to the markets associated with the production and distribution / sale of maize seed, as explained next.
- [46] DuPont is the largest supplier of genetically modified (GM) maize seed in South Africa. According to the Commission's investigation it has market share of close to 50% in the supply of maize seed in South Africa. DuPont's position is largely a culmination of the Pioneer/Pannar merger, which was approved by the Competition Appeal Court ("CAC") in 2010. The only other major player in this market is Monsanto, which holds the majority of the traits registered in South Africa.
- [47] We next describe the value chain and some of the characteristics of maize seed production and distribution to contextualize the Commission's competition concern and the licensing remedy that was eventually imposed.
- [48] The Commission described the GM maize seed market as a complex and elaborate one with a supply chain made up of multiple and inter-linked markets. The Commission stressed that there are three main and important components involved in the maize seed breeding processes. A company seeking to enter this market and produce GM seed must have, or have adequate access to, all of the following components:
- (i) a deep, diverse and strong pool of genetics (i.e. a germplasm pool);¹
 - (ii) advanced breeding technologies;² and
 - (iii) biotechnology traits.³

¹ A germplasm contains the material in a seed, composed of the DNA which determines its characteristics, its interactions with the growing environment and the yield of the crop it produces.

² Advanced breeding technologies are processes and technologies used to dramatically speed up and improve the precision of traditional breeding.

³ Biotechnology traits are genetic sequences taken from organisms other than the maize seed and developed to work (introgressed) within the maize germplasm to confer additional, beneficial characteristics such as herbicide or pesticide resistance.

- [49] It is further important to note that the maize seed value chain includes seed breeding, seed production and seed distribution before final use by the maize farmers.
- [50] Seed breeding is the science of developing desired seed characteristics by changing the genetics of plants or careful screening, selecting and crossing of species to maximize beneficial traits. The process involves laboratory developments and trials in plots under constant monitoring and verification of required traits. The plot trials are conducted in different geographical locations for the purposes of testing specific geographical adaptability such as disease, yield and drought resistance.
- [51] Seed production or multiplication commences once a new variety of seed has been approved. The multiplication of seeds is done from a limited amount of parent seeds through a repetitive process over years / seasons and through several generations before a sufficient amount of seed is obtained to be marketed. Seed multiplication may be carried out by the breeder in-house or it may be sub-contracted to specialist farmers. Usually farmers (producers) are contracted to multiply the seed on their farms because of land constraints. However, the sub-contracted farmers do not take ownership of the seed.
- [52] From a distribution perspective there are two ways in which breeders can distribute seeds. The breeder can use a direct route to the market where seeds are sold directly to the farmer through sales representatives and agents. Alternatively, the breeder can sell to various agricultural businesses such as independent retailers and former agricultural cooperatives who in turn sell the seeds to farmers.
- [53] Of specific relevance to the competition assessment of the proposed transaction and an appropriate remedy are Dow's germplasm and its biotechnology traits. The Commission found that although Dow does not currently have maize seed operations in South Africa, it has been making endeavours to enter the South African (and African) commercial maize seed market and compete against the two large incumbents, DuPont and Monsanto. The Commission's theory of harm in this instance thus is the removal of a potential entrant, Dow, as a result of the proposed transaction.
- [54] The merging parties on the other hand submitted that the proposed merger does not result in the removal of potential competition since Dow would not have entered the South Africa market given 'failed' hybrid test results. The Commission disputed this.
- [55] The Commission stated that it found evidence suggesting that Dow's maize seed initiatives in South Africa included actively considering entering into South Africa

through a joint venture with a local seed company, Klein Karoo. The plan was that Dow would have an ownership stake of 51% in the joint venture to enable it to commercialise traits in South Africa, with the objective of moving towards full ownership. The Commission further found that Dow and Klein Karoo have had a lengthy commercial relationship dating back to 2001 and that Dow has been supplying a number of maize hybrids seeds to Klein Karoo for field trials and testing.

- [56] The Commission further indicated that Dow's own strategic documents reveal a significant projected market share in the commercial maize seed market in South Africa within five years of its planned entry. This entry was premised on Klein Karoo completing the tests carried out on behalf of Dow and subsequently the registration of certain traits with the Department of Agriculture, Forestry and Fisheries ("DAFF").
- [57] We note that - currently - Dow does not have (i) any maize hybrids registered in South Africa; (ii) its own seed testing capabilities in South Africa; (iii) any registrations to commercialize its maize trait technology in South Africa; and (iv) no employees associated with any maize seed business in South Africa. However, according to the Commission, importantly, unlike DuPont, Dow does have an international presence across all the critical layers of the maize seed value chain, including owning biological traits. The merging parties confirmed that Dow is endeavouring to register two traits in South Africa, the Powercore and PowerCore with Enlist trait stacks.
- [58] We next discuss the relevant maize traits: (i) Herculex; (ii) PowerCore; and (iii) Enlist and the ownership of these traits, since it is of importance to an appropriate remedy.
- [59] Herculex is an insect resistant maize trait co-developed by Dow and DuPont that provides protection against maize stalk borers. It is already registered by DuPont in South Africa. Dow however does not have a registration or application for Herculex in South Africa. The Commission noted that Herculex has been used in South Africa in a 'stack' environment, i.e. it has been combined with traits from other developers.
- [60] PowerCore⁴ is a trait stack for maize, reflecting a cross-licence between Dow and Monsanto. However, the out-licensing of Powercore to third parties in South Africa falls within the domain of Monsanto. If a registration for the PowerCore Enlist maize trait

⁴ It is the trade name for the combination of three traits: (i) Herculex insect resistance trait (TC1507); (ii) Monsanto's above-ground YieldGard VT Pro insect resistance trait (MON89034 Monsanto's Roundup); and (iii) Ready 2 herbicide tolerance (NK603).

stack is obtained, third parties would need to obtain a licence from Monsanto (for PowerCore) and Dow (for Enlist) to be able to use this technology in South Africa.

- [61] Enlist is a herbicide tolerant trait entirely owned by Dow. Dow is in the process of carrying out field trials with an aim to register this technology in South Africa. The merging parties however submitted that Enlist would need to be stacked in South Africa with insect resistance traits and herbicide resistant (glyphosate tolerance) traits to be commercially viable.
- [62] The Commission submitted that the processes of testing Dow hybrids containing the PowerCore and Enlist traits further suggests that Dow had significant intentions to enter the South African market. We however note that the Commission found that there is no significant overlap on traits between the merging parties since DuPont does not have traits of its own that it has individually developed.
- [63] Given Dow's abovementioned plans and strategy to enter the South African commercial maize seed market in direct competition against the incumbents, the Commission found that the proposed transaction will likely result in the removal of Dow as a significant potential competitor in the market for the supply of hybrid maize seed. The Commission stressed that the maize seed market in South Africa is effectively a duopoly market, with DuPont as the largest player and Monsanto as the second largest player. The Commission further noted that there are no other potential entrants other than Dow who are likely to significantly constrain the incumbents.
- [64] Given the above, the Commission concluded that the proposed transaction results in a substantial prevention or lessening of competition in the breeding, production and supply of commercial hybrid maize seed in South Africa that would have taken place absent the proposed merger since the transaction removes the potential constraining influence that would have been exerted by Dow on DuPont and Monsanto absent the proposed transaction.
- [65] Given the competition concerns expressed by the Commission, the merging parties proffered to license the Dow germplasm to any third party in South Africa wishing to utilise Dow's germplasm to breed commercial hybrid and GM seed. The Commission and merging parties then agreed on a proposed licensing remedy relating to Dow's germplasm pool that have been directly tested in South Africa and requiring Dow to license its hybrids and inbreds.

- [66] The merging parties submitted that the proposed licensing remedy would address the Commission's competition concerns because it means that the same portfolio of germplasm that would have been made available to Klein Karoo would under the remedy be made available to Klein Karoo as well as to a broader group of potential licensees on a non-exclusive basis and on terms that are fair, reasonable and non-discriminatory. In other words, the licensing remedy will permit any firm to access the maize and inbred lines that are the subject of the remedy and to test those lines with other lines to which they may have access. Such combinations may have the result that new hybrids have the potential of being introduced in South Africa.
- [67] Furthermore, the proposed conditions require Dow to register its traits in South Africa within two years of the merger in order to provide competition (in traits) against Monsanto.
- [68] After hearing the matter on 19 July 2017, the Tribunal requested additional information from the Commission in relation to an appropriate remedy. The Tribunal specifically requested the Commission to do a proper market investigation regarding the appropriateness and efficacy of either a licensing or a divestiture remedy to address the Commission's identified competition concern in the maize seed market. The Tribunal further directed that the market investigation must include all potential entrants/licensees in the maize seed market in South Africa, including Klein Karoo, LinkSeed, United Seeds, Agricol and Delta Saad. The Commission was also requested to explain the proposed licensing remedy to these potential entrants/licensees, including all its limitations.
- [69] The Tribunal further required that the potential licensees appear before it to make submissions and answer questions on an appropriate remedy, if any. The Tribunal wanted to ensure that the remedy, if any, would assist the potential licensees to grow their market positions in South Africa given the significant potential competition lost as a result of the proposed transaction.
- [70] Upon reappearance on 04 August 2017, the Tribunal questioned the representatives of Dow regarding *inter alia* the germplasm pool that it intends making available to third parties in terms of the proposed remedy; how the intended remedy will work in practice, including the cost of the germplasm to licensees and royalties to be paid by them; the past relationship between Dow and Klein Karoo; the registration of traits in South Africa; the possibility of licensing traits to third parties in South Africa; and a restriction

contained in the proposed conditions regarding using the licensed materials for commercialization, registration and use only in South Africa. We were concerned that this restriction would prevent or restrict the viability of the licensing remedy from the perspective of a potential licensee.

[71] The Tribunal further at the hearing requested Mr Salomon Janse Van Rensburg, one of the directors of the Klein Karoo group, and Mr James Wickens, the CEO of United Seeds, to comment on the proposed remedy. The Tribunal was particularly interested to find out if the proposed remedy would assist these small players in growing their market positions and to what extent.

[72] Mr Janse Van Rensburg of Klein Karoo was positive about the prospects of gaining access to the Dow germplasm pool through the proposed remedy.⁵ Mr Wickens of United Seeds, however, was more concerned about getting access to traits at an affordable price specifically from a public interest perspective, i.e. the affordability of seed to small / black farmers in South Africa.⁶ Mr Wickens said that the price of commercial hybrid maize seed has become unaffordable to small scale farmers in South Africa. He said: *"I think also to mention something is the pricing in South Africa on commercial hybrid seed is running with the traits very high. At this stage we are talking 3 000, 3 500 a bag of 60 000 kernels. So, it's putting the seed pricing into a category where only the best largest farmers in South Africa is capable of actually buying that seed. It's definitely not for a small scale farmer somewhere up in Thohoyandou. They can't afford it."*⁷

[73] Amid questions from the Tribunal and submissions from the potential licensees, the merging parties offered certain clarifications and improvements on the proposed licensing conditions. This included to grant the right to third parties to conduct breeding and testing in South Africa of each and any of the products on the Dow Genetic Materials List at no charge (see paragraph 75.2(a) below); extending the conditions from only an undertaking to register traits in South Africa to licensing traits under the control of Dow (see paragraphs 76 and 77 below); and removing the restriction on using the licensed materials for commercialization, registration and use only in South Africa and broadening it to the rest of Africa (see paragraph 75.2(b) below).

⁵ Transcript, pages 108 to 124.

⁶ Transcript, pages 124 to 130.

⁷ Transcript, page 128.

[74] Following certain enhancements made by the Commission and the merging parties to the proposed remedy, the Tribunal approved the merger subject to a detailed set of licensing conditions.

[75] The conditions that we imposed include the following in relation to the licensing of the Dow germplasm pool:

[75.1] The merging parties undertake to negotiate in good faith to make available and license the plant materials in the Genetic Material List (as defined in the conditions), which Dow has the right to license, to any person, firm or Licensee in South Africa apart from Monsanto, on a non-exclusive basis, and on terms and conditions that are fair, reasonable and non-discriminatory to any licensee.

[75.2] Under these conditions, the merging parties shall:

- (a) grant the right to conduct breeding and testing in South Africa of each and any of the products on the Genetic Materials List, at no charge, and
- (b) subsequently upon request enter a commercialization agreement relating to any licensed material or inbreds developed through breeding activities using the licensed materials for commercialization, registration and use in South Africa and, if applicable, thereafter, the rest of Africa, and
- (c) grant the right to sub-license the genetic materials.

[75.3] The license shall permit the Licensee to cross the licensed plant material with other non-Dow lines to create breeding populations. The license will require systems of notification and inspection to allow the merging parties the ability to monitor compliance with the license and sub-licenses.

[75.4] The merging parties record that any such license shall include provisions excluding any transfer of plant materials provided under license or any derived inbreds or hybrids derived as a consequence of breeding activity under the licenses either directly or indirectly to Monsanto.

[76] As stated above, the merging parties also enhanced their proposed remedy in relation to traits. The imposed conditions require the following in relation to the registration of traits:

- [76.1] The merging parties undertake commercially reasonable efforts to register the Enlist Corn Event for cultivation in South Africa, subject to the necessary regulatory approvals and the processes and requirements contemplated thereby, within 24 months of the approval date of the proposed merger or soon thereafter as is reasonably possible.
- [77] Following the second hearing, the Commission and the merging parties included the following additional conditions in relation to the licensing of traits in South Africa:
- [77.1] The merging parties undertake to negotiate in good faith to make available and license Enlist Corn Event on a non-transferable, non-exclusive basis, without the right to grant sublicenses to any prospective licensee, on terms and conditions that are fair, reasonable and non-discriminatory.
- [77.2] Any person or firm that already has a license to use the Enlist Corn Event or any trait stack containing the Enlist Corn Event in South Africa is not an eligible licensee for an Enlist Corn Event license under this remedy.
- [77.3] The license shall provide the right to introgress the Enlist Corn Event into maize seed and sell such seed in South Africa only. The license shall provide commercially reasonable rights to use the associated trademarks for the Enlist Corn Event for the purpose of marketing the maize seed containing the Enlist Corn Event in South Africa.
- [77.4] The license shall require the Licensee to comply with all government or Dow stewardship requirements for the Enlist Corn Event. The license will require systems of notification and inspection to allow the Parties the ability to monitor compliance with the license.
- [77.5] The licenses shall be on commercially reasonable terms and conditions including reasonable, fair and non-discriminatory compensation and/or royalties.
- [77.6] The merging parties will further grant their consent, to the extent required, and will use their reasonable endeavors to encourage Monsanto to license PowerCore to third parties in South Africa.
- [78] We are satisfied that the enhanced set of licensing conditions adequately addresses and is proportional to the identified competition concern. The licensing conditions as imposed are attached hereto as **Annexure "B"**.

Public interest

Employment

- [79] The merging parties submitted that they do not anticipate that the proposed transaction will have a significant adverse impact on employment in South Africa and further noted that Dow has a very limited number of employees in South Africa.⁸
- [80] The Commission contacted the Food Allied Workers Union (FAWU), the South African Chemical Workers Union (SACWU), the Hotel, Liquor, Catering, Commercial & Allied Workers Union of South Africa (HOTELICCA) and the South African Commercial Catering and Allied Workers Union (SACCAWU). None of these unions raised any concerns about the proposed transaction.
- [81] The Commission further indicated that the merging parties do not intend to combine their South African businesses and therefore, based on the merging parties' submissions, concluded that the proposed transaction is unlikely to lead to any negative effects on employment.

Impact on a sector

Impact on warehousing and logistics companies

- [82] The Commission considered whether the proposed transaction would affect the businesses of the warehousing and logistics companies that currently service the merging parties. The Commission was concerned that post-merger the merging parties could potentially have an incentive to integrate their South African operations and use fewer logistics companies.
- [83] The merging parties however indicated that the current existing contracts with warehousing and logistics service providers will be honoured post-transaction. Further, the merging parties stated that there are no changes being considered with respect to warehousing and logistics service providers.

⁸ Merger Record, pages 14 and 85.

- [84] Given the merging parties' submissions as confirmed in their strategic documents, the Commission concluded that the current warehousing and logistics service providers are unlikely to be negatively affected by the proposed transaction.

Impact on R&D activities in South Africa

- [85] The Commission also considered the potential impact that the proposed merger may have on the existing manufacturing and R&D initiatives of Dow and DuPont in South Africa. The Commission was specifically concerned that the merged entity may have an incentive to discontinue its breeding facilities in South Africa and import seed from its facilities outside of South Africa.
- [86] The Commission however noted that seeds need to be registered with DAFF before they can be sold in South Africa. According to DAFF, the registration process for seeds can take at least seven years since the seeds have to go through field trials to ensure that the seeds are compatible with South African climatic conditions. The Commission thus submitted that the importation of seeds by the merged entity will not take place immediately after the merger due to the regulatory requirements imposed by DAFF for seed registration. Furthermore, Dow has only registered sunflower seeds for distribution in South Africa.
- [87] The Commission was also concerned that there may be a change in incentives arising as a result of the merger in relation to the continuance of certain existing R&D facilities in South Africa. DuPont has two major breeding facilities in South Africa, one in Delmas (Mpumalanga) and one in Hoogekraal (North West). DuPont has smaller facilities in Bloemfontein (Free State), Greytown (KwaZulu-Natal) and Letsitele (Limpopo).
- [88] The Commission noted that the upgrades and investments at the International Research and Technology Hub at Delmas and Hoogekraal were developed by DuPont as a culmination of remedies that were imposed by the CAC in the merger transaction between Pioneer Hi-Bred International Inc and Pannar Seed (Pty) Ltd, under case number 113/CAC/Nov11. The Commission argued that it is important that these initiatives should continue post-merger in South Africa.
- [89] The Commission therefore recommended a condition that the merged entity should commit to maintaining these facilities in South Africa into the future. The merging

parties agreed to this as a condition to the approval of the proposed transaction and we have included this in the imposed set of behavioural remedies.

Conclusion

[90] We conclude that the proposed transaction is likely to substantially prevent or lessen competition in certain relevant markets as indicated above. However, the imposed sets of conditions (i.e. both a divestiture and behavioural remedy) adequately address these competition concerns. Similarly, concerns relating to the post-merger continuation of research and development initiatives in South Africa are adequately addressed by a condition that was agreed by the Commission and the merging parties. Accordingly, we approve the proposed transaction subject to both structural and behavioural remedies.



AW Wessels

03 November 2017
DATE

Prof. Imraan Valodia and Mrs Medi Mokuena concurring

Case Manager:	Kameel Pancham
For DuPont:	Derek Lotter and Maryanne Angumuthoo from Bowmans
For Dow:	Stephen Langbridge from Fasken Martineau
For the Commission:	Grashum Mutizwa and Nelly Sakata

CONFIDENTIAL

ANNEXURE A

DOWDUPONT INC / THE DOW CHEMICAL COMPANY AND E.I DU PONT DE NEMOURS
AND COMPANY

CC CASE: 2016May0227

CT CASE: LM030May16

CONDITIONS

1. DEFINITIONS

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

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Annexure "B"

SEEDS REMEDY

DowDuPont Inc

And

**The Dow Chemical Company and E.I DuPont De Nemours and Company (CASE NO.
2016MAY0227)**

1. DEFINITIONS

- 1.1 "Act" means the Competition Act, 89 of 1998;
- 1.2 "Affiliated Undertakings" means undertakings controlled by DuPont and/or by the ultimate parents of the merging parties;
- 1.3 "Approval Date" means the date referred to on the Tribunal's Merger Clearance Certificate (Form CT 10);
- 1.4 "CAC" means the Competition Appeal Court;
- 1.5 "Commission" means the Competition Commission of South Africa;
- 1.6 "Conditions" means these conditions;
- 1.7 "Confidential Information" means any business secrets, know-how, commercial information, or any other information of a proprietary nature that is not in the public domain;
- 1.8 "Days" means business days, being any day other than a Saturday, Sunday or official public holiday in the Republic of South Africa;
- 1.9 "Dow" means The Dow Chemical Company, a company incorporated in terms of the company laws of the United States of America;
- 1.10 "DowDuPont" means DowDuPont Inc., a company incorporated in terms of the company laws of the United States of America and which will be the merged firm;
- 1.11 "DuPont" means E.I. DuPont de Nemours and Company, a company incorporated in terms of the company law of the United States of America;
- 1.12 "Enlist Corn Event" means the DAS-40278-9 corn event, identified in the U.S. APHIS Petition No. 09-233-01p.;

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- 1.13 "Genetic Material List" means the Dow maize inbred lines and maize hybrids attached as Annexure "B1" which constitute all material in non-traited form as provided to Klein Karoo for testing by Klein Karoo in South Africa between 2013 and 2017;
- 1.14 "Implementation Date" means the date occurring after the Approval date, on which the Merger is implemented by the Merging Parties;
- 1.15 "Klein Karoo" means Klein Karoo Seed Marketing (Pty) Ltd, a company incorporated in terms of the company laws of the Republic of South Africa;
- 1.16 "Licenses" means the licenses in respect of the hybrids and inbred lines listed in the Genetic Materials List, and / or Enlist Corn Event;
- 1.17 "Licensee" means a licensee of the hybrids and inbred lines listed in the Genetic Materials List, and / or Enlist Corn Event;
- 1.18 "Merger" means the merger notified to the Commission in terms of the Act under case number 2016May0227;
- 1.19 "Merging Parties" or "Parties" means Dow and DuPont;
- 1.20 "Monsanto" means the Monsanto Company and any firm directly or indirectly controlled by the Monsanto Company or its successor in title;
- 1.21 "South Africa" means the Republic of South Africa;
- 1.22 "Tribunal" means the Competition Tribunal South Africa.

2. CONDITIONS

- 2.1 The Parties undertake to negotiate in good faith to make available and license the plant materials in the Genetic Material List (as defined above), which Dow has the right to license, to any person, firm or Licensee in South Africa apart from Monsanto, on a non-exclusive basis, and on terms and conditions that are fair, reasonable and non-discriminatory to any licensee.
- 2.2 Under these conditions, the Merging Parties shall :
- 2.2.1 grant the right to conduct breeding and testing in South Africa of each and any of the products on the Genetic Materials List, at no charge, and

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- 2.2.2 subsequently upon request enter a commercialization agreement relating to any licensed material or inbreds developed through breeding activities using the licensed materials for commercialization, registration and use in South Africa and, if applicable, thereafter, the rest of Africa, and
- 2.2.3 Grant the right to sub-license the genetic materials.
- 2.3 Such licenses shall occur as soon as practical after nine months from the Implementation Date, and after a request in this regard has been received.
- 2.4 The license shall permit the Licensee to cross the licensed plant material with other non-Dow lines to create breeding populations. The license will require systems of notification and inspection to allow the Parties the ability to monitor compliance with the license and sub-licenses.
- 2.4.1 The Parties record that any such license shall include provisions excluding any transfer of plant materials provided under license or any derived inbreds or hybrids derived as a consequence of breeding activity under the licenses either directly or indirectly to Monsanto.
- 2.5 The Parties shall undertake commercially reasonable efforts to register the Enlist Corn Event for cultivation in South Africa, subject to the necessary regulatory approvals and the processes and requirements contemplated thereby, within 24 months of the Approval Date or soon thereafter as is reasonably possible.
- 2.6 The Parties undertake to negotiate in good faith to make available and license Enlist Corn Event on a non-transferable, non-exclusive basis, without the right to grant sublicenses to any prospective licensee, on terms and conditions that are fair, reasonable and non-discriminatory.
- 2.7 Any person or firm that already has a license to use the Enlist Corn Event or any trait stack containing the Enlist Corn Event in South Africa is not an eligible licensee for an Enlist Corn Event license under this remedy.
- 2.8 The license shall provide the right to introgress the Enlist Corn Event into maize seed and sell such seed in South Africa only. The license shall provide commercially reasonable rights to use the associated trademarks for the Enlist Corn Event for the purpose of marketing the maize seed containing the Enlist Corn Event in South Africa.

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- 2.9 The license shall require the Licensee to comply with all government or Dow stewardship requirements for the Enlist Corn Event. The license will require systems of notification and inspection to allow the Parties the ability to monitor compliance with the license.
- 2.10 The licenses shall be on commercially reasonable terms and conditions including reasonable, fair and non-discriminatory compensation and/or royalties.
- 2.11 The Parties undertake to negotiate any licenses or other requirements in these Conditions in the utmost good faith.
- 2.12 The Parties further undertake to continue their commercially reasonable efforts to register the PowerCore trait stack for maize and the PowerCore with Enlist trait stack for maize within 24 months of the Approval Date. This undertaking is subject to the necessary regulatory approvals and the processes and requirements contemplated thereby.
- 2.13 The Merging Parties will grant their consent, to the extent required, and will use their reasonable endeavors to encourage Monsanto to license PowerCore to third parties in South Africa.

3. MONITORING OF CONDITIONS

- 3.1 Within 5 (five) days of the Approval Date, the Merging Parties shall publish on their website a notice announcing that it will make available and license the plant materials in the Genetic Material List, as described above. The parties will also send such notice to potential licensees, including Klein Karoo, LinkSeed (Pty Ltd), United Seeds CC, Agricol (Pty) Ltd, and Delta Saad.
- 3.2 As proof of compliance with 3.1 above, a regional director of the Merging Parties shall, within 10 (ten) Days of publishing the notice in the website and sending the notice to potential licensees, submit an affidavit confirming the publication and sending of the notice and provide a copy of the notice that was published on the website and sent to potential licensees.
- 3.3 The Merging Parties shall inform the Commission in writing of the Implementation Date within ten business days after the Implementation Date has occurred.
- 3.4 The Merging Parties shall submit a comprehensive confidential compliance report to the Commission, setting the extent of its compliance with clause 2 of the Conditions on each anniversary of the Implementation Date for a period of 5 (five) years. This report shall include as a minimum requirement:

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- 3.4.1 The number of material testing agreements concluded;
 - 3.4.2 The names of the parties who have concluded material testing agreements;
 - 3.4.3 The materials tested;
 - 3.4.4 The number of commercialization agreements concluded in the relevant period;
 - 3.4.5 The names of the licensees and / or of parties that have concluded commercialization agreements;
 - 3.4.6 ;
 - 3.4.7 The material terms of such commercialization agreements, including agreed royalties.
- 3.5 This compliance report shall be accompanied by an affidavit (deposed to by a regional director of the Merging Parties) confirming the accuracy of the information contained in the compliance report.

4. BREACH OF CONDITIONS

- 4.1 In the event that the Merging Parties appear to have breached the above Conditions or if the Commission determines that there has been an apparent breach by the Merging Parties of any of the Conditions, this shall be dealt with in terms of Rule 39 of the Commission Rules.

5. VARIATION

- 5.1 The Merging Parties shall be entitled, upon good cause shown, to make a proposal to the Commission to consent to the waiver, relaxation, modification and/or substitution of one or more of the Conditions herein, which consent shall not be unreasonably withheld.
- 5.2 In the event of the Commission and the Merging Parties agreeing upon the waiver, relaxation, modification and/or substitution of any aspect of the Conditions, the Commission and the Merging Parties shall apply to the Tribunal for confirmation thereof.
- 5.3 In the event of the Commission withholding its consent to a waiver, relaxation, modification and/or substitution of any condition, the Merged Parties shall be entitled to apply to the Tribunal for an order to waive, relax, modify and/or substitute the Conditions. The Commission shall be entitled to oppose such application.

ANNEXURE B1

GENETIC MATERIAL LIST

sort	Type	DAS Name	Descriptor	Adaptation
1	Hybrid	X14816NT	Yellow	Late Temperate
2	Hybrid	DAS-14Y0036	Yellow	Temperate
3	Hybrid	DAS-14Y0003-2	Yellow	Temperate
4	Hybrid	DAS-14Y0034	Yellow	Temperate
5	Hybrid	DAS-15Y1252	Yellow	Temperate
6	Hybrid	CNX157137	Yellow	Temperate
7	Hybrid	DAS-15Y1249	Yellow	Temperate
8	Hybrid	CNX157146	Yellow	Temperate
9	Hybrid	DAS-15Y1256	Yellow	Temperate
10	Hybrid	CNX157122	Yellow	Temperate
11	Hybrid	DAS-15Y1253	Yellow	Temperate
12	Hybrid	DAS-15Y1254	Yellow	Temperate
13	Hybrid	CNX168019	Yellow	Late Temperate
14	Hybrid	CNX168026	Yellow	Late Temperate
15	Hybrid	CNX157139	Yellow	Late Temperate
16	Hybrid	CNX167226	Yellow	Temperate
17	Hybrid	DAS-15Y1257	Yellow	Temperate
18	Hybrid	DAS2306	White	Subtropical
19	Hybrid	DAS2358	White	Subtropical
20	Hybrid	DOW985	White	Subtropical
21	Hybrid	DOW911	White	Subtropical
22	Hybrid	DAS-1120 (FKA 2A120)	Yellow	Subtropical
23	Hybrid	DAS3361	Yellow	Temperate
24	Hybrid	DAS - 1587 (FKA 2B587)	Yellow	Tropical
25	Hybrid	X14825NT	Yellow	Late Temperate
26	Hybrid	DAS-14Y0003-2	Yellow	Temperate
27	Hybrid	X13803NT	Yellow	Late Temperate
28	Hybrid	X14814NT	Yellow	Temperate
29	Hybrid	X14816NT	Yellow	Late Temperate
30	Hybrid	X14819NT	Yellow	Late Temperate
31	Hybrid	X14823NT	Yellow	Late Temperate
32	Hybrid	CNX157139	Yellow	Late Temperate
33	Hybrid	DAS-14Y0034	Yellow	Temperate
34	Hybrid	DAS-14Y0036	Yellow	Temperate
35	Hybrid	CNX157131	Yellow	Late Temperate
36	Hybrid	DAS-14Y0005	Yellow	Temperate
37	Hybrid	DAS-14Y0006	Yellow	Late Temperate
38	Hybrid	DAS-14Y0007	Yellow	Late Temperate
39	Hybrid	X14804NT	Yellow	Late Temperate
40	Hybrid	X14815NT	Yellow	Temperate

41	Hybrid	X14817NT	Yellow	Late Temperate
42	Hybrid	X14822NT	Yellow	Late Temperate
43	Hybrid	X14826NT	Yellow	Late Temperate
44	Hybrid	X15747NT	Yellow	Late Temperate
45	Hybrid	DAS-14Y0020	Yellow	Late Temperate
46	Hybrid	DAS-14Y0021	Yellow	Early Subtropical
47	Hybrid	DAS-14Y0022	Yellow	Late Temperate
48	Hybrid	T13995NT	Yellow	Late Temperate
49	Hybrid	X15724NT	Yellow	Late Temperate
50	Hybrid	X13809NT	Yellow	Late Temperate
51	Hybrid	X14728NT	Yellow	Temperate
52	Hybrid	X14817NT	Yellow	Late Temperate
53	Hybrid	DAS-14Y0028	Yellow	Early Temperate
54	Hybrid	DAS-14Y0029	Yellow	Early Temperate
55	Hybrid	DAS-14Y0031	Yellow	Temperate
56	Hybrid	CNX157123	Yellow	Temperate
57	Hybrid	DAS-14Y0033	Yellow	Early Temperate
58	Hybrid	DAS-14Y0035	Yellow	Early Temperate
59	Hybrid	DAS-14Y0037	Yellow	Temperate
60	Hybrid	DAS-14Y0038	Yellow	Temperate
61	Hybrid	X12707NT	Yellow	Temperate
62	Hybrid	X12730NT	Yellow	Temperate
63	Hybrid	X14531NT	Yellow	Early Temperate
64	Hybrid	X14644NT	Yellow	Early Temperate
65	Hybrid	X14703NT	Yellow	Early Temperate
66	Hybrid	X14709NT	Yellow	Early Temperate
67	Hybrid	T14812NT	Yellow	Temperate
68	Hybrid	X15731NT	Yellow	Late Temperate
69	Hybrid	DAS-15Y1254	Yellow	Temperate
70	Hybrid	CNX167226	Yellow	Temperate
71	Hybrid	CNX157139	Yellow	Late Temperate
72	Hybrid	DAS-15Y1257	Yellow	Temperate
73	Hybrid	DAS-15Y1252	Yellow	Temperate
74	Hybrid	CNX157146	Yellow	Temperate
75	Hybrid	CNX157137	Yellow	Temperate
76	Hybrid	CNX157122	Yellow	Temperate
77	Hybrid	DAS-15Y1256	Yellow	Temperate
78	Hybrid	DAS-15Y1253	Yellow	Temperate
79	Hybrid	DAS-15Y1249	Yellow	Temperate
80	Hybrid	CNX168026	Yellow	Late Temperate
81	Hybrid	CNX168019	Yellow	Late Temperate
82	Inbred Line	MN4154W	White	Late Temperate
83	Inbred Line	MN4243W	White	Late Temperate
84	Inbred Line	HD008W	White	Early Subtropical

85	Inbred Line	M41MU1W	White	Temperate
86	Inbred Line	M41MU3W	White	Temperate
87	Inbred Line	MNGD02W	White	Temperate
88	Inbred Line	DDM01	Yellow	Early Temperate