

**E.I DuPont de Nemours & Company: Aftermath of Split-off[[1]](#footnote-1)\***

 The *Conoco* split-off offer of August 1999 was a ranging success. *DuPont* accepted 148 million shares in exchange for 437 million of its *Conoco* shares. The exchange offer was 2.4 times oversubscribed and the exchange ratio of 2.95 was not adjusted. *DuPont* accepted 42% of each offer of its stock that was tendered; the exchange offer implied a 17.7% premium over face value. From overseas investors, *DuPont* repurchased 8 million shares at $80.76 per share. In total, *DuPont* bought back about 16% of the 50 million shares tendered on a pro rata basis.

The divestiture of *Conoco* yielded $21 billion in after-tax proceeds and disposed of 100% of *DuPont’s* shares in it. In 2002 *Conoco* merged with *Phillips Petroleum* to form the third-largest U.S. oil company. The success of *ConocoPhillips* overshadowed the remaining dilemma *i.e.,* how the “stub” company -- *E.I DuPont de Nemours & Company* – should compete within the mature worldwide petrochemicals industry.

Although *DuPont* believed that it was far more innovative than other chemical companies, the market’s valuation of its stock suggested that it was lumped together with *Dow* (the largest U.S. chemicals firm) and *BASF* (Germany’s noteworthy chemicals firm). In its heart, *DuPont* considered *Monsanto* to be the company it strived to emulate. [See Appendix for details concerning *Monsanto*.]

**Restructuring for Growth**

*DuPont* launched a search for its next growth engine. By the end of 1999 investors had lost their appetite for “life science companies” due, in part, to consumer backlash against genetically-modified foods, but also because the rewards of using bioengineered technologies seemed far off. By late October 2000, *DuPont’s* stock price had fallen by 28% since Chad Holliday took over as leader in February 1998. *DuPont* was celebrating its 200th anniversary as a company in July 2002 and Holliday very much wanted to preside over that celebration. He was replaced as CEO in 2008.

“The board should be asking hard questions,” said one analyst. “Holliday has a huge credibility hole to dig out of.”

A senior portfolio manager complained, “*DuPont* is stumbling around looking for a growth engine and has clearly not found one.”

“Investors are looking at *DuPont* right now and saying ‘Show me.’ They are waiting for the growth story to unfold,” said a senior investment officer at Wilmington Trust, *DuPont’s* largest shareholder.[[2]](#endnote-1)

Chad Holliday acknowledged that his earlier ambition to generate 30% of *DuPont’s* income from life sciences by 2002 would have to be rethought, but he was determined to push ahead with his strategy, this time under the banner of “bio-solutions” which placed new emphasis on chemicals used in electronics manufacturing and Internet commerce. It was a period of restructuring and retrenching in the chemicals industry as life sciences subsidiaries were being spun off to generate quick shareholder returns.

*ICI* had been the first chemical firm to split off its life sciences operations into a separate entity (*Zeneca*) in 1993. By 1999 other chemical companies had also abandoned their life sciences strategies, including Swiss pharmaceutical giant *Novartis*, which announced it would spin off its agricultural unit. Around the same time that *Novartis* was created (from *Sandoz* and *Ciba-Geigy*), *Monsanto* was acquired by *Pharmacia & Upjohn Inc*. *Monsanto’s* agricultural unit was subsequently spun off as a public company. [*See Appendix for an explanation of Monsanto’s corporate structure*.] *Hoechst* restructured itself into *Aventis (*via a merger with *Rhône-Poulenc* in which its French partnerspun off *Rhodia)*, *Clariant,* *Dystar*, *Celanese* and miscellaneous other divestitures. (*Clariant* also contained assets spun off from *Sandoz*. In 2006 *Clariant* sold its Pharmaceutical Fine Chemicals to *Tower Brook Capital Partners*, a private equity firm.) Chemical operations were valued like “bath water” while pharmaceutical operations were valued as “the baby.”

In December 2000 *BASF* announced that it would sell its drug business for US$6.9 billion to *Abbott Laboratories*. The decision to sell this line of business culminated three decades of effort by *BASF* to buy its way into the pharmaceutical industry. Like most big chemical companies, *BASF* concluded that it could no longer do both chemicals and drugs effectively.[[3]](#endnote-2)

Like *DuPont*, *Dow Chemical* spent the 1990s selling assets that no longer fit with its corporate strategy, cutting operating costs within ongoing businesses, and reducing the size of its workforce. Both *DuPont* and *Dow* firms began acquiring businesses in 2000 to complete their corporate transformations. While *DuPont’s* vision included “life sciences” -- the confluence of chemicals, pharmaceuticals, and agriculture – *Dow Chemical* increased its market share in basic and specialty chemicals to generate synergies from classic efficiencies of scale and remained an integrated chemicals company.[[4]](#endnote-3) When other companies were fleeing basic chemicals, *Dow* bought up market share in ethylene, polyethylene and other building block chemicals, and it acquired *Union Carbide* for US$11 billion in 1999. *Dow* also increased its production of higher-margin specialty chemicals, such as resins for water purification and polymers for coating paper. Since the 1950s the market had valued *Dow’s* corporate strategy less highly than *DuPont’s*.

In 1999 *DuPont* was midway through a significant “business portfolio transformation” in which it made over US$60 billion in acquisitions and divestitures. Over the next ten years, *DuPont* shed its energy, pharmaceuticals and textiles businesses while emphasizing agricultural biotechnology, coatings, and electronic materials. As the chemical firm struggled to find its growth engine, Holliday adopted “sustainable growth” as *DuPont’*s new mantra. (*DuPont* abandoned its pre-war motto of “Better things for better living through chemistry” for a new slogan: “The miracles of science.”)

**Quest for *DuPont’s* Growth Engine**

*DuPont’s* growth has been driven by successes in gunpowder in the 19th century and by polymers in the 20th century. In the 21st century management hoped that *DuPont* could prosper by improving the environment. In 2007 *DuPont* claimed that US$5 Billion of its US$29 Billion of revenues came from sustainable products, *e.g.,* *bio-PDO* (a corn-based material, 1-3 propanediol, with many uses) and *Tyvek®* (to increase energy efficiency). Meanwhile – to keep investors’ attentions on the firm’s stock – *DuPont* repurchased US$5 Billion of its shares in 2007 and continued to reduce its dependence on commodity chemicals.

**Chemicals**

**Fibers**

**Polymers**

**Foundation Businesses**

**Agriculture**

**Pharmaceuticals**

**Biotechnology**

**Life Science Businesses**

***Branded Products***

**(Corian®, Tyvek®, Kevlar®, Teflon®, Nomex®, Stainmaster®)**

**Automotive Finishes**

**Titanium Dioxide (TiO2)**

**Differentiated Businesses**

*DuPont’s* commodity fibers, polymers and chemical businesses were mighty cash cows that generated the cash needed to expand into bio-engineered product lines. Chad Holliday believed that *DuPont* should move away from these big and comfortable lines of business and into arenas with higher growth potential (but higher risk).

**1999**

 With US$10 Billion of the proceeds from the *Conoco* split off, *DuPont* completed a takeover of *Pioneer Hi-Bred* *International* (the leading hybrid seed company) with the objective of applying genetic engineering to use of transgenic crops in polymers rather than for foods.[[5]](#endnote-4) (Successful creation of transgenic feedstocks would reduce *DuPont’s* dependence on dirty, depletable petroleum.) Skeptics snorted that it would take *a generation* – not the decade that Holliday was promising – for renewable feedstocks to become a significant share of the current petrochemicals asset base. In 1999 only 20 percent of *DuPont’s* corporate revenues came from life sciences sources. DuPont reported its revenues were generated by: performance coatings and polymers [$6,485 Billion or 22 percent of total]; nylon [$4,554 Billion or 15.5 percent]; specialty polymers [$4,508 Billion or 15 percent]; pigments and chemicals [$3,907 Billion or 13 percent]; specialty fibers [$3,452 Billion or 12 percent]; agricultural and nutrition [$2,511 Billion or 8.5 percent]; *Pioneer Hy-Brid® Seeds* [$1,938 Billion or 6 percent]; pharmaceuticals [$1,487 Billion or 5 percent]; and other [$456 million or 1.5 percent].

In 1999 *DuPont* began a campaign to “de-materialize” their product line – a movement by which they strived to deliver more performance while using fewer materials, *e.g*., polyester film products that are thinner but stronger command higher prices for customers that were willing to pay premiums for them when making electronic components.

 Although *DuPont’s* top management team was enamored by the potential of biotechnology, successful integration of biology with chemistry to create new products could take decades to implement. *DuPont* was also implementing productivity improvement programs to generate more revenues with fewer resources and promoting its knowledge and resources to generate bigger benefits from established brands – *Kevlar®* (for bullet-proof vests), *Corian*® (for countertops and furniture), *Teflon®* (to protect clothing as well as pots and pans), *Tyvek*® for protecting clothing, gift wrap and house construction, and *Lycra*® spandex fiber. It was putting more resources behind promising product lines that it had already developed, such as the electronic-materials business that was selling to makers of flat panel displays, batteries and fuel cells. Even *DuPont’s* old, core polyester and nylon businesses were increasing revenues in 1999.

 *Lycra*.® Although *DuPont* was preparing to sell its commodity fibers business to raise cash to fund its search for a new growth path, it launched a branding campaign to promote its specialty stretch fiber, *Lycra®-*brandedspandexto increase its sale value. (*DuPont* had 52% of the worldwide market for spandex fiber in 1999.) Because demand for *Lycra®* was growing by around 10% per year while demand for generic spandex grew by only 2%, *Lycra®’s* marketing budget was increased to US$40 million as *DuPont* launched a global advertising campaign to support the product’s pricing premium of 20% to 25%.[[6]](#endnote-5)

 Although *DuPont* had recently expanded its *Lycra®* capacity by 20% at several locations worldwide (via three new plants in Ireland and Singapore), in 1999 *DuPont* announced another US$100 million investment to build a new *Lycra*® plant in Paulinia, Brazil that incorporated the next-generation of *Lycra®* polymerization and filament spinning technology that it had developed to keep the cost of manufacturing spandex fabrics low. *DuPont* reported that the PTMEG needed for the new facility would come from existing facilities – although it would expand its PTMEG capacity in the future. *DuPont* expected to remain a net buyer of BDO for the immediate future.[[7]](#endnote-6)

**2000**

 Pharmaceuticals. In an effort to build a business unit of critical mass, *DuPont* bought the Romainville, France, research center from *Aventis* *SA* that increased its presence in Europe and boosted sales in its drug unit by 15%.[[8]](#endnote-7) The purchase was part of a short-term strategy of picking up bits and pieces of pharmaceutical capacity and products as the industry consolidated. The redundant facility was one of two French research centers that *Aventis* inherited when *Hoechst AG* and *Rhône-Poulenc SA* combined to create it. The acquisition was supported by an alliance between *DuPont* and *Aventis* to discover, develop and market pharmaceuticals in several therapeutic categories.[[9]](#endnote-8) *DuPont* marketed two highly-successful drugs – *Sustiva* (for AIDS) and *Cozaar* (for hypertension) – at that time. The *Aventis* research center had over thirty products in its pipeline and 300 marketing employees to promote *DuPont’s* extant product line. *DuPont Pharmaceuticals* manufactured only finished-dosage-form products for itself and three other companies in its facilities.

 While the science was similar between agricultural and pharmaceutical products – and *DuPont* wished to use biotechnology as a bridge between them – observers criticized that the concept was unworkable because the end markets were too different. They recognized that *DuPont* was scrambling to build its drug business to a critical size before selling it (in 2001 to *Bristol-Myers Squibb)*.[[10]](#endnote-9) Pharmaceuticals represented only 3 percent of DuPont’s revenues in 2001, compared with 20 percent from performance coatings and polymers; 16 percent from specialty fibers; 16 percent from agriculture and nutrition (including *Pioneer*); 14 percent from specialty polymers; 13 percent from pigments and chemicals; 10 percent from nylon; 7 percent from polyester; and 1 percent from other businesses.

 *Sonora*®. *DuPont* and *Tate & Lyle Citric Acid* formed a joint venture in 2000 to build a 1-3 propanediol (bio-PDO) pilot plant in Illinois. Bio-PDO was used to produce *DuPont’s* *Sonora*® polymer-polytrimethylene terephthalate or 3GT which was used in textiles and resins, and the process of making bio-PDO from glucose contributed to *DuPont’s* plan to generate 25% of its revenues from renewable resources by 2010. In the partnership, *DuPont* brought the microorganism, market knowledge, and process technology to the alliance while *Tate & Lyle* brought biochemical and fermentations expertise, site infrastructure, and access to raw materials. *DuPont* had developed the improved bio-PDO process in a research venture with *Genencor,* and their innovation facilitated the combining of enzymes from two microbes into a single strain. The pilot plant had 10,000 to 50,000 liters of fermentation capacity. The scale-up to commercialization required additional capacity by 2003.[[11]](#endnote-10)

 In 2004 *DuPont* and *Tate & Lyle* announced an additional joint venture to make synthetic fibers with genetically-modified bacteria that converted sugar into chemicals, the first commercial use of the process from the bio-PDO partnership. The venture opened a plant in Tennessee to ferment microbes in corn syrup to make 100 million lbs./ year of an ingredient for plastics.[[12]](#endnote-11) A second bio-PDO plant opened in 2008.

 PBT. *DuPont* and *Bayer* announced plans to bring a plant to make polybutylene terephthalate (PBT) base polymer in Europe by 2003. The new facility had 60,000 m.t. to 80,000 m.t./ year of capacity and replaced older, less-efficient batch production of PBT.[[13]](#endnote-12) The increase in PBT base polymer capacity was in response to the anticipated growth of the market for PBT resins, estimated at 7% to 9% per annum. Although markets for PBT resins was tight in 2000, there was a danger of overcapacity by 2003 because *Polyplastics* and *Teijin* were evaluating a plant in Japan, *GE Plastics* and *Mitsubishi Engineering Plastics* were evaluating a plant in Asia, and *DSM* and *Ticona* were evaluating PBT production outside of Europe. (Excess capacity was a continual, competitive risk in the chemicals industry.)

**2001**

 With proceeds from the US$6 billion sale of its drug unit, *DuPont* planned to pay down debt and buy back shares to improve its financial performance. Critics advocated making small acquisitions of paint or coating businesses that made materials for the information technology or agriculture industries instead.[[14]](#endnote-13)

Seeking to move assets out of slow-growth businesses, *DuPont* eliminated 4,000 jobs (4% of its work force) plus 1,300 contract workers from its nylon and polyester businesses. It reorganized its agricultural sales force so farmers could purchase pesticides, feed, or seed from one representative.[[15]](#endnote-14) *DuPont* continued to apply biotechnology research to chemicals as it restructured businesses that it would ultimately divest.

 PVB. *DuPont* expanded its sheeting capacity for polyvinyl butyral (PVB) by 30% in Germany – including capacity to supply jumbo-size PVB interlayer for architectural glass. *DuPont* also planned to expand PVB capacity at its United States and Korean plants by 2006. These capacity additions were to supply the growing automotive glass laminating market.[[16]](#endnote-15)

 PFOA Lawsuit. *DuPont* was sued in many venues for water pollution from an important chemical used to make *Teflon*® --perfluorooctanoic acid (PFOA). The lawsuits threatened one of *DuPont’s* most lucrative branded products, Teflon®, which had been manufactured using PFOA for over 50 years. A major lawsuit was settled in 2004 for US$85 million, plus US$22.6 million in legal fees and US$235 million for a medical monitoring program.[[17]](#endnote-16) *DuPont* promised to phase out the use of PFOA by 2015.

**2002**

 *DuPont* observed its bicentennial as a chemical company in 2002, but the worldwide chemicals industry was so depressed at that time that there was little to celebrate. *DuPont* announced its plan to divest its nylon and fibers subsidiary and reorganize its remaining businesses into five groups: electronic and communications; performance materials; coatings and color; safety and protection; and agriculture and nutrition.[[18]](#endnote-17)

 *Teijin* and *DuPont* agreed to dissolve their nylon joint venture in Japan in 2002. The decision was made because of the recession in the construction industry (which negatively affected demand for nylon carpeting), because of global oversupply, and because of a belligerent labor union’s demands.[[19]](#endnote-18)

 *DuPont* acquired *ChemFirst* – an aniline and photoresist stripper company – in 2002 for US$408 million. *ChemFirst* was one of three producers of polyhydroxystyrene (PHS), the key polymer ingredient in chemically-amplified photoresists that operate with 248-nanometer photolithography.[[20]](#endnote-19)

**2003**

TiO2. *DuPont* announced plans to expand the scope of its titanium dioxide (TiO2) business through developmental activities which included its *SmartPaint®* branding effort, development of nanoparticle technology for its coatings, and representation arrangements with titanium and related ore suppliers. Because demand in the TiO2 market was growing by only 3% per annum (and *DuPont* was the world’s leading supplier of it), bulk titanium dioxide alone would not satisfy DuPont’s growth objectives.[[21]](#endnote-20) It could not buy more TiO2 capacity because antitrust litigation had prevented *DuPont* from acquiring *ICI’s* TiO2 business outright in 1999, but *DuPont* was considering several joint venture proposals to enhance the performance of its TiO2 business.

 Alkylation. *DuPont*, a supplier of sulphuric acid catalyst for alkylation, acquired the alkylation division of technology provider *STRATCO* in 2003. The two companies previously worked under a licensing arrangement to provide sulphuric acid regeneration services. *DuPont’s* Refinery Solutions division subsequently built and operated on-site sulphuric regeneration plants for its clients. With state MTBE bans increasing, alkylation was seen as a cost-effective method for producing a replacement, high-value, clean octane stream.[[22]](#endnote-21)

 Automotive Safety. During the 2003 SAE World Congress in Detroit, Michigan, *DuPont* introduced a range of new materials for use in cars and trucks (as well as a corporate safety program to leverage more than 60 of its extant product lines to help car manufacturers and their suppliers build and design safer vehicles).[[23]](#endnote-22) *DuPont’s* automotive safety systems initiative incorporated air bag nylon, electronic materials, engineering plastics, elastomers, advanced composite materials, coatings, chemicals and other *DuPont* technologies that represented US$600 million in annual revenue. The new products included more-advanced air bag nylon and laminated glass, as well as advanced composites to protect against side impacts and rollovers, engineering plastics for new impact absorbing components and electronic materials and processing technologies for collision avoidance systems. Although cost reduction was still the biggest priority for the automotive industry, the importance of safety to consumers was increasing.

 *Tenneco Automotive* announced its licensing agreement with *DuPont* to develop, manufacture and market certain products under the *DuPont*™ brand in North America. The branded car-appearance product line included waxes, protectants, car wash, and tire and wheel care products that used *Teflon*® chemical additives.[[24]](#endnote-23)

**2004**

 *DuPont* launched a US$900 million global annual restructuring plan to reduce costs in 2004 as it cut jobs, consolidated product lines, and launched new sourcing strategies.[[25]](#endnote-24) *Invista* -- *DuPont’s* fibers unit (which included nylon, *Dacron®* polyester and *Lycra*® spandex) -- was sold to *Koch Industries* for US$4.4 billion. In connection with the divestiture, *DuPont* took US$302 million in charges to pay for job cuts and the disposal of underperforming businesses. As part of its sharper focus on China, Eastern Europe and Brazil, *DuPont* announced the construction of a US$15 million corporate R&D facility near Shanghai.

 Hydrofluorocarbon (HFC). *DuPont* finalized terms of a joint venture with Zhonghao New Materials Co. to produce hydrofluorocarbon (HFC) blends for the air conditioning and refrigeration industry. Under their agreement *DuPont* invested up to US$100 million in fluorochemical and fluoropolymer capacity in Changshu. The resulting products are marketed by *DuPont* under the *Suva*® brand name.[[26]](#endnote-25)

 Agricultural Products. *DuPont* acquired *Maxgen’s* agricultural biotechnology unit, *Verdia*, in 2004 for US$64 million. As a part of the deal, *DuPont* gained exclusive, non-royalty-bearing rights to use *Maxgen’s* *MolecularBreeding*®-directed evolution “gene-shuffling” technologies for agricultural applications. Scientists at *Verdia* and *DuPont’s Pioneer Hi-Bred* subsidiary announced development of glyphosate-resistant corn. This discovery and the *Verdia* acquisition positioned *DuPont* as a significant potential competitor to *Monsanto’s Roundup Ready®* seeds product line.[[27]](#endnote-26)

 In 2004 *DuPont* acquired the animal health business of *BioSentry,* a leading biosecurity company providing animal health prevention programs in 50 countries. The acquisition was viewed as a good strategic fit with *DuPont’s* Clean and Disinfect business within its *DuPont* Chemical Solutions Enterprise business – a part of the *DuPont* Safety & Protection (DSP) growth platform.[[28]](#endnote-27)

**2005**

 A slowdown in chemical sales volume depressed revenue growth for the largest North American chemical firms in 2005. High and volatile feedstock costs, as well as high energy costs, further depressed profit margins for firms like *Dow Chemical*, *ExxonMobil Chemical, GE Advanced Materials*, and *ChevronPhillips Chemical.* Spot market prices for ethylene and propylene contracts fell and demand for polyethylene and ethylene glycol fell even more dramatically. Weakness in PVC prices were attributed to the introduction of Chinese chemical capacity.

*DuPont’s* earnings in 2004 grew by 43% to US$2.4 billion on US$27 billion in sales. *DuPont’s* first quarter profits in 2005 rose by 45% to US$967 million on sales of US$7.4 billion. *DuPont* raised its quarterly dividend by 2 cents per share (to 37 cents) and announced a stock buyback program to raise its share price.[[29]](#endnote-28)

 Elastomers. *DuPont* and *Dow Chemical* dissolved their elastomers joint venture in 2005 with *Dow* exercising its option to acquire selected ethylene and chlorinated elastomers assets. *DuPont* purchased *Dow’s* share of the remaining JV assets for US$87 million. *DuPont’s* resulting business unit included the *Neoprene®, Hypalon®, Kalrez®*, and *Viton*® businesses.[[30]](#endnote-29)

 *Sonora*®. *Mohawk Industries* and *DuPont* partnered to introduce Mohawk’s *SmartStrand™* line of residential carpeting which used *DuPont’s* *Sonora*® polymer (propanediol). The carpeting was durable, soft and naturally stain-resistant because *Sonora®* had no acid dye receptor sites to attract stains and allow them to become attached to the carpet.[[31]](#endnote-30) Chad Holliday had two business suits made of *Sonora®* which he wore during interviews with the business press to publicize the fabric.

**2006**

 Coatings. *DuPont* closed paint and coating laboratories in Rubi and Polinya (Spain), Breda (Netherlands), and Hellac (Germany) in an effort to cut costs. It also closed its performance coatings laboratory in Troy, Michigan. Job cuts of 1,700 were associated with these closings[[32]](#endnote-31) which were part of a campaign to reduce operating costs by US$165 million per annum. At the same time, *DuPont* opened a new automotive finishes laboratory in Aichi (Japan), formed an OEM coatings joint venture with Russian finishes supplier, *RussieKraski*, acquired full ownership of a coatings JV in Mexico, bought its coatings distributor in Poland, and opened a new industrial coatings facility in Brazil. The powder coatings business had shifted to Asia by 2006, leaving Western producers without Asian facilities struggling to survive.[[33]](#endnote-32)

 Seeds. *Mycogen* (a *Dow Chemical* subsidiary) and *DuPont’s* *Pioneer Hi-Bred* subsidiary modified terms of the joint marketing agreement for their *Herculex* BT corn hybrid line to permit technology licensing to other seed companies in time for the 2007 growing season. The new policy enabled the JV sponsors to exploit the benefits of their innovations faster by disseminating them more widely.[[34]](#endnote-33)

 Agriculture and Nutrition. *DuPont* eliminated 1,500 agriculture jobs in late 2006 and cut output of herbicides and pesticides in order to boost spending on genetically- modified seeds.[[35]](#endnote-34) Many of the reductions occurred at facilities that were part of *Solae*, a joint venture with *Bunge* that made liquid packaging and soybean-derived ingredients for energy bars and other foods. *DuPont* took a fourth quarter, pretax charge of US$200 million for cutbacks and severance costs.

 Bio-Fuels. Through the formation of *DuPont Biofuels*, the firm applied its capabilities in agricultural biotechnology, metabolic engineering, chemistry and process engineering to the creation of improved biofuels. Annual revenues from this line of business in 2006 were about US$300 million – largely from agricultural inputs to fuel ethanol. In partnership with *Brion Company*, DuPont won a U.S. government grant to develop bio-refineries that could reduce the cost of producing ethanol by using nonfood crops and agricultural waste-grass, straw and wood chips as raw materials.[[36]](#endnote-35)

**2007**

 By mid-2007 *DuPont* announced that it had completed its US$5 billion share repurchase plan ahead of schedule. (The plan for boosting *DuPont’s* stock price had been announced in 2005.) *DuPont* boosted its dividend from 37 cents to 41 cents per share in the third quarter of 2007.

 Agriculture. *DuPont* focused its crop protection strategy in 2007 by selling its fenbutatin-oxide miticide and triphenyltinhydroxide contact fungicide assets to *United Phosphorus Limited* (UPL), a large Indian agrochemical firm. Funds generated by their sale were used to develop DuPont’s *Altacor™, Coragen™*, and *Prevathon™* insecticides based on its *Rynaxypyr™* chemistry as well as new herbicides for the *Optimum*™ *GAT™* trait in corn and soybeans to be launched in 2008 and thereafter.[[37]](#endnote-36)

 Bio-Fuels. *DuPont* developed biobutanol as an alternative to ethanol. Biobutanol performed more like gasoline and was be made from wheat, corn, sugar beets, cassava, and other plants. In 2007 *DuPont* invested US$58 million in two biofuel plants in Britain with partners *BP PLC* and *British Sugar PLC*. The total cost of the plants was US$400 million. One plant produced experimental fuel biobutanol; the other plant produced ethanol from British wheat.[[38]](#endnote-37)

**2008**

 In 2008 Ellen Kullman became President of *DuPont* (and became CEO on January 1, 2009) as Chad Holliday passed the baton to his successor after ten years. In typical *DuPont* fashion, Ms. Kullman had been rotated through division and was responsible for Coatings & Color Technologies; Electronic & Communication Technologies; Performance Materials; Safety & Protection; Marketing & Sales; Pharmaceuticals; Risk Management; and Safety & Sustainability. (*DuPont* executives typically rotated between line responsibilities and staff jobs.) Ms. Kullman began her career at *DuPont* in 1988 as marketing manager in the Medical Imaging business (after first working in various positions in *General Electric*).

In 2009 *DuPont’s* revenues of $26.1 Billion were generated by agriculture & nutrition [31 percent];[[39]](#footnote-2) electronics & communications [7 percent];[[40]](#footnote-3) performance chemicals [19 percent];[[41]](#footnote-4) performance coatings [13 percent];[[42]](#footnote-5) performance materials [18 percent];[[43]](#footnote-6) safety & protection [11 percent];[[44]](#footnote-7) and other [1 percent]. Although pharmaceutical royalties of $1,037 million[[45]](#footnote-8) represented 29.6 percent of *DuPont’s* total operating income in 2009, Agriculture & Nutrition was finally its largest revenue-generating group. The major product groups within its Agriculture & Nutrition division were corn seeds [38 percent of revenues]; herbicides [14 percent]; food ingredients [14 percent]; soybean seeds [13 percent]; fungicides [7 percent]; insecticides [7 percents]; other seeds [5 percent]; and other [2 percent]. North America (United States and Canada) accounted for 41 percent of *DuPont’s* total net revenues. Emerging markets represented 31 percent of *DuPont’s* total net sales for 2009. It generated 39 percent of its revenues from new products[[46]](#footnote-9) and spent 5.3 percent of sales on R&D.

*Monsanto*returned to the stock market as the “*New Monsanto*” in 2002 when it was spun off from its pharmaceutical parent. Ellen Kullman sighed when she compared how *DuPont*’s stock had fared against that of its re-born nemesis, *Monsanto*. When would the market acknowledge the miracles of science that were day-to-day fare at *DuPont*?

**E.I. DuPont de Nemours**

Income Statement

All numbers in thousands ($)

PERIOD ENDING **31-Dec-09 31-Dec-08** **31-Dec-07 31-Dec-06 31-Dec-05**

Total Revenue 27,328,000 31,836,000 30,653,000 28,982,000 28,491,000

Cost of Revenue 19,708,000 23,543,000 21,565,000 20,440,000 19,701,000

Gross Profit 7,620,000 8.293,000 9,088,000 8,542,000 8,790,000

Operating Expenses

Research Development 1,378,000 1,393,000 1,338,000 1,302,000 1,336,000

Selling General and Administrative 3,440,000 3,593,000 3,364,000 3,224,000 3,223,000

Non Recurring 210,000 535,000 - - (75,000)

Others - - 213,000 227,000 230,000

Operating Income or Loss 2,592,000 2,767,000 4,173,000 3,789,000 4,076,000

Interest Expense 408,000 376,000 430,000 460,000 518,000

Provision for Income Tax 415,000 381,000 748,000 196,000 1,468,000

Less: Net Income (Loss) from Minority Interest 14,000 3,000 (7,000) 15,000 (37,000)

Net Income Attributable to DuPont 1,755,000 2,007,000 2,988,000 3,148,000 2,053,000

**E.I. DuPont de Nemours**

Balance Sheet

All numbers in thousands ($)

PERIOD ENDING **31-Dec-09 31-Dec-08** **31-Dec-07 31-Dec-06 31-Dec-05**

Assets

Current Assets

Cash And Cash Equivalents 4,021,000 3,645,000 1,305,000 1,814,000 1,736,000

Marketable securities 2,116,000 59,000 131,000 79,000 115,000

Net Receivables 5,030,000 5,140,000 5,683,000 5,198,000 4,801,000

Inventory 5,380,000 5,681,000 5,278,000 4,941,000 4,743,000

Other Current Assets 741,000 786,000 763,000 838,000 1,027,000

Total Current Assets 17,288,000 15,311,000 13,160,000 12,870,000 12,422,000

Long Term Investments 908,000 897,000 937,000

Property Plant and Equipment 10,860,000 10,498,000 10,309,000

Goodwill 2,074,000 2,108,000 2,087,000

Intangible Assets 2,856,000 2,479,000 2,712,000

Accumulated Amortization - - -

Other Assets 2,750,000 1,495,000 3,646,000

Deferred Long Term Asset Charges 1,523,000 1,430,000 1,137,000

Total Assets 34,131,000 31,777,000 33,250,000

**E.I. DuPont de Nemours**

Balance Sheet

All numbers in thousands ($)

PERIOD ENDING **31-Dec-09 31-Dec-08 31-Dec-07 31-Dec-06 31-Dec-05**

Liabilities

Current Liabilities

Accounts Payable 6,190,000 6,423,000 6,066,000

Short/Current Long Term Debt 1,370,000 1,517,000 1,397,000

Other Current Liabilities 981,000 -\_\_\_ -\_\_\_

Total Current Liabilities 8,541,000 7,940,000 7,463,000

Long Term Debt 5,955,000 6,013,000 6,783,000

Other Liabilities 7,255,000 7,692,000 8,441,000

Deferred Long Term Liability Charges 802,000 269,000 1,166,000

Minority Interest 442,000 441,000 490,000

Total Liabilities 22,995,000 22,355,000 24,343,000

Stockholders' Equity

Preferred Stock 237,000 237,000 237,000

Common Stock 296,000 303,000 302,000

Retained Earnings 9,945,000 9,679,000 7,935,000

Treasury Stock (6,727,000) (6,727,000) (6,727,000)

Capital Surplus 8,179,000 7,797,000 7,678,000

Other Stockholder Equity (794,000) (1,867,000) (518,000)

Total Stockholder Equity 11,136,000 9,422,000 8,907,000

### APPENDIX:

### Spin-offs and mergers form the “new” *Monsanto*

Through a series of transactions, the “old” *Monsanto* that existed from 1901–2000 and the current *Monsanto* are legally two different corporations. Although they share the same name, corporate headquarters, many of the same executives and other employees, and responsibility for liabilities arising out of its former activities in the industrial chemical business, the agricultural chemicals business is the only segment carried forward from the pre-1997 *Monsanto* Company to the current *Monsanto* Company.

With its leading agricultural herbicide [*Round-up*®] and a head start in developing genetically-modified grains, *Monsanto* was the rabbit that DuPont chased. The “old” *Monsanto* company (that was acquired by *Pharmacia* which was acquired by *Pfizer*) was formed in 1901 to provide saccharin to the *Coca Cola* Company. It acquired *G.D. Searle* to bolster its activity in pharmaceuticals and developed aspartame which it marketed as *Nutrasweet.*® *Monsanto* began biotechnology research in 1972.

Executives in the “old” *Monsanto* believed that there were natural connections in the R&D phases of agricultural, pharmaceutical and health-care businesses which they funded under the umbrella of “life sciences.” *Monsanto’s* commodity and specialty chemical businesses were spun off as *Solutia* in 1997. After *Pharmacia* spun off the subsidiary that named itself “*Monsanto*,” the new company consisted of the agricultural productivity, seed, biotechnology traits, and genomics businesses of the “old” *Monsanto*. The agricultural chemical portion of the new company accounted for 69 percent of revenues in 2001, while seed sales and trait license revenues accounted for 31 percent of sales. A timeline follows:

1985: *Monsanto* purchases *[G. D. Searle & Company](http://en.wikipedia.org/wiki/G._D._Searle_%26_Company%22%20%5Co%20%22G.%20D.%20Searle%20%26%20Company)*. In this merger, *Searle's* aspartame business became a separate Monsanto subsidiary, the *NutraSweet Company*. CEO of *NutraSweet,* [Robert B. Shapiro](http://en.wikipedia.org/wiki/Robert_B._Shapiro%22%20%5Co%20%22Robert%20B.%20Shapiro), goes on to become CEO of *Monsanto* from 1995 to 2000.

1996: Acquired 49.9 percent of *Calgene* in April and another 5 percent in November.

1997: *Monsanto* spins off its industrial chemical and fiber divisions into *[Solutia Inc](http://en.wikipedia.org/wiki/Solutia_Inc%22%20%5Co%20%22Solutia%20Inc).* This transfers the financial liability related to the production and contamination with [PCBs](http://en.wikipedia.org/wiki/Polychlorinated_biphenyls%22%20%5Co%20%22Polychlorinated%20biphenyls) at the Illinois and Alabama plants. With the proceeds, *Monsanto* buys parts of *DeKalb Genetics* (second-largest U.S. seed company), *Cargill’s* international seed business, and *Asgrow*. *Monsanto* purchases *Holden's Foundations Seeds*, a privately-held seed business owned by the Holden family along with its sister sales organization, *Corn States Hybrid Service*, of Williamsburg and Des Moines, Iowa, respectively. Aaa9The combined purchase price totaled $925M.) Monsanto also purchases the remaining shares of *Calgene*.

1999: *Monsanto* sells *Nutrasweet Co*. and two other companies.

2000: *Monsanto* merges with *[Pharmacia](http://en.wikipedia.org/wiki/Pharmacia%22%20%5Co%20%22Pharmacia)* and *[Upjohn](http://en.wikipedia.org/wiki/Upjohn%22%20%5Co%20%22Upjohn)*. Later in the year, *Pharmacia* forms a new subsidiary, also named *Monsanto*, for the agricultural divisions, and retains the medical research divisions, which includes products such as *[Celebrex](http://en.wikipedia.org/wiki/Celecoxib%22%20%5Co%20%22Celecoxib)*.®

2002: *Pharmacia* spins off its remaining interest in *Monsanto*, which has since existed as a separate company: the "new *Monsanto*." As part of the deal, *Monsanto* agrees to indemnify *Pharmacia* against any liabilities that might be incurred from judgments against *Solutia*. As a result, the new *Monsanto* continues to be a party to numerous lawsuits that relate to operations of the old *Monsanto*.

2005: *Monsanto* purchases *Seminis*, the largest seed company not producing corn or soybeans in the world.

2008: *Monsanto* purchases the Dutch seed company *[De Ruiter Seeds](http://en.wikipedia.org/w/index.php?title=De_Ruiter_Seeds&action=edit&redlink=1" \o "De Ruiter Seeds (page does not exist))* for about 855 million dollars.

ENDNOTES

1. \* This case was prepared from public documents by Professor Kathryn Rudie Harrigan for classroom use. [↑](#footnote-ref-1)
2. E.I. DuPont de Nemours & Company: The Conoco Split-off (B), Intercollegiate Case Clearinghouse, 9-202-006. [↑](#endnote-ref-1)
3. Edmund L. Andrews, 2000, “Big Chemical Companies Reshufflng Units,” New York Times, December 16, 2000, p. C2. [↑](#endnote-ref-2)
4. Amy Feldman, 1999, “Dow vs. DuPont,” Money, October 1999, Vol. 28, Iss. 10, pp. 40-41. [↑](#endnote-ref-3)
5. “Business: DuPont’s Punt,” 1999, The Economist, October 2, 1999, Vol. 353, Iss. 8139, pp.75-76. [↑](#endnote-ref-4)
6. “Business: Stretch-pockets,” 1999, The Economist, October 2, 1999, Vol. 353, Iss. 8139, p.76 [↑](#endnote-ref-5)
7. Alex Tullo, 1999, “DuPont Plans $100 mm *Lycra*® Plant in Addition to Global Upgrades,” Chemical Market Reporter, October 18, 1999, Vol. 256, Iss. 16, p.1 [↑](#endnote-ref-6)
8. Susan Warren & Stephen D. Moore, 2000, “DuPont Pharmaceuticals to Buy Research Center from Aventis,” Wall Street Journal, March 9, 2000, p. B2 [↑](#endnote-ref-7)
9. Joseph Chang, 2000, “DuPont Forms Pharmaceutical Alliance with Aventis in Europe,” Chemical Market Reporter, March 13, 2000. Vo. 257, Iss. 11, p.1. [↑](#endnote-ref-8)
10. Ann Thayer, 2001, “DuPont Sells Drug Business,” Chemical & Engineering News, June 11, 2001, Vol.79, Iss.24, p. 8. [↑](#endnote-ref-9)
11. Kara Sissell, 2000, “DuPont, Tate & Lyle Link to Develop Renewable Polymers,” Chemical Week, August 9, 2000, Vol. 162, Iss. 30, p. 14. [↑](#endnote-ref-10)
12. *Anon*., 2004, “Joint Venture to Make Chemicals from Bacteria,” New York Times, May 27, 2004, p. C4. [↑](#endnote-ref-11)
13. Robert Westervelt, 2000, “Bayer and DuPont Link to Build PBT Plant,” Chemical Week, October 18, 2000, Vol. 162, Iss. 39, p. 9. [↑](#endnote-ref-12)
14. Evelyn Ellison Twitchell, 2001, “Barron’s Online: Dog Days at DuPont,” Barron’s, June 18, 2001, Vol. 81, Iss. 25, p.37. [↑](#endnote-ref-13)
15. Claudia Deutsch, 2001, “DuPont to Cut 4,000 Jobs to De-emphasize Slow-Growth Areas,” New York Times, April 3, 2001, p. C4. [↑](#endnote-ref-14)
16. Robert Brown, 2001, “Solutia to Add PVB Capacity in Wake of DuPont Expansion,” Chemical Market Reporter, January 22, 2001, Vol. 259, Iss. 4, p.26. [↑](#endnote-ref-15)
17. Michael Janofsky, 2004, “Settlement in DuPont Water Suit,” New York Times, September 10, 2004, P. C4. [↑](#endnote-ref-16)
18. Claudia Deutsch, 2002, “New Strategies from DuPont and from Eastman,” New York Times, February 12, 2002, p. C8. [↑](#endnote-ref-17)
19. *Anon*., 2002, “Teijin and DuPont Agree to Dissolve Nylon Jint Venture in Japan,” Chemical Market Reporter, October 21, 2002, Vol. 262, Iss. 14, p. 2. [↑](#endnote-ref-18)
20. David Hunter, 2002, “DuPont’s Move,” Chemical Week, July 31, 2002, Vol. 164, Iss. 30, p. 5. [↑](#endnote-ref-19)
21. Natasha Alperowicz, 2003, “DuPont Seeks to Grow Beyond TiO2,” Chemical Week, Vol. 165, Iss. 5, p. 25. [↑](#endnote-ref-20)
22. *Anon.,* 2003, “DuPont Buys STRATCO; Deal Raises Chemical Company’s Refining Profile,” Hart’s European Fuels News, February 5, 2003, p.1. [↑](#endnote-ref-21)
23. Anon., 2003, “DuPont Unveils Enhanced Strategy for Supplying the Automotive Industry,” Chemical Market Reporter, March 10, 2003, Vol. 263, Iss. 10. p.4. [↑](#endnote-ref-22)
24. *Anon*., 2003, “Tenneco Automotive Signs Licensing Agreement with DuPont to Launch New Car Care Product Line,” PR Newswire, December 15, 2003, p. 1. [↑](#endnote-ref-23)
25. Joseph Chang, 2003, “DuPont Launches $900 Million Global Restructuring Program,”, Chemical Market Reporter, December 8, 2003, Vol. 264, Iss. 20, p.1. [↑](#endnote-ref-24)
26. Andrew Wood, 2004, “DuPont Finalizes China HFCs Venture,” Chemical Week, March 24, 2004, Vol. 166, Iss. 10, p.14. [↑](#endnote-ref-25)
27. Robert Westervelt, 2004, “DuPont to Acquire Maxgen’s Ag Biotech Business,” Chemical Week, June 9, 2004, Vol. 166, Iss. 19, p. 15. [↑](#endnote-ref-26)
28. *Anon*., 2004, “DuPont Acquires BioSentry’s Animal Health Business Assets,” PR Newswire, June 30, 2004, p. 1. [↑](#endnote-ref-27)
29. Phyllis Berman, 2005, “Good Chemistry,” *Forbes*, May 23, 2005, Vol. 175, Iss. 11, p. 230. [↑](#endnote-ref-28)
30. Anon., 2005, “DuPont and Dow Dissolve JV,” Chemical Market Reporter, January 10, 2005, Vol. 267, Iss. 2, p.2. [↑](#endnote-ref-29)
31. Anon., 2005, “Mohawk and DuPont Partner to Introduce Most Revolutionary Carpet Fiber Technology in 20 Years,” PR Newswire, November 4, 2005, p. 1. [↑](#endnote-ref-30)
32. Steve Levine, 2006, “DuPont to Close Sites in Europe; Outlook Is Raised,” Wall Street Journal, March 16, 2006, p. A2. [↑](#endnote-ref-31)
33. Joseph Chang, 2006, “DuPont to Restructure Its Coatings Business,” Chemical Market Reporter, March 20 – March 26, 2006, Vol. 269, Iss. 11, p.7. [↑](#endnote-ref-32)
34. Michelle Bryner, 2006, “Dow and DuPont Expand Access to Seed-Trait Technology,” Chemical Week, October 25, 2006, Vol. 168, Iss. 35, p. 13. [↑](#endnote-ref-33)
35. *Anon*., 2006, “DuPont to Reduce Pesticide Output and Cut 1,500 Jobs,” New York Times, December 12, 2006, p. C2. [↑](#endnote-ref-34)
36. John Teresko, 2007, “DuPont Does the DNA Dance,” Industry Week, April 2007, Vol. 256, Iss. 4, p. 42. [↑](#endnote-ref-35)
37. *Anon.,* 2007, “DuPont Crop Protection Divests Select Miticide & Fungicide Assets; UPL Acquires *Super Tim*® and *Vendex*®,” PR Newswire, June 26, 2007, p. 1. [↑](#endnote-ref-36)
38. Bob Fernandez, 2007, “DuPont Puts Funds in BioFuels: With Partners, the Chemical Firm Is Investing $58 million in Two Plants in Britain, Knight Ridder Tribune Business News, June 27, 2007, p.1. [↑](#endnote-ref-37)
39. 35 percent of total operating income [↑](#footnote-ref-2)
40. 3 percent of total operating income [↑](#footnote-ref-3)
41. 17 percent of total operating income [↑](#footnote-ref-4)
42. 2 percent of total operating income [↑](#footnote-ref-5)
43. 8 percent of total operating income [↑](#footnote-ref-6)
44. 9 percent of total operating income [↑](#footnote-ref-7)
45. For licensing of Cozaar and Hyzaar [↑](#footnote-ref-8)
46. Products launched in past five years [↑](#footnote-ref-9)