

American Chemical Society AMA: Hi! I'm Alex Tullo of Chemical & Engineering News, here to discuss the effect of the DowDuPont merger on the chemical industry. AMA!

AmerChemSocietyAMA¹ and r/Science AMAs¹

¹Affiliation not available

April 17, 2023

[REDDIT](#)

American Chemical Society AMA: Hi! I'm Alex Tullo of Chemical & Engineering News, here to discuss the effect of the DowDuPont merger on the chemical industry. AMA!

AMERCHEMSOCIETYAMA [R/SCIENCE](#)

[removed]

[READ REVIEWS](#)

[WRITE A REVIEW](#)

CORRESPONDENCE:

DATE RECEIVED:

February 03, 2016

DOI:

10.15200/winn.145441.16004

ARCHIVED:

February 02, 2016

CITATION:

AmerChemSocietyAMA ,
r/Science , American Chemical
Society AMA: Hi! I'm Alex Tullo
of Chemical & Engineering
News, here to discuss the
effect of the DowDuPont
merger on the chemical
industry. AMA!, *The Winnower*
3:e145441.16004 , 2016 , DOI:
[10.15200/winn.145441.16004](https://doi.org/10.15200/winn.145441.16004)

© et al. This article is
distributed under the terms of
the [Creative Commons
Attribution 4.0 International
License](#), which permits
unrestricted use, distribution,
and redistribution in any
medium, provided that the
original author and source are
credited.



Please explain how "business oriented discovery" works and is it better for discovery or just better for the bottom line?

[Decolater](#)

I specifically meant "technology push" rather than "market pull". Some of the comments below, specifically CBates', apply as well. Chemical companies do seem to be collaborating more and more with startups and universities. Perhaps a useful tool would be to think of this broadly as risk mitigation in R&D. Outsource the risk to, say, venture capital backed firms that have more of an appetite for risk.

The decline in oil price has resulted in cuts to R&D employment in the oil and gas industry, as refiners delay large capital projects. How does the price of oil affect the reorganization strategy of Dow/DuPont? As an industrial chemist, should I be concerned about my job security, as hundreds of qualified candidates enter the job market after being cut from Dow/DuPont?

[q24blue](#)

I haven't heard of the cuts in R&D post merger being connected to oil. From what I understand, they are meant to address the overlap, specifically in ag, between the two organizations. Also I think it is important to realize that at this point, the low oil prices are thought to be temporary. As for your other question, there is an enormous supply of highly qualified and experienced scientists on the market. If I were running a company and had positions open, I would see it as an opportunity.

Hi Alex. I've been following your coverage of the Dow - DuPont merger pretty closely and I want to thank you for your high quality coverage. Thus far you're the only journalist I've found regularly discussing the impacts on R&D -- do you know of anyone else?

This whole affair makes me sad because of what I assume will be the negative impacts on R&D, like everyone else. I assume that some research groups and divisions will just stop existing at both

companies, do you know when the two companies will announce what areas they are totally exiting?

Do you have a sense for how this is going to affect chemistry as a profession? Despite the recent article in C&E about how you probably could've seen this coming at DuPont, there aren't many other places in the world left with a reputation for world class R&D. Who do you think takes up that mantle? Have you ever tried interviewing one of the Wall Street people who pushed for this? Why do they hate R&D?

[EagleFalconn](#)

Thank you for your kind remarks. I don't know when (or if) the companies might disclose what research projects might be shelved. Let's not forget that the combined Dow and DuPont will still spend billions on R&D. That said, CR&D was unique, at least in the U.S. I think Wall Street doesn't like high overhead and risk. (I shouted a couple of questions at Nelson Peltz at the DuPont annual meeting. I wouldn't call that an interview.)

Overlooked by the Dow-Dupont talk but still important, is the Dow buyout of Corning to completely own DowCorning. Are there implications of this as well or is the DowCorning R&D so unique that we should not expect reductions in R&D?

[nallen](#)

Good question. The Dow Corning deal has never gotten enough attention because of the other, much larger deal. Dow is taking over the silicones business of Dow Corning. The Hemlock silicon joint venture will continue to a joint venture between Dow, Corning, and Shin-Etsu. I don't know about the R&D consolidation specifically. I think it was communicated on the conference call that the savings from the merger would come from both companies being headquartered in Midland...which seems to be about administrative and footprint overlap to me.

Alex, have you discovered how and why this deal was initially proposed and/or structured, and by whom?

The two companies are culturally very different. Will the new operating model for DowDuPont try to blend them together, or will the new company be treated like a holding company for reorganizing those three new, market specific corporations?

Was the spinoff of Chemours done in preparation of this merger, for anti trust reasons or otherwise?

[Nitsgnats](#)

I have heard that the merger is something that Dow's Liveris had wanted to do for a while, but he didn't have an opportunity to pitch a deal until Breen came in. However, when the proxy materials go out for the merger (so the shareholders can vote) we'll know for sure and I will be reading that with great interest. Yeah, the two companies are very different culturally. I really am thinking of DowDuPont as a temporary holding company. I don't think Chemours was done with this merger in mind at all.

It seems like pharmaceutical companies have been moving away from risky research and just buying up small start ups who have promising data. This feels like it makes research riskier because a small company can only run a project or two at a time, making it less likely for them to have a successful project, whereas a large company can have many projects, at least one of which works. Is there any indication that this trend is seen in the more generalized chemistry companies like Dow or DuPont, or that the merger could make it worse?

[borrax](#)

The R&D is risky for the individual startup but the VC backers of these startups are pooling their risk in the form of backing many startups. I don't think that the chemical industry is as far along down that road as pharma is. (I am speaking anecdotally. I would love to see data on this question) I don't know if the model is appropriate for chemical companies, either. So it might not go down that road as far.

A lot of my colleagues complain about the difficulty of finding employment. So, I have a few questions regarding the job market at this time.

How many new chemical engineering graduates does the industry accept every year? Would you expect this number to increase, or decrease in the future?

Are there companies which have trouble looking for new candidates, due to inefficient marketing, or are somehow just not getting their message out? If so, what methods would you suggest to find these companies?

I understand that this isn't completely related to the topic at hand, but any information you are able to provide is appreciated.

[Rearranger](#)

I am not an expert on this. Let me direct you to C&EN's coverage of employment, which I hope you find helpful. <http://cen.acs.org/articles/93/i44/Tips-Job-Hunt.html>

[deleted]

[\[deleted\]](#)

I don't necessarily see a flood of outsourcing of research to universities as a result of this merger.

Do you believe this shift away from exploratory research at large companies should spur the US government to create more incentives for basic, fundamental research at universities?

[Everestologist](#)

Yes...in every sense of the word should.

Hi Alex,

I work in the Agriculture sector in the US. I have heard numerous uneducated opinions and projections about how this merger will affect the end-user (farmer). I would be interested to hear a more informed opinion from you, who has a lot more insight into the business than myself or the producers that I speak with about this issue.

How do you think this will affect product development and R&D on new seed varieties & chemical products? Will this lead to faster, more progressive innovation, or will this slow the process due to lesser competition?

Second, how would you predict that this will affect pricing of existing as well as newly developed products? This is a big issue right now with the depressed agricultural markets, and if this move is a positive one for the farmer (lower retail prices), this could be great news for the industry.

Thanks in advance!

[mgros483](#)

I can guess that this could mean more deals in ag and seeds. I do not know what the rest of the ag supply chain thinks of this. Maybe they like the counterweight to Monsanto. Maybe they don't like the consolidation. I don't know for sure. Good question for C&EN to follow up on though.

I've been unable to even get a phone call after over 800 applications since finishing my chemical engineering PhD. I'm going back to school for CS. Would I be right to say that there are rapidly increasing number of graduates and job seekers and a shrinking job market for R&D? Do you think people should be discouraged from working to get into industry R&D like I have?

[postdoclife](#)

I don't have a good feel for those kinds of numbers. See C&EN's coverage of the job market:
<http://cen.acs.org/articles/93/i44/Tips-Job-Hunt.html>

We have heard about the DuPont cuts, but these are all pre-merger, and they mentioned there would be a billion dollars in "synergies" (the new business speak for further job losses), what should we expect once the merger concludes?

[nallen](#)

\$3 billion is the target. 40% of that is sales, general, and administrative expenses (30%) and R&D (10%). So I would expect a cost cutting initiative on the order of \$1.2 billion or so. (That \$1.2 billion is my speculation.)

So, if I am understanding correctly, they are moving away from making scientific discoveries and towards "make more money"?

[ZulDjin](#)

The cuts are meant to reduce costs. And usually when decisions like this are made, it is because companies feel that the increased earnings later on aren't worth the costs right now.

was there a risk of this being shut down for monopoly / anti-trust reasons?

Do you feel this presages a larger trend of consolidation in the chemical industry?

[theuglyducker](#)

I don't think that there is enough overlap between the two firms for the deal to be blocked for antitrust reasons. They don't really compete directly in many places. The companies might have to sell off a few small things before they can proceed. I should point out that both companies make ethylene vinyl acetate.

Hi Alex, thanks for taking the time to answer questions. I live in Midland, MI (Dow's headquarters) and obviously this is the talk of the town. What are the chances Dow would jump ship and locate somewhere else?

[tierneyb](#)

A number greater than zero but very, very close to zero. I just don't see that happening.

What are we looking at in terms of facilities being shut down due to redundant production?

[Back Porch](#)

Both companies haven't said anything specific on that question. There isn't a lot of manufacturing overlap between the companies, so I am not expecting very much of that at all.

What effect might the merger have on other similar companies like Corning or Monsanto? Or put another way, on the entire industry sector?

[tvo1688](#)

In agriculture, it could very well trigger more deals as Monsanto and other firms try to keep up. There was a lot of M&A activity in the chemical industry already. I would expect there to be even more now. I wouldn't be surprised by another headline deal.

I learned a lot after reading John Cassidy's piece in the New Yorker about this merger. Do you think this transaction is rooted in competitive pressure, or in profits for the financing/shareholders? Will you assume increased value and productivity for the newly formed companies on the back end over what there is currently?

[theloniouszen](#)

Competitive pressure in regards to the ag piece, perhaps. If you look at electronics and polymers, those are two areas also where the companies will have a potent combination.

Alex,

I work in R&D for a consumer products company. We do a fair amount of business with DowCorning for materials. My company relies on our suppliers for innovative chemical technologies to give our products a competitive advantage. In your opinion, will DowDupont focus on innovative chemical additives at all? - specifically for the packaged goods market

[m1cism](#)

I would imagine it would. Packaging is a big part of the merger.

An article in C&E news about this topic pointed to a Whitesides paper from 2015 (<http://onlinelibrary.wiley.com/doi/10.1002/anie.201410884/full>) describing a fundamental shift that must occur within research. From your experience reporting on this merger, how much of this merger was driven by a fundamental shift in the market/human knowledge and how much of it was driven by corporate greed masquerading as efficiency?

[captainfriendly](#)

I think this particular deal was driven more about the desire to have cohesive portfolios of businesses

than anything else. They are planning subsequent splits, let's not forget, so it isn't like they are combining all their corporate costs into one entity. In fact, eventually, there will be three companies.

What effect will the decrease of R&D have on the future economy? Do you think the large chemical companies will be able to sustain their size, or will smaller companies that focus on R&D prosper?

[hulkstang66](#)

Good question. Large companies will continue to do a lot of R&D. They might, however, do less speculative R&D. That might present openings for startup companies.

What affect will this merger have on studebts who will be entering the worlforce in the next 5-10 years?

[scorchclaw](#)

I don't think it will have much of one. The merger is pretty small compared to the entire world of chemistry.

DuPont N&H has laid off the majority (~100) of their R&D and analytical scientist mid January, how will they compete in the food space and "feed the world" with no innovation moving forward?

[Truffle_Shuffle_85](#)

I don't know what research projects are remaining in Nutrition and Health and what the prospects of those research projects are. I don't think that DuPont is completely shutting R&D in any specific business area.

Looking at the agrochemical industry, the Dow DuPont merger seems to only be first step in a series of further consolidation of an industry that was already pretty consolidated to begin with (6 big innovative agrichem companies). The next merger announcement (ChemChina buying Syngenta) could come as early as tomorrow: [link](#) And further M&A deals between the remaining 3 (Monsanto, BASF and Bayer) then seem like a distinct possibility.

- How do you evaluate this industry restructuring?
- What will the effect on consumers, farmers & other end-users be?
- Is this good or bad for R&D and innovation?
- Will the trend of companies combining seeds & traits with corresponding crop protection chemicals in their portfolio continue?
- Was it a smart move for DowDuPont to kick off this industry consolidation?
- Was this an inevitable development?
- What do companies need to do to succeed in this new market environment?
- Who will be the winners and losers?

[The_dude_is_not_in](#)

Definitely a lot in your question. Honestly, out of the ag deals that could be done, Dow DuPont seems like a fairly complementary combination. We probably will, as you pointed out, see more. If ChemChina happens, Monsanto will likely do something in my opinion.

DuPont Pioneer employee here (throwaway account).

To what extent do you see the recent weakness in the Ag economy contributing to this merger and the somewhat inevitable Syngenta and/or Monsanto mergers? In the Ellen era of DuPont we were constantly told how DuPont should focus on the Ag sector since it was such high growth at that time. Now that it has inevitably cooled off it seems that logic was very short-sighted. The ag industry is somewhat notoriously cyclical and with breeding being a long-term effort it seems foolish to rapidly shift resources in response to short-term impacts. You thoughts on this?

[PM_ME_YOUR_CORNS](#)

I do see this as being driven in large measure by weakness in ag. Fertilizers have been consolidating, too. There has been so much driving it over the past 10 years--Brazil, China--that it had to level off eventually. You always see a lot of consolidation when industry's hit a trough--AHT

Hi Alex, thank you for doing this ANA.

Regarding the new focus on business oriented interests and drifting away from a more exploratory research style, what can we expect in terms of a market change? I know that this trend was seen in the pharmaceutical industry with companies like Pfizer and Johnson & Johnson, and that ultimately innovation and new drug research fell onto small start-ups that would aim for a single drug, hope for success, and then hope for a buy out.

But drugs have a more tangible and relatable value for would-be investors, and that is really a vital component in getting a start-up started. I'd imagine it'd be difficult for the average investor to see the true value in research and innovation that would be needed to fill the hole left from DowDuPont.

[DatNewbChemist](#)

Thank you for the comment. I agree. I don't know if the the pharma model can exactly be transferred to the chemical industry. I don't know, for instance, why so many startups in chemistry seem to go it alone and build their own plants. If I were running a startup, I don't know if I would proceed if I haven't been bought out by the time I have reached the pilot stage. Thank you for bringing the issue into sharper focus.

Hi Alex,

When you have interviewed or spoken with the business decision-makers at companies tending in this "business oriented discovery" direction, what motivations do you find drive their choices? Not to bait an obvious "money" answer - the reasons why internal R&D is becoming not profitable enough in its former state are what I'm seeking.

Also, do you think that this shift in R&D will have any serious, long-term impact on the US's advanced position in scientific research by undercutting a system that has fostered growth of scientific careers?

Are there other countries you know of that are investing more in large-scale company R&D, namely in countries that do not have other places (universities, startups) from which to pull innovation?

[YouDoNotWantToKnow](#)

I think it was just better returns on R&D spending. DuPont is more of the last of a breed that included Bell Labs, etc. So a lot of the impact of the general trend has already been felt.

Is there any further clarification on how the three future companies will be divided? There are a lot of

divisions in both companies, and the three classifications are very vague.

[cinnamon muncher](#)

All of ag into one company. Dow's electronics stuff will go to the new company that will be headquartered in Wilmington. Let's call that "new DuPont." Old DuPont's polymers business (both packaging and engineering polymers) will go to the company headquartered in Midland, Mich. Let's call that "New Dow". New Dow will also get the 100% holding in the silicones business of Dow Corning.

As someone from midland I hope the headquarters stays there. That town would go under so fast if Dow left.

[Sniperawd](#)

It would. But I don't think Dow is going anywhere.

How will the pension benefits for current workers be affected with proposed merger then split?

[mmlj2014](#)

Excellent question, one that C&EN is looking into--AHT.

I teach general chemistry at a large university in the U.S. What is the one "real world application" that [in your opinion] I should be teaching my students? #chemisfun

[Katethechemist](#)

Dow's Great Stuff is fascinating in every respect.

How does this affect the industrial gases industry? (Air Liquide, Airgas, Praxair, Linde, etc.)

[Fenceriderer](#)

The combined company will have more purchasing power. (They also have a lot of existing contracts, however.)

What do companies like yours look for in potential employees. As a current biochemistry senior student, I have been actively looking for work experience before moving on to grad school.

[undecidedrussia](#)

I am not with Dow or DuPont.

I work for a smaller (but not small) chemical importer and distributor. While most people have never heard of us, our name is well-known among chemical distributors worldwide. We are ~#15 on the annual list of the 100 largest chemical distributors.

I am curious what you think this merger will do for a business like ours. We buy and sell from Dow and Dupont but we are also major competitors. Often, we import a product from China that directly

competes with the Dow/Dupont domestic product.

While in theory they should have better purchasing power and scope, I am hopeful they will miss out on some of the "smaller" or more regional customers that we might go after to focus on multinational customers.

Would this merger have an effect on global chemical prices?

Thanks

[bradfink2](#)

I think you reasoned through the answer pretty well yourself. I see it having more purchasing power because of common feedstocks and so on. I am not so sure how additional pricing power will play out because they don't directly overlap all that much--AHT

How will this merger potentially effect, if at all, non R&D engineers and workers such as in Dow Plants throughout the country?

Thanks

[freshyk](#)

Both companies don't really make the same exact things, so I don't expect a lot of pressure to close plants.

Hi Alex,

How likely is this merger to go through? Could this potentially be terminated days before the final papers are signed (K-Dow 2008) or not even make it past the first merger stages?

Thanks for doing this AMA! I'm a big fan...your Top 50 articles saved me for my last report about the U.S. Chemicals Industry!

[science_and_cats](#)

I have had no indication that shareholders might spike the merger. Thanks for the comments about the U.S. Top 50!!!

Greetings Alex. Do you have any word on new projects that the merger will make possible that might not have been as feasible pre-merger?

[TheYambag](#)

Good question. I don't know. They have spoken of technical synergies in packaging and electronics. Nothing specific--AHT

There is a good deal of frustration among the environmentally conscious towards these chemical giants. People worry about the ethics involved in producing chemicals potentially damaging to our ecosystem and are equally apprehensive about emerging technologies and practices, which could adversely and directly effect human health or livelihoods. E.g: Monsanto and GMOs

It can be difficult to suss out the truth when the narrative coming from these industrial experts is really centered around innovation and improving society, human life and the future. My question is, as an impartial observer whose reported on these companies for years, are the anxieties many feel justified or largely based on ignorance? In the grand scheme of things haven't Dow, DuPont and even Monsanto made enormous strides for the average global citizen? Which of these narrative most resembles your understanding of the truth behind the industry and its relationship with our biosphere?

[BalooThe_Bear](#)

This is a little out of the scope of the the discussion. And I speak on this question only for myself. But I think they have made enormous strides. How many police officers has Kevlar saved over the years? But we shouldn't give these companies a blank check either.

Hi Alex,

DuPont has a large legal liability due to their past dumping activities of PFOA, recently chronicled in the New York Times. What will happen to this liability in the merger?

Link to article: [The Lawyer Who Became DuPont's Worst Nightmare](#)

[Indigoes](#)

An interesting question is how much of the liability is Chemours' and how much is DuPont's. Not an expert in this and the courts are sorting out the total liability owed to people in W.Va.--AHT.

Hello Mr. Tullo. I am currently an undergraduate Chemist working as an intern in Ann Arbor, MI. I plan to go into a Chemical Engineering Masters program starting next fall that will take me about 3 years to complete. How will this merger affect their hiring over the next couple of years as I look to enter the workforce full time?

Thank you for doing the AMA.

[albinorhino7267](#)

This merger alone isn't big enough to make much of an impact. Also, Go Blue!

In your opinion, what is the latest scientific (or engineering) breakthrough coming out of Dow and DuPont before the merger?

[lalala253](#)

Furandicarboxylic acid, which DuPont just unveiled, seems interesting. Dow's Innate seems like a solid development in packaging.

Will there be job losses in Freeport, Texas? Dow is rather large down here...

And, how does this effect the Sadara project?

Thanks

[poorleno111](#)

Good question. I don't see them cutting back either because of this. They have left the integration untouched--AHT.