As I thought of what to write about the situation that we, as an industry and as a people, have gone through during our interaction with COVID-19, my first inclination was to look at the experience as a kind of Great Collaboration. Early in the pandemic, we interviewed Michael Muzyk of Bronx, NY-based Baldor, and he told us of how his company had pivoted to survive the pandemic.

One of the examples he gave was how his company flushed its warehouse capacity and trucks when restaurants closed down, came to the aid of Acme, whose own warehouses and trucking capabilities were overwhelmed by the need to handle pandemic supplies and consumer hoarding of canned goods and other products.

Efforts such as these were inspiring, and similar stories were happening throughout the industry. Yet as useful, indeed inspiring, as many of these efforts were, they seemed more improvisational, fitting the moment, not rewriting the future.

It is very difficult to ascertain precisely how the future outside of the produce industry will be redirected by this pandemic experience. The problem is that we mostly did things with good reason, and even knowing the short-term costs of many long-term decisions, it is not obvious we will change very much.

In other words, we were short of intensive care facilities, and we learned that the existence of a contagious pandemic led many elective procedures to be delayed, both because hospitals redirected resources and because people were afraid to expose themselves to COVID-19.

We will probably never really know how many people died or will die in the near future because of a delay in the diagnosis of their cancers, heart diseases or other ailments.

Yet, what will knowing this actually mean? Will we spend trillions to build and equip extra hospitals, train extra doctors and nurses and have them sit idle, providing spare capacity for the next pandemic, an event that might come in a 100 days or 100 years? This seems unlikely.

**THE FUTURE IS NOW**

The best way to think of the impact of the pandemic is not so much the memory of the way we have gotten through it, but to look at the future with the notion that the pandemic greatly accelerated many of the trends and technologies that were already in place to rise in the years ahead.

In a societal sense, we saw this most obviously in the rapid development under President Trump’s Operation Warp Speed of the new mRNA vaccines (Pfizer and Moderna are both of this type). This technology was not invented just for this instance. In fact, it was already projected to help vaccinate against many diseases, but COVID-19 made development a priority.

The US government provided almost unlimited resources to accelerate the innovation, and now the world will be forever changed as the technology is applied to other diseases. Indeed, shocking as it sounds, it is entirely possible that despite the heavy COVID-19 death toll, the acceleration of mRNA vaccines may in the fullness of time save more lives than the pandemic caused to be lost.

For the industry, the impact of change is still undetermined. Certainly it seems likely that online ordering, having been experienced by so many, will be higher than it would have been otherwise. In this sense, as with mRNA vaccines, the pandemic is best seen as the Great Accelerator, taking ideas and technology that have been stewing and moving us forward into the future. So, the move to online shopping, which might have taken 10 years to develop instead took 10 months.

Change is complicated though. One sector booming now is urban agriculture. Shortages of drivers, rocketing freight rates… it all seems to suggest that our urban greenhouses and other formats have found their moment.

But the future is hard to predict. Perhaps high freight rates will accelerate autonomous trucking. If produce can be grown in ideal growing areas and shipped in vehicles that move 24 hours a day without drivers, perhaps the competitive advantage of local farms might not turn out to be such a great advantage, and growing on low cost land or where cheap labor or water is readily available might turn out to be the winning formula.

**INDUSTRY VOICES HEARD**

The produce industry is unlikely to thrive unless the country does. Unlike the flu pandemic just after World War I, the technology exists now so that many people could work or study from home. The wealth of the country is so great that we could pay tril-
lions for all kinds of support systems without flinching. Yet, whether all this will produce a more enlightened, intelligent and productive populace is uncertain. No society has ever had wealth on the scale of 21st century America, yet society seems torn by racial and political tensions.

It is, however, always good to think of Adam Smith at times such as this. A young aide once advised, “If we go on at this rate, the nation must be ruined.” Smith replied: “Be assured, my young friend, that there is a great deal of ruin in a nation.”

The same sentiment can be said about our industry. We asked members of the trade to share their reflections on this most unusual period. Many shared their voice, and we will post many in their entirety online, but we thought we would lay out here some particularly thoughtful pieces.

In reading through the many profound and interesting comments we received, it was most interesting to see how its impact affected all of us on a global scale but also each of us on a personal scale. So Tracie Levin told us of the struggles of a young working mother (Editor’s Note: Please see page 101 of this issue, where we devoted our Wholesale Marketing column to Tracie’s comments) and Beth Frith as a mother of adult children.

Some people focused on their own industry, so Viraj Puri saw how it played out for local growing operations, and some, such as John Stanton, saw the broader perspective.

With such a wise collection of thinkers, we find ourselves optimistic regarding the post-pandemic future of the produce industry. We publish excerpts here, but you can find more complete statements at www.Produce-Business.com.

We express our thanks to each contributor.

– Jim Prevor

ROBERT COLESCOTT
President/CEO
Southern Specialties
Pompano Beach, FL

Many things existed pre-COVID, and the pandemic either exposed or exacerbated them. Some examples would include the driver shortage, which already existed, and it was estimated that the industry was already short 60,000-plus drivers; lots of inefficiencies existed in our workplace, stores, operations, etc.; lots of waste existed in the workplace and our daily lives too; digital tools, data analytics, business intelligence software, automation, robots, etc… all existed but were underutilized; digital content (social video platforms) and online platforms for making purchases existed but during COVID their use exploded.

Thanks to COVID, businesses have quickly transitioned into the digital age. If you don’t learn to quickly adapt and change the old outdated style of managing your business, you will be left behind. Business intelligence, artificial intelligence, and predictive analysis are being used in every aspect of our business today. In order to be a successful trusted partner in today’s supply chain, everyone must accept and adapt. This means learning how to utilize information and digital tools so as a whole we can accomplish more with less.

Adapting to the new work environment means the digital work environment (less waste, more efficient use of time, more effective planning throughout entire food chain...
from seed to plate/shelf); automation occurring from all segments including replenishment buying practices; less need for both sales and procurement functions (note these roles still exist but now have capability and expectation of accomplishing more with less due to operating in digitalized world utilizing business intelligence tools).

And as margins get squeezed due to rising costs, those with low-cost capabilities will come out winners. This relates to all players from retail, foodservice, restaurants, and grower/shippers.

Companies with an old style of doing business will become obsolete. Small businesses will feel the squeeze too in this new environment because economies of scale will favor others, and those that have adapted to this new business model will have a new currency to offer which is time.

But, with all being said, I still strongly believe that personal relationships still matter in our unique business. The challenge we have is the new generation of people entering the business is accustomed to a digital world, and their most important relation is with their smartphone. Communication is done via text, and you probably had to give them instructions on how to use the office phone.

ACCEPT, ADAPT AND CAPITALIZE ON IT

Regarding technology and the changes it will bring, trust me when I tell you that there is no founder/CEO of a technology-driven or start-up company selling a software or intellectual property that has a business plan requiring a company to increase the amount of labor you have today or states a claim that by using their product you will increase the time spent accomplishing a task. This is just reality, so let’s accept, adapt, and capitalize on it.

During the crisis, companies have refocused their offerings rather than product development in the span of a few months. This means companies are applying their limited resources on SKU’s and services which are profitable and purging everything else.

What has changed permanently? Removal of complexity from operations, reduction of waste (not just materials but time/effort spent on things that do not bring value), improved efficiencies, technology investments that will transform your business model. We have to reimagine and reinvent the way we approach doing business and reprioritize support functions necessary to operate in a virtual environment with transparency. You are only as strong as your weakest link, and everyone plays a role in your success!

Customers will change the way they operate and promote. Digital marketing will replace wasteful paper ads and reach more customers. Messaging and promotions will be around story telling (no longer about price). Promotions will be targeted to core customers, smarter buying practices; investments will be focused on items that are elastic and drive volume. Stop deep promotions on price that didn’t change customers’ decisions or drive additional traffic and only resulted in deflated sales. Companies will promote based on what they are known for.

Convenience is a human-centered experience that provides customers with a feeling of ease. While perception of convenience can range from “saves me time” to “meets all my needs in one place,” what many people are looking for is something that simplifies life while delivering a positive experience. People want to “outsource” the work of getting products. Instead of focusing on the act of purchasing products, they want to focus on the act of using them. That’s what appears to really matter.

The reality is that it is no longer enough to market product and price alone. While the quality of the product is still important, the point of differentiation between brands is now often dependent on their ability to market the service, delivery, and overall
convenience that they provide. Things like same day delivery, curbside pick-up, and buy online/pick up in-store have become table stakes. Note: the challenge for all retailers is to create online shopping similar to your experience in the produce section. Just like it’s hard to build company culture over Zoom, it’ll be challenging to create impulse purchases for produce items at their peak of freshness.

**NEW WORK ENVIRONMENT**

Challenges related to the COVID work environment: The number of workers on our production lines have been decreased by 30-40%, this reduces our output capacity (efficiency) and increases cost to produce. COVID protocols, protection, and additional sanitation practices all add cost. Employers today more than ever need to acknowledge mental health awareness. This involves managing anxiety and stress caused from the pandemic disrupting our normal lives all at once, keeping in touch and talking about your feelings, keeping active, eating well, taking breaks, learning a new hobby and caring for others. Supply chains are so disrupted today that it is becoming the norm for delays, shortages, cancellations, no workers, poor communication, etc. Stay in the fight and continuously strive to do better. In difficult times I believe leaders need to be seen more often and over communicate so everyone knows we’re in this together.

But I will say this: I’m proud of our people, our company and the culture we support. Throughout this pandemic our team members, farming operations, and drivers have done everything within their powers to remain solvent. Yes, it has been a struggle but we all agreed that it would be better to go down while trying to survive rather than expecting hand-outs from others. This is what makes our company different, our people the driving force, and provides a foundation based on setting values for our future generations.

The majority of the inflation we are seeing today and likely until Q2 of 2022 is being driven from supply chain shortages caused from lack of labor. The other portion of increased costs is being driven from suppliers and shipping lines manipulating prices for materials. We’ve seen international logistics costs rise 500% from China and 130% from Latin America. This is not sustainable.

Speaking of sustainability, throughout COVID, there is a surge in demand from consumers and customers regarding sustainability initiatives and requirements as a supplier. First, I want to acknowledge that our company and grower-partners have been actively supporting sustainability initiatives for decades long before it became a trend. Our focus is on health, education and natural resources. But let me point out a few things:

If a business is providing additional benefits to workers, communities and conducting other business practices that generate a cost of goods that is higher than what the market is able to bear, this means you are not profitable. In order for something to be sustainable, you need to achieve a profit to survive, not a subsidy.

When we started operations in 1990, I had already had the vision of conducting business in Latin America with a focus on social responsibility. This included child care, teachers, medical help, clean water, recreational grounds, pharmaceutical program, 401K savings plan, etc. I felt all of these needs were important and would help make a difference in the communities we worked, but over time everything became an entitlement and nothing was appreciated for their well-being.

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**New FogMist™ Technology Yields Higher ROI Than Traditional Misting**

Prodw is a world leader in misting with over 30 years of experience designing and manufacturing the best preservation solutions. Prodw is used and trusted by 80% of supermarket chains across the United States. Prodw’s newest FogMist system is engineered to out-perform traditional misting, while maintaining the freshness of your perishable products and maximizing your profits. The proof is in the produce.

<table>
<thead>
<tr>
<th>Savings of Prodw Systems compared with traditional misting</th>
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<tbody>
<tr>
<td>Greatly reduce product loss and extend shelf life</td>
</tr>
<tr>
<td>Improve products’ fresh appearance for increased impulse sales</td>
</tr>
<tr>
<td>Case cleaning drastically reduced - Less calcium &amp; mud build up</td>
</tr>
<tr>
<td>Save labor costs</td>
</tr>
<tr>
<td>Efficient water usage leads to 35% less water consumption</td>
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<tr>
<td>Customer satisfaction and repeat business</td>
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</tbody>
</table>

**TOTAL YEARLY SAVINGS* (per store)**

$19,850 +

*Estimates based from several produce directors of large retail chains who used Prodw FogMist systems and compared it to traditional misting.
My point is that over my 30-years of experience, the biggest lesson learned in doing good by people is that for whatever reason, people appreciate things more in life when it is earned versus being given to them. Even if it’s just a very small sum that is paid by the people, they suddenly feel vested in something and will treat it with greater respect.

On the subject of recycling and biodegradable packaging material: As a society, we should make every effort to protect and preserve our natural resources for the long-being of our planet. But has anyone really spent time researching how much of this material actually makes it back to being recycled versus directly to the dump site? This is one of those ‘say good, do good, feel good’ moments. Again, if it costs more to recycle a product versus generating a new product, then it’s not sustainable. Now consumers are becoming aware of this recycling issue and we are at a crossroads with consumers wanting biodegradable packaging but the customers are having sticker shock with the increased cost to this packaging. I’m hopeful and confident we can all put our thinking caps on and solve this issue.

BETH FRITH
Marketing Specialist
Western North Carolina Farmers Market (Retired)
Black Mountain, NC

Changing a business philosophy to prioritize work/life balance will remain critical to retaining happy and healthy employees. The labor shortage put workers in a position to select work based on their personal needs as a family or community member; their skills as an employee; and the culture of the workspace. Toxic bosses and toxic work environments beware... there are too many choices now.

My four adult children, all in their 20s, have widely different views about the workplace than I did growing up. I expected to work for an established entity and fill a slot that needed to be filled. That “slot” had policies, goals, duties and a mission statement already written. Young career prospects seek cultures that care and nurture them, that offer flexible work schedules, and find value in them as a part of a team. Today’s workforce has changing ideas about employment, including the demand for an improved work/life balance. Competition for quality employees will increase. Smart businesses should continuously monitor and support their current employees’ talents, acknowledge their value, and avoid the likelihood of losing them if they begin to seek better opportunities. And last, examine the work/life balance that the company offers to its staff members, accommodating employees so that work fits in with life’s obligations.

CINDY HANAUER
Educator/Writer/Strategist/Futurist for the Floriculture Industry
Founder/CEO
Grand Central Floral
The Villages, FL

The onset of COVID-19 was frightening for everyone, including the front and back lines of the floriculture industry. It took
a pandemic such as this one to remind us of the importance of flowers in our own minds, the minds of our suppliers and the minds of our consumers. Flowers connect. Flowers relay feelings. Flowers cheer us on. Flowers mourn with us.

As acclaimed artist Corita Kent so aptly pronounced, “Flowers grow out of dark moments.” And while there continue to be “dark moments” around us, the floriculture industry has gained resiliency and a new awakening of its importance. Despite ongoing transportation and labor challenges, floral retailers and suppliers are reporting their highest revenue trajectory ever.

Equally as progressive, social distancing requirements have driven consumers to technology at a greater speed than ever before. Online ordering, drop-shipping, curbside pickup, and home delivery were once hovering on the perimeter. Now, these technologies are at the epicenter of the retail floriculture industry and wise companies are latching on to this driving force for the future.

Flowers — are they essential? Although the Centers for Disease Control (CDC) doesn’t classify retail florists as “essential workers” because they don’t provide “food for the stomach,” many could argue that flowers do provide “food for the soul,” and there’s not a much higher calling than that.

GENE HARRIS
Senior Purchasing Manager
Denny’s Inc.
Spartanburg, SC

It’s been a whirlwind since March 23, 2020, when my Denny’s colleagues and I transitioned from working in our support center in Spartanburg, SC, to our individual homes. Most of us thought we’d be working from home for a few months, maybe through the summer — we were very optimistic! Many of us, especially in purchasing, distribution and operations, as well as other departments, have worked harder and longer than at almost any time in our careers. Most days, we still are!

I have been impressed and amazed by the resourcefulness and “never give up” spirit of my Denny’s team members and many others in the restaurant industry, especially many Denny’s franchisees, their teams and our produce distributors. We all know what “ghost kitchens” are now and have ordered more food online, from our phones, to be delivered than we ever imagined. Some of us have done more video calls in the past 18 months than the prior five years — and how many of us knew what Zoom was back in 2019? (It was created in 2011.)

The supply chain has had several links missing and misplaced for over 18 months — both domestic and international. The phrase “train wreck” comes to mind. I never thought I would see numerous empty slots in warehouse clubs and supermarkets, not to mention temporary shortages of many things including toilet paper! There have been and are numerous reasons for this, but the primary reason has been people.

People have died, been very sick, scared, insecure, as well as careless, lazy, overworked, undervalued and missed. There are many people not working for various reasons — some legitimate, some not. This shortage of willing workers has created shortages of almost everything at one time or another, including manufacturing, transportation, distribution, repair parts, car parts, cars and trucks. We need drivers, cooks, servers, cashiers, stockers, order selectors, loaders and the list goes on.

We have not always gotten the timely guidance we need from government and medical experts. I feel terrible for those who have lost loved ones, some unnecessarily.

I pray, hope and believe that we will be stronger for having survived this, not only as a nation, but as a planet. We all need to be the best we can be, for each other and ourselves!

ANDY HIGGINS
CEO
IFG
Bakersfield, CA

In the grape and cherry breeding world, IFG looks ahead at least 20 years to predict future trends in the fresh market. From there, we determine which of those we would like to encourage or discourage in our future variety breeding endeavors. COVID-19, of course, changed these trends and has forced many to shift course. One result of COVID-19 that is here to stay is online shopping. It provides the convenience and flexibility that many consumers now require.

Food safety through handling has always been important to consumers but is now paramount as consumers want to ensure their health. With the closure of restaurants in 2020, many consumers shifted to cooking more at home and focusing on healthier options. I see this focus on healthier eating options as being permanent.

COVID has also changed the world of transport and logistics. The shipping costs are double, and it is more challenging than ever to find containers or flights that can ensure that fresh foods will arrive in time. These delays affect fresh foods in a much more detrimental way than, say, toys or clothing. We are in the worst of it now and are optimistic that this is temporary.

The global pandemic has changed the world of fresh foods, and I don’t foresee a reversal to pre-pandemic protocols. One of the most significant changes to come is that of food safety and certifications. It’s always been essential, but as mentioned regarding consumers’ food safety concerns, I see it moving to the forefront for producers and retailers. Also, the logistical issues have made it clear that growers need to invest more in local resources to provide the same services as before the pandemic.

BRUCE PETERSON
Founder and President
Peterson Insights
Bentonville, AR

Many characterize the changes that we see in the produce industry as a reaction to the pandemic. I would suggest that the pandemic exposed activities in both procurement and shopping behavior and accelerated the evolution of the retail industry in general and the role fresh fruits and vegetables have played in the food supply chain.

I’ve suggested that for years, there are four major challenges that have been facing the produce industry: food safety/traceability; labor/immigration; transportation; and water management. I would suggest that the pandemic exponentially increased the exposure to these challenges, and the rate of response that the pandemic caused needed to accelerate exponentially as well.

Regarding food safety/traceability, the produce industry has been coming under pressure since the spinach crisis in the 90s. We’ve seen a dramatic increase in packaging, as consumers feel less comfortable handling bulk products. We’ve seen an increase in juice and further processed produce. We’ve seen external
treatments that artificially increase shelf life. We’ve seen an increase in organic sales.

All of this stems from a perception that conventionally grown, fresh fruits and vegetables may have a degree of hazard that causes consumers to think twice about how they obtain their nutritional needs. And when a national viral outbreak reminds people how carefully they need to examine all of their lifestyle habits, this simply accelerates the issue.

And then, add this to the consumer psyche — it is no longer necessary to shop at a store to get your needs! Heaven forbid, you should expose yourself and your family to a germ-infested, unsanitary environment. Just order from home and have it delivered. Omni-channel retailing has increased exponentially and will continue to do so. This is not a good thing for the produce industry for a multitude of reasons, but not the least of which is labor.

Labor issues have been increasing for many years, and much of it has to do with outdated immigration policy. But much of it also has to do with the fact that baby boomers had fewer children than their parents, and that the Gen Xers are having children later. All of this became exposed when people stayed home, or even dropped out of the workforce, because of the pandemic.

Robotics and “thing to thing” transactions have accelerated and will continue to do so. But at retail, existing labor budgets have been redeployed. At one time, you might have five people working in the produce department. But now, you need three of those people to pull online orders. Self-checkouts and checkout-free stores are a direct response to labor challenges and will continue to proliferate.

Transportation is another area that labor challenges have been impacting. The industry reliance on individual tractor/trailer transportation for supply chain fulfillment has been an Achilles’ heel for decades. And when you couple the aforementioned labor issues with increasing oil prices, you have a real problem. And throw in overseas freight challenges, and now you have a real dilemma. You have every product commodity, both general merchandise and food, fighting for limited transportation capacity. The pandemic merely accelerated and exposed the flawed supply chain.

Water management is the only major issue that was not directly accelerated by the pandemic — but the pandemic exposed how significant water management is needed. This problem is not going away in the near future and the produce industry needs to finally take a hard look at where and how they will get the water necessary to keep up with their production needs.

So again, I don’t believe that the pandemic is the cause for the challenges the industry faces today — but it did expose and accelerate the response. And most of the responses are here to stay.

VIRAJ PURI
Co-Founder and CEO
Gotham Greens
Brooklyn, NY

The COVID-19 pandemic exposed the fragility of our nation’s food supply chain. Stay-at-home orders led to consumer spending habits shifting from foodservice to retail, including a surge in ecommerce sales. The traditional supply chain could not react in time, and food was left stranded to rot at every point. Farmers were forced to destroy tens of millions of pounds of fresh food that they could no longer sell, burying their produce and plowing it back into the soil.
The disruption to the food supply chain led to food insecurity and exacerbated the $285 billion food waste problem in our country.

Indoor farming enables the decentralization of supply nodes for certain crops and thus distributes risk of supply chain disruption. Through the design of indoor growing facilities and new growing processes such as hydroponics, we can grow produce year-round across the country, creating localized supply nodes that minimize the impact of any individual supply disruption...

Increased investment in indoor farming will help bolster the health and resilience of our nation’s agriculture sector and food supply chain. In time, technology advancements developed for indoor farming will likely create spillover benefits for outdoor growers, who can adapt and adopt many of these precision agriculture techniques.

The pandemic’s confinement has led families to rediscover cooking. While it may not go back to the ’50s where almost every meal was home-cooked, we can expect to see more meals prepared at home, especially by younger families. This will likely lead to more fresh products used.

More families used online shopping than before the pandemic hit, either through necessity or novelty. We can expect online shopping to continue at a rate that is faster than if we had not had our families sequestered at home. Many discovered that they thought “only they could pick the best produce.” And many are surprised that the fresh products they received were very acceptable.

Nothing ever reverts back, as the COVID-19 year will leave an indelible mark on how we eat and shop. Everything morphs into a new behavior that may, to some extent, have elements of pre-COVID life. Remember, the post-COVID age will also have a new generation of adults that will have their mark on food consumption and purchase, whether or not there was a pandemic.

DR. JOHN L. STANTON
Chairman and Professor of Food Marketing
St. Joseph’s University
Philadelphia, PA

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