YOUR MARKET METRICS

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INDEX OF PRICES PAID BY GROWERS 2007–2025

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By Dr. Charlie Hall

AmericanHort

Chief Economist
AmericanHort

TEXAS A&M UNIVERSITY

Ellison Chair in
International Floriculture
Texas A&M University

EAGL
EXECUTIVE ACADEMY FOR GROWTH & LEADERSHIP

Lead Faculty Member
The EAGL Network

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Dr. Charlie Hall, Professor and Ellison Chair in International Floriculture, Texas A&M University

A native of North Carolina, Dr. Charlie Hall received a B.S. in Agricultural Economics from the University of Tennessee in 1984, a Master's Degree in Ornamental Horticulture and Landscape Design from the University of Tennessee in 1986, and his Ph.D. from Mississippi State University. He began his academic career at Texas A&M University in 1988, where he spent 13 years on the faculty before joining the faculty at the University of Tennessee in 2002. In August 2007, Dr. Hall returned to Texas A&M University as **Professor and Ellison Chair in International Floriculture**.

Dr. Hall's expertise is in the production and marketing of Green Industry crops is **nationally recognized** in academia and among the horticultural clientele he serves. His major research, teaching, & extension areas of specialization include strategic management, market situation/outlook, cost accounting, and financial analysis for Green Industry firms.

Dr. Hall currently serves as the **Chief Economist** for AmericanHort and Co-Chair of the **Advisory Council** of Seed Your Future. He is the **lead faculty member** for the certification program and grower executive network he co-founded, the Executive Academy for Growth & Leadership (EAGL). He is former **President** and Past-President of the board of directors for America in Bloom. He received the **Paul Ecke, Jr. award** from the Society of American Florists for professional contributions to the floral industry and the **Porter Henegar Memorial Award** from the Southern Nursery Association for significant contributions to ornamental horticulture research and to the Southern Nursery Association.

He is an **Honorary Lifetime Member** of the Texas Nursery and Landscape Association and has received TNLA's **Award for Outstanding Service to the Nursery Industry**. He is also a member of the **Hall of Fame** and **Honorary Lifetime Member** of the Tennessee Nursery and Landscape Association. Dr. Hall has received Texas A&M University's A**ssociation of Former Students' Distinguished Achievement Award in Teaching** and the **Vice Chancellor's Award in Excellence for Student Counseling and Relations**.

For more information, contact: c-hall@tamu.edu

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Executive Summary

Before the recent global pandemic, the green industry had reached the mature stage of its industry life cycle. Consequently, margin compression was evident, with prices slow to increase due to both real and perceived competitive forces. Concurrently, the costs of production inputs were rising, leading to margin squeezing across the entire industry.

The pandemic exacerbated the situation, bringing significant supply chain challenges while also sparking unprecedented increases in final demand. This surge created exceptionally high inflationary pressures. Thus, it became essential for growers to possess accurate information about their cost structure to facilitate managerial decision-making.

This included SKU rationalization, customer profitability analyses, and determining appropriate price increases. Armed with such data, growers could better comprehend inflationary pressures on their production costs and make more informed pricing decisions, recognizing that total costs set the price floor while customer willingness-to-pay establishes the price ceiling.

The Index of Prices Paid by Growers, initiated in 2017 as part of the **Your MarketMetrics** industry benchmarking program, annually documents these inflationary pressures on the critical inputs used by green industry growers. Each cost-related line item is weighted by its relative share of the total assortment of goods and services purchased for plant production, marketing, and shipping. Through this methodology, a weighted average inflation rate for input prices is estimated.

The weighted Index of Prices Paid by Growers ranged from 100 in the base year (2007) to a peak of 166.6 by the end of calendar year 2025. **This implies that the overall costs of producing nursery and greenhouse crops in 2025 were 67% more than they were in 2007,** with labor experiencing the largest increase among these inputs. Year-over-year increases reflect the magnitude of ongoing inflationary cost pressures.

Since the beginning of the pandemic, tracked expenses rose by about 9.5% in 2021 relative to 2020, increased 9.6% from 2021 to 2022, were 0.4% higher in 2023 than in 2022, 1.8% higher in 2024 than in 2023, and 1.6% higher by the end of 2025 than in 2024. In total, since the onset of the pandemic, input costs have surged by 23.5% compared to 2019 levels, just before the pandemic. Growers who have not raised prices by at least this amount have been sacrificing profit margin.

An Index of Prices Paid by Growers in the Green Industry

Introduction

This white paper focuses on the grower sector of the green industry and the costs incurred in the propagation, production, and shipping of plants to retail and landscape customers. While there are other non-green-industry-related indices that are available that reflect general inflationary pressures in the economy, the use of standard measures such as the Producer Price Index (PPI) and Consumer Price Index (CPI) for this purpose is insufficient because wholesale growers in the green industry purchase different goods and services from those used for calculating these indexes. The USDA National Agricultural Statistics Service also calculates an Index of Prices Received by Farmers for their crops and livestock and an Index of Prices Paid by Farmers for the inputs they use during production. However, these indices also fall short in that they contain many items that are not applicable to nursery and greenhouse growers or exclude items that are applicable.

This ***Index of Prices Paid by Grower***s overcomes these challenges and includes major production inputs (e.g., containers, soil mixes, propagation stock, plant protection products, fertilizers, and fuel), along with the costs of labor, maintenance supplies, packaging materials, labels and other signage, freight, and other shipping-related expenses.

Indexing Methodology

In calculating the index, the relative importance of each of the input costs was determined by collecting income statement data from leading growers in the industry for multiple years and using the averages of these data to calculate a weight for each line item relative to the collective total. The weighting scheme from 2017 was **updated this year** for each of the line items and is found in the following table.

Relative weighting of items included in the Index of Prices Paid by Growers.

COST CATEGORY	% OF SALES	% OF TRACKED EXPENSES
Containers & other plastics	6.035%	8.90%
Media (soilless potting mix)	2.961%	4.37%
Propagative materials	12.855%	18.97%
Plant protection products	1.104%	1.629%
Fertilizers	1.102%	1.626%
Labor (wages)	29.134%	42.99%
Fuel/Energy	3.095%	4.57%
Supplies & repairs	1.998%	2.95%
Freight and trucking	9.489%	14.00%
TOTAL	67.773%	100.00%
Other expenses	32.227%	---
	100.0%	100.00%

Altogether, the production-related line items included in the calculation of the index represented 67.8% of sales. The remaining 32.2% were either SG&A expenses or non-allocable expenses that could not be attributed to specific production-related categories. Thus, these were not included in the calculation of the index. Thus, the table weights are normalized to sum to 100% across the included production-related categories, which together represented 67.8% of sales.

Once the weights were established, an econometric model was built to estimate the index for each cost line item to reflect the relative changes in price for these expense line items through time. The base year for calculation of the index was 2007, so that year is set to 100 since it reflects the most recent pre-Great Recession time frame. The costs of each line item in each subsequent year can then be compared to the same line-item costs in 2007 to determine how much the cost has increased since then. Multiplying the weight of each line item times the index for that line item each year and then summing all of the line items yields the summary weighted index. It is the YOY comparisons that are perhaps of most concern to industry participants since these data are useful for setting future pricing strategies each year.

The 2026 Index of Prices Paid by Growers

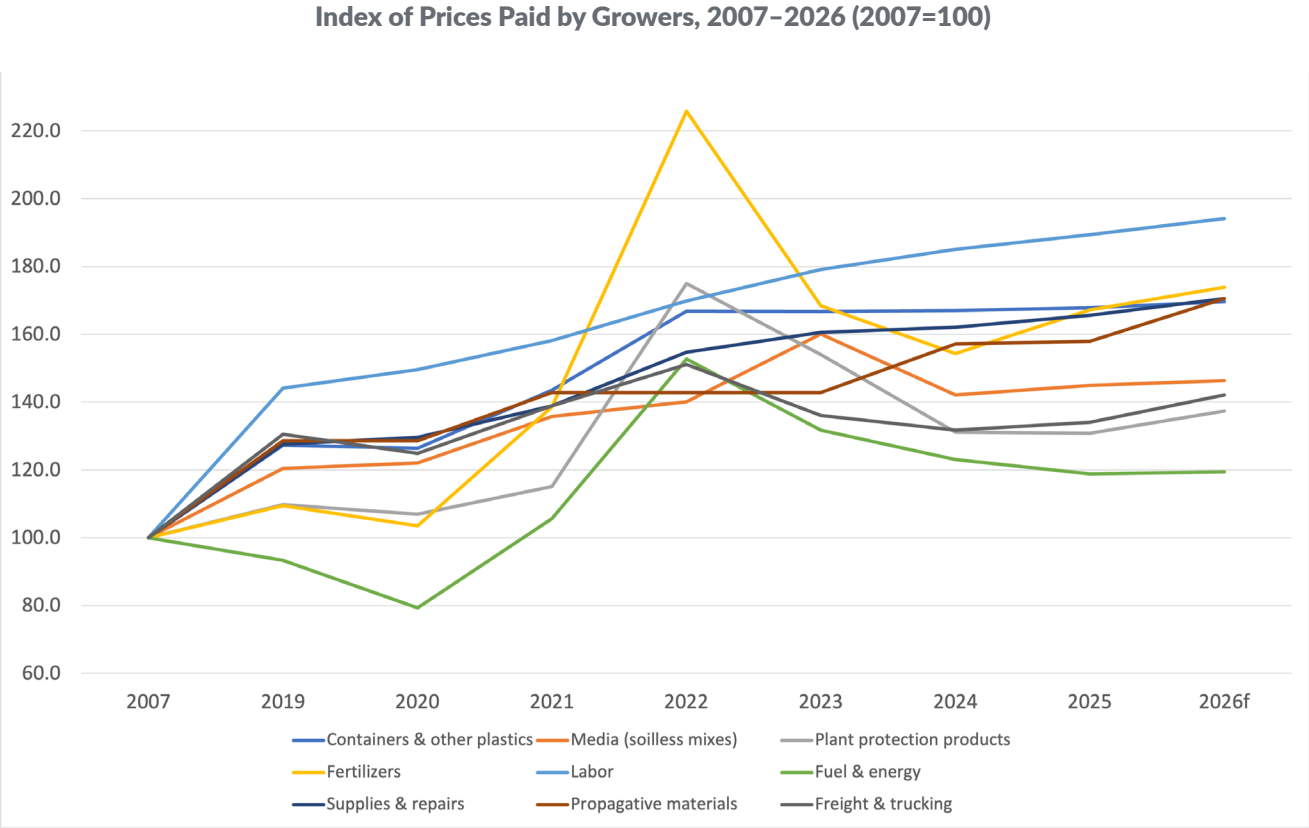
The forecasted index for EOY (end-of-year) 2026 is 172.7, which means the **overall cost of inputs used in producing nursery and greenhouse crops will, by the end of the year, be about 73% higher in 2026 than it was at EOY 2007.** The year-over-year (YOY) increases are also presented (in red font), reflecting the annual inflationary pressures of costs over time. For example, the tracked costs in 2025 increased about 1.6% over what they were in 2024. *(Please note that the results for 2008-2018 are hidden in the table to enhance readability and maintain focus on the most recent years.)*

Index of Prices Paid by Growers in the Green Industry, (2007=100).

COST CATEGORY	WEIGHT	2007	2019	2020	2021	2022	2023	2024	2025	2026f
Containers & other plastics	8.90%	100.0	127.3	126.4	143.5	166.8	166.7	167.0	167.8	169.7
Media (soilless mixes)	4.37%	100.0	120.5	122.0	135.8	140.1	160.1	142.1	144.9	146.4
Propagative materials	18.97%	100.0	128.6	128.6	142.9	142.9	142.9	157.1	157.9	170.6
Plant protection products	1.629%	100.0	109.8	107.0	115.1	175.0	154.0	131.2	130.8	137.4
Fertilizers	1.626%	100.0	109.5	103.5	138.6	225.8	168.4	154.3	167.2	173.9
Labor	42.99%	100.0	144.2	149.6	158.1	169.8	179.1	185.1	189.4	194.1
Fuel & energy	4.57%	100.0	93.3	79.3	105.6	152.7	131.7	123.0	118.8	119.4
Supplies & repairs	2.95%	100.0	127.6	129.6	138.9	154.7	160.5	162.1	165.6	170.6
Freight & trucking	14.00%	100.0	130.5	124.9	138.9	151.1	136.1	131.8	134.1	142.1
Weighted index (2007=100)		100.0	132.8	133.6	146.3	160.3	161.0	163.9	166.6	172.7
YOY increase/decrease		---	4.8%	0.6%	9.5%	9.6%	0.4%	1.8%	1.6%	3.7%

f=EOY forecast

Recent data for growers and retailers that participate in the Your MarketMetrics benchmarking program indicate margins improved during the pandemic because plant prices increased at a much faster rate than they had historically. However, while survey data indicated that most growers raised their prices, slightly less than half of them raised them enough to cover the entirety of their input cost increases. **On top of this, it is anticipated that input costs will continue to rise slightly in the coming year, mainly due to increases in labor costs, which more than offset the slower price increases in other inputs.).**



The top three individual components of the index that experienced the largest cost increases since 2007 included labor, the cost of containers, and freight and trucking costs, which are 95%, 68%, and 67% more expensive, respectively, than they were in 2007. Labor has been a two-fold dilemma for growers with both the cost and availability of labor being a severe limitation for nursery and greenhouse growers alike. Search and acquisition costs for labor have also increased, on top of the increased wages and associated burden of labor. All other categories of costs have also experienced increases since 2007.

The following table summarizes projected price changes for major grower inputs heading into 2026. Estimates incorporate current tariff policy (including USMCA exemptions), geopolitical factors, commodity market fundamentals, and supply/demand dynamics as of March 2026.

Note that the Estimated Change column contains a range, for each input, in the expected annual increase or decrease. The first number is the range should be interpreted as the base case scenario, with the upper bound representing a worst-case scenario. The weighted overall increase is estimated at 3.7%, with **significant variation** expected by operation depending on sourcing patterns, input mix, and purchasing scale.

INPUT CATEGORY	ESTIMATED CHANGE	KEY DRIVERS
Containers & Other Plastics	**+2% to 12%**	China tariffs >47%; domestic resins flat to slightly up; USMCA exemptions help
Media (Soilless Mixes)	**+2% to 10%**	Peat tariff-exempt under USMCA; coir up 60–70%; good 2024 peat harvest
Propagative Materials	**+3% to 6%**	10% baseline tariff on non-exempt imports; royalty creep; airfreight costs
Plant Protection Products	**+3% to 8%**	China-sourced AIs face 20%+ tariffs; some exemptions; channel inventory depleted
Fertilizers	**+3% to 15%**	Phosphates leading; N complex tight; potash elevated; specialty/CRF even higher
Labor	**+4% to 7%**	New H-2A AEWR rule may lower guestworker costs; domestic wages still rising
Fuel & Energy	**Flat to −5%**	Diesel forecast ~$3.50/gal (−7%); nat gas up modestly; crude ~$52/bbl
Supplies & Repairs	**+3% to 10%**	Steel/aluminum 25% tariffs; supplier letters +2.5–12%; parts from China elevated
Freight & Trucking	**+1% to 3%**	Soft freight market; lower diesel helps; slow recovery from prolonged downcycle
WEIGHTED OVERALL CHANGE	**Roughly +4-7% depending on mix & source**	**With key exemptions in place; 9%+ if full tariffs applied without exemptions**

Containers & Other Plastics: +2% to 12%

The “plastics picture” for 2026 is shaped by two competing forces: a favorable domestic resin market and a punitive tariff environment for imported finished goods and Chinese-origin resins. Understanding which force dominates depends entirely on where a grower sources containers.

On the raw resin side, the outlook is actually quite benign. After a turbulent 2025 marked by global oversupply and weak demand, commodity resin markets appear to be bottoming out. Prices for all five major commodity resins—polyethylene, polypropylene, polystyrene, PVC, and PET—ended 2025 lower than they started, and 2026 contract negotiations have largely been a buyer’s market. Spot prices for polyethylene were running 8–10 cents per pound below contract prices at year-end. Polypropylene

monomer (PGP) hit its lowest level since the early COVID period. Industry analysts describe demand as increasing only 1–2% for PE while PP was essentially flat versus 2024. Resin producers have been reducing operating rates into the upper 70% range, and global oversupply conditions continue to push export pricing lower. The consensus is that the bottom of this cycle is likely in place, with modest price recovery possible in the second half of 2026 if demand firms.

However, the tariff overlay changes the calculus significantly for any container or plastic product sourced internationally. Combined tariff duties on plastics from China now often exceed 47%, reflecting the universal 10% baseline plus specific Section 301 punitive tariffs. The American Chemistry Council has noted that manufacturers relying on imported raw materials could face cost increases of 12–20% depending on supply chain adjustments. Even domestically, tariffs have effectively eliminated many cheaper Asian imports, which allows domestic producers to maintain stronger price levels than market fundamentals alone would suggest.

For the typical nursery or greenhouse grower purchasing injection-molded containers from domestic manufacturers like HC Companies (formerly ITML/Dillen), East Jordan Plastics, or similar U.S.-based suppliers, the net effect will likely be in the 5–8% range. These manufacturers source primarily domestic resins (PE, PP) and are USMCA-compliant, insulating them from the worst tariff impacts. Their cost pressures come mainly from labor, energy, and transportation—not resin feedstock. However, growers sourcing decorative containers, imported pottery, or specialty plastics from China or non-USMCA countries should budget for 10–12% increases. Hardgoods such as glassware, trays, and design tools imported from affected countries face the full tariff burden.

Media (Soilless Mixes): 2% to 10%

Growing media is one of the most tariff-sensitive input categories for the green industry, primarily because of the industry's overwhelming reliance on Canadian sphagnum peat moss. Canada produces approximately 85% of the world's horticultural peat, and 96% of U.S. sphagnum peat imports come from Canada. This made the initial threat of a 25% tariff on Canadian goods in early 2025 an existential concern for the substrate supply chain.

The good news is that advocacy by AmericanHort and allied organizations was largely successful. Peat was ultimately listed among the products excluded from the steepest reciprocal duties, and USMCA-compliant peat products from Canada remain exempt from the 25% tariff. This is a critical outcome—had the full 25% tariff taken hold, the downstream impact on finished growing mixes would have been dramatic, potentially adding 5–8% to mix costs from the peat component alone, since peat typically constitutes 50–70% of commercial soilless formulations. As of February 2026, approximately 89% of Canadian imports are claiming USMCA exemption, a sharp increase from the roughly 35% levels seen before the tariff actions began.

The supply side also provides some relief. The Canadian Sphagnum Peat Moss Association reported that the 2024 extraction season was quite good and much improved compared to the disastrous 2023 harvest, when poor weather in New Brunswick and other provinces led to harvest shortfalls of 40–60%. Good 2024 supply means peat inventories going into 2026 are healthier than they have been in several years.

Coconut coir, however, is a very different story. Coir prices in some locations have increased 60–70% compared to January 2024, driven by a convergence of factors: severe monsoons that damaged coconut production areas in India and Sri Lanka, historically high demand from China, and the general global growth trajectory for coir as an alternative substrate. Some Indian and Sri Lankan coir suppliers have reported production declines of 30–40%. For growers whose mixes are coir-heavy—including many tropical foliage producers—this is a major cost driver that tariffs actually have little to do with.

Other substrate components—perlite, vermiculite, stone wool, pumice, bark—appear to be in relatively good supply. Ongoing research into wood-based substrates (including USDA-funded efforts under the Soilless Substrate Science initiative) may eventually provide domestic alternatives, but these remain in development. Net effect for growers: expect 2–6% increases on standard peat-dominant mixes (reflecting freight, energy, and modest component cost increases) and 8–10% or more on coir-heavy or specialty formulations.

Propagative Materials: +3% to 6%

Propagative materials—unrooted cuttings, rooted liners, tissue culture plantlets, seed, and bulbs—have a uniquely global supply chain. The major vegetative propagators (Dümmen Orange, Syngenta Flowers, Ball FloraPlant, Selecta One) maintain stock plant production facilities scattered across Central America (Guatemala, Costa Rica, El Salvador, Nicaragua), East Africa (Kenya, Ethiopia, Uganda), Colombia, and the Netherlands. Most finished liners are then produced domestically, but the unrooted cuttings and young plant material that feed the U.S. propagation pipeline are overwhelmingly imported.

These imported cuttings and starter materials now face the universal 10% baseline tariff under IEEPA, with the exception of USMCA-compliant material from Mexico and Canada. Material from Central American countries, Africa, Colombia, and the EU (Netherlands) is all subject to reciprocal tariff rates that vary by country. The November 2025 U.S.–China tariff reduction agreement (extending through November 2026) somewhat eased the broader trade environment, but the ornamental supply chain's exposure is primarily to non-China origins where the 10% baseline is the operative rate.

Beyond tariffs, propagative material costs are being pushed upward by several structural factors. Royalty costs on patented varieties continue to creep higher as breeding companies invest more in R&D and seek returns on intellectual property. Airfreight costs for perishable cuttings (which must move quickly from tropical production sites to U.S. propagation greenhouses) have stabilized somewhat after the post-COVID spike but remain elevated compared to pre-pandemic levels. Phytosanitary compliance costs—including USDA-APHIS inspection fees and documentation requirements—add further overhead. Additionally, the loss of some production capacity in Nicaragua following geopolitical tensions (and the Section 301 investigation into Nicaraguan labor practices) has tightened supply for certain crops.

For growers who propagate their own material from domestic stock, the impact is much more muted. But for the many operations—particularly in bedding plants, annual color, and tropical foliage—that purchase liners or plugs from specialist propagators, expect those propagators to pass through cost increases in the 3–6% range, reflecting the combination of tariff pass-through, royalties, and logistics.

Plant Protection Products: +3% to 8%

The crop protection chemical market heading into 2026 is best described as structurally tighter after two years of channel destocking. Following the 2022–2023 period of aggressive inventory building and subsequent correction, channel inventories of lower-cost products have largely been depleted. This means the tariff-driven cost increases that could previously be partially absorbed by selling through cheaper pre-tariff inventory are now flowing directly into market pricing.

The tariff impact on plant protection products is highly variable by active ingredient, because sourcing varies dramatically. China is the world's dominant producer of many active ingredients, including glyphosate, glufosinate, and numerous generic fungicides and insecticides. Products with significant Chinese-origin active ingredients face at least a 20% tariff, and in some cases much more when layered duties are considered. The herbicide 2,4-D, for example, faces an extraordinarily complex cost structure with general tariffs, anti-dumping duties, and countervailing duties (stemming from a Corteva-initiated trade case) that can total up to 170% depending on the supplier.

However, several key active ingredients used in ornamental production were listed among the products excluded from the steepest reciprocal duties. The exemption list includes certain herbicides and pesticides identified as critical agricultural inputs. Branded products from major registrants (Bayer, BASF, Corteva, Syngenta, FMC) that are formulated domestically are less exposed than generic imports, though even branded products often rely on Chinese or Indian intermediates.

For the typical ornamental grower, the practical impact depends on the specific pest management program. Growers relying heavily on branded products formulated in the U.S. (including most biologicals and biopesticides, which are a growing category) will see more modest increases of 3–5%. Operations using generic chemistry—particularly generic herbicides, broad-spectrum fungicides like chlorothalonil, or insecticides with Chinese-origin AIs—should budget for increases closer to 6–8%, with the possibility of higher spikes on specific products. The FBN crop protection outlook advises building chemical plans early and locking in supply, as delayed purchasing could create spring shortages as suppliers themselves wait to clarify tariff costs before committing to production volumes.

Fertilizers: +3% to 15%

Fertilizer is the input category with the most upward cost pressure heading into 2026, and the drivers are a combination of global market fundamentals, energy costs, and trade policy. Reports from multiple sources converge on the same general picture: fertilizer prices are 10–15% above 2025 levels in many regions, with considerable geographic variation.

In the nitrogen complex, strong demand across North America (fueled in part by near-record corn acreage of 97.3 million acres) has kept upward pressure on ammonia, urea, and UAN prices throughout 2025. Global supply of urea and UAN has been less than adequate, with Chinese export policy continuing to restrict urea shipments and Indian import demand remaining robust. The baseline cost of nitrogen production has risen because U.S. natural gas prices are projected to increase into late 2025 and 2026 as liquefied natural gas export capacity expands, raising the marginal cost of ammonia synthesis. European

natural gas prices, while well below the 2022 crisis peaks, remain volatile and could spike again with a cold winter or LNG disruptions. Recent Illinois price data shows nitrogen products 6–20% higher than the same period in the prior year.

Phosphate fertilizers are leading the price increase this cycle, driven by tight global supply and continued demand growth. Potash has also risen above expectations, supported by geopolitical risk—the U.S. imports roughly 97% of its potash consumption, primarily from Canada, with Russia, Jordan, and Israel as additional global suppliers. Potash prices are expected to remain in the upper-$400/ton range through spring 2026. The tariff situation here is somewhat favorable: potash received a reduced 10% tariff rate rather than the full 25%, and fertilizer products were mostly exempted from tariffs in late 2025—the most significant positive development in this category.

For ornamental growers specifically, the concern goes beyond commodity fertilizer prices. Controlled-release fertilizers (CRF), water-soluble specialty fertilizers, and micronutrient packages used in containerized production are manufactured products with their own cost structures, often incorporating imported coatings, chelates, and trace elements. These specialty products typically carry higher markups and may not directly track commodity fertilizer prices, but they do reflect the same underlying cost pressures plus additional manufacturing and tariff exposure. ICL, Haifa, and other major CRF manufacturers have historically passed through commodity cost increases with a lag. Growers should anticipate 8–12% increases on standard CRF products and potentially higher on specialty formulations.

Labor: +4% to 7%

Labor remains the single largest cost category for nursery and greenhouse operations, typically representing 30–45% of total production costs. The labor cost outlook for 2026 is unusually complex because of a major regulatory shift in the H-2A guestworker program that creates both opportunities and uncertainties.

The most significant development is the Department of Labor's October 2025 Interim Final Rule (IFR) that fundamentally changes how Adverse Effect Wage Rates (AEWRs) are calculated for H-2A workers. The rule switches the wage data source from USDA's Farm Labor Survey (which was canceled in August 2025) to the Bureau of Labor Statistics' Occupational Employment and Wage Statistics (OEWS) survey. The OEWS surveys nonfarm employers rather than farm employers, and the way it weights occupations—two-thirds of the relevant workers are hand packers, most of whom work in nonfarm warehouses—produces lower calculated wage rates for farm occupations. The result is dramatic: H-2A wage rates for 2026 could range from $8 to $17 per hour compared to $15 to $20 per hour required in 2025. DOL itself estimates the H-2A wage bill will drop from $6.6 billion in 2025 to $5.0 billion in 2026. For Michigan greenhouse employers specifically, estimated wage savings range from 11–24%.

However, there are important caveats. First, the rule is being actively litigated. The United Farm Workers Foundation and other labor advocacy groups have filed legal challenges, and a federal court could modify or vacate the rule. Congressional proposals (such as H.R. 1624, the Supporting Farm Operations Act) that would freeze AEWRs at 2023 levels add further regulatory uncertainty. Second, many H-2A employers

may choose not to aggressively lower wages to the minimum allowable rate, recognizing that worker retention, morale, and productivity are at stake. Between 2021 and 2025, blueberry-producing states saw H-2A wage rates increase 25% on average, and employers who have invested in worker relationships may maintain wage levels voluntarily. Third, the rule applies only to H-2A guestworkers—it does not directly govern wages for the approximately 80% of crop workers who are settled in the U.S., including an estimated 40% who are unauthorized.

For the nursery and greenhouse sector specifically, H-2A usage has been growing but still represents a relatively small share of total employment—approximately 21,000 H-2A jobs were certified for greenhouse and nursery growers (NAICS 1114) in 2022, representing about 6% of all certified H-2A positions. The majority of green industry labor is domestic, and these workers continue to face upward wage pressure from state minimum wage increases, competition from non-farm sectors (warehousing, logistics, construction), and general cost-of-living inflation. The net effect for most operations will be continued labor cost increases of 4–7%, with the H-2A rule change providing potential relief of 1–2 percentage points for operations that participate in the program and can successfully navigate the regulatory uncertainty.

Fuel & Energy: Flat to –5%

Fuel and energy represent the one bright spot in the 2026 input cost outlook. The U.S. Energy Information Administration's Short-Term Energy Outlook projects average retail diesel at approximately $3.47 per gallon in 2026, down from $3.66 in 2025—roughly a 5% decline marking the fourth consecutive year of lower diesel prices. This forecast is driven by expectations that global crude oil inventories will build throughout the year, with Brent crude projected to average around $52–55 per barrel. U.S. crude oil production is projected to remain near record levels at approximately 13.5 million barrels per day.
For greenhouse operations, the picture is more nuanced because natural gas is the primary heating fuel, and natural gas markets follow somewhat different dynamics than diesel. U.S. natural gas prices are projected to rise modestly into 2026 as LNG export capacity grows, increasing the domestic demand base. Electricity costs are also trending slightly upward, driven in part by growing demand from data centers and industrial users. Propane, used by some greenhouse operations for heating and by many for forklifts and material handling, typically makes seasonal bottoms after the winter heating season and could offer buying opportunities in spring.

On balance, the energy cost picture is modestly positive. Growers with significant diesel and propane consumption (particularly nursery field operations with vehicle fleets and delivery trucks) should see tangible relief. Greenhouse operations heavily dependent on natural gas heating may see costs roughly flat to slightly up. Operations that have invested in energy-efficient climate screens, curtain systems, or alternative energy sources (including the growing number of operations taking advantage of utility rebate programs for 2026) will be best positioned. The net blended energy cost change for a typical diversified operation is roughly flat to down 3–5%.

Supplies & Repairs: +3% to 10%

This is a broad category encompassing greenhouse structural materials, benches, carts, irrigation components, environmental control systems, tools, and general maintenance and repair items. The cost outlook here is dominated by the continued impact of Section 232 tariffs on steel and aluminum (25% duty), which have been in place since 2018 but were expanded and reinforced in 2025, and by the general tariff environment for manufactured goods from China and other countries.

Supplier price increase letters received by growers in recent months have ranged from 2.5% on the low end to 12% on the higher end, with the variation largely reflecting the import content of specific product lines. Greenhouse structures, benches, and rolling carts with significant steel or aluminum content are directly exposed to Section 232 duties. Many greenhouse control systems, LED lighting components, sensors, and populated PCB boards are sourced from China or other Asian manufacturers. As one industry distributor noted, while some products are assembled in the U.S., many critical components are still manufactured overseas—a reality unlikely to change quickly enough to shield growers from rising costs.

Repair and maintenance labor costs track general labor inflation, adding another 3–5% to the cost of keeping equipment operational. Parts availability for specialized greenhouse equipment (boilers, heat exchangers, environmental controllers) has improved since the worst of the post-COVID supply chain disruptions, but lead times remain longer than pre-pandemic norms for some items. The net effect for this category is 5–10%, weighted toward the upper end for operations planning major capital repairs or equipment purchases in 2026.

Freight & Trucking: +1% to 3%

The freight and trucking market enters 2026 in the late stages of a prolonged downcycle that has persisted since 2023. After two years of excess capacity and weak demand, the industry is showing early signs of stabilization but not yet a robust recovery. Dry van spot rates were modestly higher (approximately 0.5%) year-over-year by late 2025, and the capacity contraction is gradually progressing as marginal carriers exit the market. Industry analysts describe the outlook as “just enough capacity chasing stable demand” rather than a blockbuster recovery.

Lower diesel prices provide a structural tailwind for carriers, potentially reducing operating expenses by 5–10% and enabling stable or slightly lower contract rates for shippers. Fuel surcharges—which can represent 20–30% of total freight costs—will adjust downward in line with diesel price declines. However, other carrier costs (driver wages, insurance, equipment, compliance) continue to rise, and the industry’s push toward cleaner equipment and sustainability compliance adds capital costs.

For nursery and greenhouse growers, freight is particularly important because plants are heavy, bulky, and perishable—meaning shipping costs represent a higher proportion of delivered cost than for many agricultural commodities. The relatively favorable freight environment of 2025–2026, with flat-to-modest rate increases and lower fuel surcharges, provides a rare opportunity to somewhat offset cost pressures in other input categories. Growers who can optimize load density, consolidate shipments, and negotiate contract rates in this buyer’s market should see freight costs remain among the most manageable line items in their 2026 budgets. Expect overall freight cost increases in the 1–3% range, with the potential for flat or even slightly declining costs for growers with favorable contract positions.

Key Caveats and Wildcards

Several major uncertainties could materially alter these projections in either direction. First, on February 20, 2026, the U.S. Supreme Court ruled 6–3 in Learning Resources, Inc. v. Trump that the International Emergency Economic Powers Act (IEEPA) does not authorize the president to impose tariffs, striking down both the Reciprocal Tariffs and the Trafficking and Immigration Tariffs. Chief Justice Roberts, writing for the majority, held that the words "regulate" and "importation" in IEEPA "cannot bear such weight" and that "IEEPA contains no reference to tariffs or duties."

The ruling invalidated an estimated $175 billion in collected tariff revenue. However, the practical cost relief for growers may be limited, for two reasons. Within hours of the decision, President Trump signed a proclamation imposing a new 15% global tariff under Section 122 of the Trade Act of 1974 (the maximum rate permitted under that statute), effective February 24, 2026.

Section 122 tariffs are time-limited to 150 days (expiring July 24, 2026), and the administration simultaneously launched Section 301 investigations that could serve as the basis for permanent replacement tariffs without a time cap. Treasury Secretary Bessent has stated that combining Section 122, Section 232, and Section 301 tariffs "will result in virtually unchanged tariff revenue in 2026." Meanwhile, the refund process for previously collected IEEPA tariffs remains unresolved—more than 2,000 importers have filed suits to recover duties, and on March 4, the Court of International Trade ruled that all companies that paid IEEPA tariffs are entitled to refunds including interest, but actual disbursement could take months or years to complete. Twenty-three states have also filed suit challenging the legality of the Section 122 replacement tariffs.

The net effect is that the tariff environment remains highly uncertain: the statutory authority has shifted, but the effective tariff rate facing growers may not change materially in the near term. Second, the USMCA is scheduled for its mandatory joint review by July 1, 2026, and the outcome of that review could alter the terms under which Canadian and Mexican products (including peat moss, fertilizers, and manufactured goods) enter the U.S. market. Third, the November 2025 U.S.–China tariff reduction agreement extends through November 2026, but its continuation or modification remains subject to bilateral negotiations. Finally, the U.S.–Israel war with Iran that began on February 28, 2026, has introduced the most significant near-term wildcard—effectively closing the Strait of Hormuz, disrupting 20% of global oil supply and a third of global fertilizer trade, and sending crude oil prices above $90 per barrel in the first week of the conflict (see Appendix for revised projections under this scenario).

Beyond the Iran conflict, other potential disruptions include weather events (hurricane damage to Gulf Coast petrochemical capacity, poor Canadian peat harvest), further Russia-related potash supply risk, or a U.S. economic recession—the probability of which has risen since the onset of Middle Eastern hostilities and now ranges from 30–50% depending on the forecaster.

Final Thoughts

Growers should develop their own cost-tracking models customized to their regional and operational circumstances, secure alternative sourcing for all major inputs, ensure overhead and administrative costs are properly allocated, and focus relentlessly on their value proposition to maintain pricing power in a market where consumer willingness to pay determines the ceiling and total cost establishes the floor.

APPENDIX

Impact of the 2026 Iran War on Input Cost Projections

On February 28, 2026, the United States and Israel launched coordinated air strikes against Iran, targeting military infrastructure, nuclear facilities, and senior leadership, including the assassination of Supreme Leader Ali Khamenei. Iran retaliated with missile and drone strikes against Israel, U.S. military installations across the Persian Gulf, and energy infrastructure in neighboring countries. As of this writing (early March), the conflict has entered its second week with no ceasefire in sight. President Trump has indicated the operation could last "weeks." This appendix revises the input cost projections presented in the main body of this report to account for the immediate and expected near-term effects of this conflict on global energy markets, fertilizer supply chains, and the broader input cost structure facing nursery and greenhouse growers.

The Strait of Hormuz: Anatomy of a Supply Shock

The single most consequential economic development from this conflict is the effective closure of the Strait of Hormuz, the 39-kilometer-wide waterway between Iran and Oman through which approximately 20% of global seaborne oil trade and roughly one-fifth of the world's liquefied natural gas (LNG) supply normally transits. Iran has threatened to fire on any vessel attempting passage, and tanker traffic has come to a near-complete standstill for five consecutive days. This is unprecedented—Iran has threatened to close the Strait many times over the decades but has never before made good on the threat. The chief economist at Rystad Energy described the situation as comparable to blocking the aorta in a circulatory system.

The closure affects not only Iranian oil exports but also shipments from Iraq (the second-largest OPEC producer, which has already cut output by nearly 1.5 million barrels per day for lack of export routes), Kuwait, Qatar, Bahrain, and the UAE. OPEC+ announced a production increase of 206,000 barrels per day, but as one analyst noted, this is "an entirely moot point" when there is no sea passage to move those barrels to market. The lion's share of OPEC barrels in the region have effectively become stranded assets. Collateral damage to infrastructure compounds the problem: Saudi Arabia's Ras Tanura refinery has been taken offline after an Iranian attack, QatarEnergy has declared force majeure on LNG exports after drone strikes on the Ras Laffan complex, and Oman's Duqm port was hit by a drone.
Revised Input Cost Projections

The following table presents revised projections alongside the pre-conflict estimates from the main report. These revisions assume the conflict persists for at least several weeks and that the Strait of Hormuz remains effectively closed or severely restricted through late March. A shorter conflict would moderate these estimates; a longer one would push them higher.

INPUT CATEGORY	PRE-CONFLICT BASELINE	REVISED ESTIMATE	CONFLICT IMPACT
Fuel & Energy	Flat to −5%	**+20% to 40%**	Largest reversal; Hormuz closure, WTI +38% in one week
Fertilizers	+3% to 15%	**+15% to 30%+**	50% of global sulphur, 34% of urea transits Hormuz; urea already +22%
Freight & Trucking	+1% to 3%	**+5% to 15%**	Diesel surcharges rising; ocean rerouting via Cape of Good Hope
Containers & Plastics	+2% to 12%	**+8% to 15%**	Resin tracks crude; buyer's market likely over at $80+ oil
Media (Soilless Mixes)	+2% to 10%	**+6% to 12%**	Peat insulated; coir logistics disrupted; perlite energy costs up
Plant Protection Products	+3% to 8%	**+5% to 12%**	Energy-intensive mfg; higher feedstock and shipping costs
Supplies & Repairs	+3% to 10%	**+8% to 15%**	Steel/aluminum respond to energy; shipping route delays
Propagative Materials	+3% to 6%	**+5% to 10%**	Airfreight rises with jet fuel; ocean rerouting adds weeks
Labor	+4% to 7%	**Still +4% to 7%**	Insulated from immediate conflict effects
WEIGHTED OVERALL	**+4% to 7%**	**+10% to 15%+**	**Duration-dependent; higher if conflict persists into April**

Fuel & Energy: The Most Dramatic Reversal

The pre-conflict forecast of flat-to-declining energy costs has been entirely overtaken by events. West Texas Intermediate crude gained over 38% in the first week of the conflict, briefly crossing $92 per barrel—its biggest weekly surge since at least 1985. Brent crude gained roughly 30% to trade above $94. Retail gasoline prices in the U.S. jumped nearly 27 cents per gallon in a single week, a pace not seen since the week following Russia's invasion of Ukraine in March 2022. Traders are warning that $100 per barrel crude is imminent if the war continues, and Goldman Sachs has acknowledged that risks to their oil price forecast are "significantly skewed to the upside."

For greenhouse operations, the natural gas picture is equally alarming. European natural gas prices nearly doubled in the first days of the conflict after Iranian drone attacks on QatarEnergy's Ras Laffan complex—the world's largest LNG export facility—forced a declaration of force majeure. Qatar supplies roughly one-fifth of global LNG. While U.S. domestic gas production provides some buffer, the LNG export dynamic means that global price spikes will pull domestic prices higher as well. Any greenhouse or

nursery grower who was budgeting based on the EIA's pre-conflict diesel forecast of $3.47/gallon or its benign natural gas outlook should immediately revisit those assumptions. The EIA's Short-Term Energy Outlook is effectively obsolete until the conflict resolves.

Fertilizers: A Potential 2022-Scale Supply Shock

The fertilizer market faces what could become its most severe disruption since the Russia-Ukraine crisis of 2022. The Middle East accounts for 50% of global sulphur exports, 34% of global urea shipments, and is a major hub for ammonia and phosphate production. More than 60 million tons of fertilizer and fertilizer raw materials are exported from the region annually, and the vast majority must transit the Strait of Hormuz. With the Strait effectively closed, these supplies are stranded.

The impact is already being felt. Urea prices at the Port of New Orleans surged in the first days of the conflict. One South Dakota farmer who rushed to secure urea reported paying 22% more than he had in late 2025—the highest price he had ever paid. Phosphate prices have risen approximately $30 per ton from recent trades. Sulphur and ammonia production has been disrupted in Qatar and Iran, Saudi Arabia's Ras Tanura refinery has been taken offline after an Iranian attack, and Oman's Duqm port was hit by a drone strike.

The timing is devastating since this is precisely the period when North American farmers and growers are making spring fertilizer purchases. Industry analysts warn that it takes 30 days to ship a vessel of urea from the Persian Gulf to U.S. shores and another three to four weeks to move product to interior markets—meaning even a multi-week disruption could create spot shortages during the spring application window.

For ornamental growers, the cascade runs through specialty products. Controlled-release fertilizer manufacturers depend on ammonia (for nitrogen content), sulphur (for coatings), and natural gas (for production energy). All three are directly affected by this conflict. Expect specialty CRF and water-soluble fertilizer increases of 20–30% if the conflict extends through March, with a lag of 4–8 weeks as manufacturers work through existing inventory and reprice. The corn-to-fertilizer price ratio—already at one of its worst historical levels before the war—has deteriorated further, raising the risk that row crop farmers will underapply nutrients, deplete soil reserves, and ultimately reduce yields. The British Food Policy Institute has warned of long-term increases in food prices from the combined fuel and fertilizer disruptions.

Freight, Containers, and the Cascade Through Other Inputs

The freight market's soft "buyer's market" environment described in the main report has been disrupted by a diesel price shock and the rerouting of global ocean shipping. Major carriers including Maersk and Hapag-Lloyd have suspended Hormuz transits, rerouting vessels via the Cape of Good Hope and adding weeks to delivery schedules. Diesel surcharges on domestic trucking routes will adjust upward with a short lag.

For containerized imports of hardgoods, equipment, and Asian-origin products, ocean freight rates will spike significantly. The plastic resin market—which was in a buyer's market with spot prices running well below contract—now faces a reversal as crude oil above $80 per barrel provides domestic producers with justification for price increase nominations. Plant protection chemical manufacturing is energy-intensive and will see feedstock cost increases. Even growing media costs will rise modestly through higher perlite production energy costs, coir shipping disruptions, and increased domestic freight rates to deliver finished mixes.

Duration Scenarios and Strategic Implications

The critical variable for all of these projections is the duration and intensity of the conflict. Three scenarios frame the range of outcomes:

- **Scenario 1:** Short conflict (2–3 weeks, Hormuz reopens by late March). Oil prices correct back toward $65–75. Fertilizer prices remain elevated through spring but moderate by summer. Revised weighted input cost increase of 8–10%. The precedent here is the June 2025 Twelve-Day War, after which energy prices retreated fairly quickly.
- **Scenario 2:** Extended conflict (4–8 weeks, Hormuz partially reopens with naval escorts). Oil settles in the $80–100 range for an extended period. Fertilizer supply disruptions are severe enough to cause spot shortages during spring application. Revised weighted input cost increase of 12–18%. This scenario risks tipping the broader economy toward recession, which would paradoxically reduce some demand-driven pressures but weaken consumer spending on green industry products.
- **Scenario 3:** Protracted conflict or wider regional escalation. Oil exceeds $100 and remains elevated through 2026. Fertilizer markets experience a 2022-scale shock. Weighted input cost increases exceed 20%. Recession probability rises sharply. This is the scenario that keeps economists up at night, and while it remains the least probable, each day the Strait remains closed moves the market closer to its tipping point.

Recommended Actions for Growers

First, lock in fertilizer supply immediately if you have not already done so for the spring season. Waiting for price clarity is a luxury the supply chain may not afford—physical shortages of urea and specialty fertilizers are a real risk if the Strait remains closed through late March. Second, review fuel hedging and purchasing strategies. If your operation uses significant volumes of diesel, propane, or natural gas, consider locking in forward contracts or prepaying at current rates before further increases materialize. Third, stress-test your pricing models under all three scenarios above and identify your break-even thresholds. Fourth, accelerate conversations with customers about price adjustments—the sooner buyers understand the cost environment, the less disruptive the pass-through will be. Finally, double down on the working capital management and lean flow analysis recommendations from the main report. In a high-cost, high-uncertainty environment, operational efficiency is no longer a nice-to-have—it is the difference between maintaining margins and losing them.

This situation is evolving rapidly, and these projections will require further revision as events unfold.