

# Pesticide Adjuvant Market in the US

## Industry Study with Forecasts for 2021

Study #3504 | March 2017 | \$5000



Adjuvant use rates (on a pounds adjuvant per pound active ingredient basis) are projected to steadily rise as adjuvants are used to improve efficiency and the environmental profile of pesticide formulations. Surfactants and emulsifiers -- which include multifunctional products that enhance spreading/sticking, improve emulsification, and promote leaf penetration -- will exhibit the best gains.

Adjuvants are being added in ever increasing amounts to pesticide formulations in order to promote compatibility between ingredients and to maximize the efficiency of older active ingredients. Environmental concerns about pesticide contamination will also support the usage of formulations with lower active ingredient loadings; these products typically contain higher levels of adjuvants in order to maximize the effectiveness of the active ingredients used in smaller volumes.

### Trends in agriculture will impact adjuvant product mixes

Genetically modified seeds will continue to represent an increasing share of crops planted. Seeds with tolerances to multiple herbicides -- including glyphosate, atrazine, 2,4-D, and dicamba -- will have a greater presence in agriculture going forward. These patented seed technologies are typically marketed with branded pesticide formulations containing higher-value proprietary adjuvant blends. However, seed varieties engineered with resistance to

insect pests and diseases will limit demand for insecticides and fungicides and their corresponding adjuvants.

### Herbicides represent best growth opportunities for adjuvants

The largest end use for pesticide adjuvants are herbicides, the largest category of pesticides in volume terms. Because of its near ubiquitous use in major crop varieties, glyphosate will continue to represent the largest single end use for pesticide adjuvants. Because weed resistance is one of the most significant issues in the pest control industry today, herbicides are the main focus for many suppliers who are reformulating older active ingredients with improved adjuvants to promote efficiency.

### Study coverage

This Freedonia industry study presents historical demand data (2006, 2011, 2016) plus forecasts (2021) by product (surfactants and emulsifiers, drift control agents, oil concentrates, compatibility agents, water conditioners), pesticide (glyphosate, atrazine, 2,4-D, S-metolachlor, dicamba, other herbicides, insecticides, fungicides), and market (agriculture, commercial, consumer). The study also evaluates company market share and provides competitive analysis on industry players such as Agrium, Akzo Nobel, Clariant International, Crodo International, Dow Chemical, Evonik, Helena Chemical, Huntsman, Land O'Lakes, Lonza, and Solvay.

### PESTICIDES

#### 2,4-D Adjuvants

US demand for adjuvants used in 2,4-D formulations is expected to rise to 1.2 million pounds in 2021. In dollar terms, demand will increase to \$1.2 billion over the same period. Though demand for 2,4-D will grow, adjuvant use is expected to exhibit healthy gains in 2021 as to enhance active ingredient function. Several other factors are expected to influence 2,4-D adjuvant demand going forward:

2,4-D is expected to continue to be commonly formulated with other herbicide active ingredients, which will promote demand for compatibility agents. Soybean varieties have provided further opportunities for 2,4-D formulations containing 2,4-D and other herbicides, being marketed as higher adjuvant levels.

Herbicide products with 2,4-D will see an increasingly large demand for compatibility agents than other adjuvant types. Surfactants will also see a strong response to efforts to maximize pesticide efficacy.

Despite positive growth factors, demand for 2,4-D adjuvants will be constrained by the overall maturity of the market for 2,4-D. In addition, the active ingredient is under review by the EPA as a possible carcinogen and possible environmental hazard. Suppliers of premium, branded 2,4-D products will continue to face significant competition from inexpensive generic formulations, which often contain fewer adjuvants in lower concentrations. Additionally, 2,4-D targets many of the same types of weeds as dicamba, which is expected to significantly expand its market share at the expense of 2,4-D and other older herbicides.

**Table 5-2 | Agricultural Adjuvant Outlook by Type, 2006-2021 (million pounds)**

Item	% Compound Annual Growth						
	2006	2011	2016	2021	11-16	16-21	21-26
Ag Pesticide Active Ingredient Demand lb adjuvants/lb agricultural active ingredient							
Agricultural Pesticide Adjuvant Demand							
Surfactants & Emulsifiers							
Drift Control Agents							
Oil Concentrates							
Compatibility Agents							
Water Conditioners							
Other Adjuvants							
\$/lb							
Agricultural Pesticide Adjuvant Demand (mil \$)							
% agriculture							
Pesticide Adjuvant Demand (mil \$)							

Source: The Freedonia Group

**Table 3-1 | Pesticide Surfactant & Emulsifier Outlook, 2006-2021 (million pounds)**

Item	% Compound Annual Growth						
	2006	2011	2016	2021	11-16	16-21	21-26
Pesticide Active Ingredient Demand lb surfactant & emulsifier/lb active ingredient							
Pesticide Surfactant & Emulsifier Demand							
By Pesticide:							
Herbicides							
Insecticides							
Fungicides							
Other Pesticides							
By Market:							
Agriculture							
Commercial							
Consumer							
\$/lb							
Pesticide Surfactant & Emulsifier Demand (mil \$)							
% surfactant & emulsifier							
Pesticide Adjuvant Demand (mil \$)							

Source: The Freedonia Group

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## This study can help you:

- Determine your market & sales potential
- Learn more about industry competitors
- Assess new products & technologies
- Identify firms to merge with or acquire
- Complement your research & planning
- Gather data for presentations
- Confirm your own internal data
- Make better business decisions

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## Related Studies

### Agricultural Pesticide Market in the US

US demand for agricultural pesticide active ingredients is forecast to rise nearly two percent yearly to \$2.9 billion in 2020. Herbicides will continue as the largest active ingredient demand, with glyphosate remaining the major product type by far. Corn and soybeans will remain the most widely planted crops and will continue as the major pesticide in volume terms. This study presents historical demand data plus forecasts for 2020 and 2025 by product and crop. The study also evaluates company market share and competitive analysis on US industry participants.

#3484..... January 2017 ..... \$6500

### Lawn & Garden Consumables

US demand for packaged lawn and garden (L&G) consumables (e.g., seeds, fertilizer, pesticides, growing media, mulch) is forecast to rise 3.4 percent per year to \$9.3 billion in 2020. Lawn and turf applications will remain the largest end use for consumables, while fertilizers and pesticides will continue to account for most demand. This study details the \$7.9 billion market for L&G consumables, giving forecasts for 2020 and 2025 by product, market, application and end use. The study also evaluates company market share and profiles US industry players.

#3422..... June 2016 ..... \$5300

### Home & Garden Pesticides

US demand for home and garden pesticides will grow 3.1 percent yearly to \$2.4 billion in 2020. Insecticides will remain dominant while fungicides and other products such as animal repellents and rodenticides will grow the fastest. Household applications will remain the largest segment, but will be slightly outpaced by lawn and garden uses. This study analyzes the \$2.1 billion US home and garden pesticide industry, with forecasts for 2020 and 2025 by product, application, and raw material. The study also evaluates company market share and profiles industry players.

#3384..... February 2016 ..... \$5200

### World Lawn & Garden Consumables

World demand for lawn and garden consumables will rise 3.7 percent annually to \$19.5 billion in 2019. North America will remain the dominant market, while the Asia/Pacific region will grow the fastest. Seeds and growing media will be the fastest growing segments, while fertilizers and pesticides remain the largest. This study analyzes the \$16.3 billion world lawn and garden consumables industry, with forecasts for 2019 and 2024 by product, market, world region, and for 16 major countries. The study also evaluates company market share and profiles industry participants.

#3265..... March 2015 ..... \$6200

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## Freedonia's methods

- Establishing consistent economic & market forecasts
- Using input/output ratios, flow charts & other economic methods to quantify data
- Employing in-house analysts who meet stringent quality standards
- Interviewing key industry participants, experts & end users
- Researching a proprietary database that includes trade publications, government reports & corporate literature

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