

INVEST IN THE RIGHT SOLUTIONS

> Cut flowers need help along the journey from harvest to consumer. They are stressed by repeated handling, exposure to fluctuating temperatures, extended storage, shipping and display. Unless you provide the proper solutions, flowers will dry out and deplete their internal sugars.

As you select the proper solutions, remember the three C's of basic flower care established by American Floral Endowment research: Cooling, Care and Cleanliness. Along with using the proper solutions, it is also important to keep flowers cold (33-35 degrees F, with 75-85 percent humidity) and to assure clean, sanitized containers, tools, work surfaces and coolers.

What are these solutions? Generally, these products restore and maintain water balance in flowers and provide supplemental sugar to replace the internal sugar that is lost during the journey. These key elements — water and sugar — are essential. Hydration solutions and flower foods are crafted to fulfill these needs. In addition to sugar, they contain an acidifying agent to lower pH, so water is taken up more rapidly and microbial growth is slowed. Microbes cause deterioration of the stem and reduce water uptake. In other words, reducing microbial activity increases water uptake, which in turn keeps sugar flowing to the petals for opening and extended life.

Are these products worth the cost? Yes, without a doubt. In my 20-plus years of cut-flower postharvest research at the University of Florida, funded mostly by the American Floral Endowment, these products were demonstrated to extend flower life and promote flower opening.

In addition, specialty products used for postharvest pretreatments successfully prevented damage from ethylene and leaf yellowing. These solutions also contain water-uptake enhancers — compounds that allow water to be absorbed more readily by reducing the surface tension of the water as it moves up the stem. The water-uptake enhancers work like oil in a car engine by reducing friction.



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Flower Care and Handling Products

	Product	Use/Description	Manufacturer
Hydration/Pretreatment	RVB	All-purpose hydrating solution	Chrysal USA
	RVB Clear Intensive	Clear universal hydrating solution	Chrysal USA
	OVB	Hydration solution for summer flowers	Chrysal USA
	AVB	Anti-ethylene treatment	Chrysal USA
	CVBN	Hydrator in pill form	Chrysal USA
	EasyDip	Pre-conditioner, stimulates hydration by easing the route for the conditioner	Chrysal USA
	RosePro Hydration	Clear formula designed to improve leaf quality and prevent bent neck	Chrysal USA
	Hydraflor 100	Hydration solution to rehydrate and condition all cut-flower types	FloraLife
	Hydraflor Clear Ultra 100	Concentrated hydration solution to rehydrate and condition all cut-flower types	FloraLife
	Express Clear 100	Hydration solution that does not require re-cutting of stems	FloraLife
	Hydrate Hydrangeas	Specially formulated for hydration of hydrangea	FloraLife
	Quick Dip 100	Ready-to-use quick hydrating solution	FloraLife
	Hydraplus	Hydration solution	Syndicate Sales
Hydraquick	Ready-to-use hydration solution	Syndicate Sales	
Storage/Transport	Professional 2	Hydration solution plus nutrients	Chrysal USA
	Flowpro 2	Conditioner that does not require re-cutting stems	Chrysal USA
	Ethylene Buster sachets	Anti-ethylene treatments	Chrysal USA
	Express Clear 200	Storage and transport solution with nutrients that does not require re-cutting of stems. Liquid and powder for florists and consumers.	FloraLife
	Express Clear Ultra 200	Concentrated storage and transport solution that does not require re-cutting of stems	FloraLife
	Clear 200	Conditioner for storage and shipping	FloraLife
	Clear 200 eZ Dose	A traceable storage and transport product made in a microperforated packet so it can be directly placed or dropped into a clean flower bucket without having to tear the packet open for use	FloraLife
	Express 200 eZ Dose	A traceable storage and transport product made in a microperforated packet so it can be directly placed or dropped into a clean flower bucket without having to tear the packet open for use. This product does not require re-cutting of stems.	FloraLife
	EthylBloc (sachets and truck treatment)	Anti-ethylene treatment	FloraLife
	Aquahold	Hydration solution that slows flower opening	Syndicate Sales

	Product	Use/Description	Manufacturer
Feeding	Professional 3	Conditioning treatment for all cut flowers with nutrients	Chrysal USA
	RosePro Vase	Solution for vase and foam for all flowers with emphasis on roses	Chrysal USA
	Clear Universal	Flower food with nutrients	Chrysal USA
	Bulb Food	Flower food for all bulb flowers	Chrysal USA
	RosePro	Liquid flower food for all flowers but specially formulated for roses	Chrysal USA
	FullBloom	Flower food for full opening	Chrysal USA
	Express Universal 300	Flower food formulation with nutrients that does not require re-cutting of stems. Liquid and powder for florists and consumers.	FloraLife
	Crystal Clear	Flower food with nutrients for florists and consumers	FloraLife
	Rose Food 300	Flower food with nutrients for florists and consumers specifically formulated for roses	FloraLife
	Special Blend 300	Flower food with nutrients for florists and consumers for use with extreme-quality (pure and hard) water	FloraLife
	Floral Foam Food	Flower food with nutrients for use as a soaking solution for floral foam	FloraLife
	Aquaplus	Solution with nutrients that keep water clear	Syndicate Sales
Accessories	Dosing Unit	Injector to enable accurate dosing of flower food products	Chrysal USA
	Glory	Spray treatment that reduces evaporation and keeps the leaves green	Chrysal USA
	Arrive Alive	Keeps flowers hydrated during transport for 3 to 5 days	Chrysal USA
	Leafshine Aerosol	Provides a natural gloss to flowers and foliage, keeping them fresh and hydrated	Chrysal USA
	Finishing Touch	Spray treatment refreshes, hydrates, and protects flowers and foliage from drying out	FloraLife
	Crowning Glory	Ready-to-use spray holds in moisture, reducing water loss	FloraLife
	Leafshine	Spray treatment to add natural shine to foliage and flowers	FloraLife
	Floralife Blend Center	Injector to ensure proper measurement and mixing of care and handling solutions	FloraLife
	Aquafinish	Reduces moisture loss on sprayed flowers and foliage	Syndicate Sales
	Aquaplus Proportioning Unit	Allows for proper mixture of hydration and flower food solutions	Syndicate Sales
Cleaners	Professional Cleaner	Cleans tools and dosing units of limescale and organic dirt	Chrysal USA
	Clean Touch	A spray to kill bacteria, fungus and algae	Chrysal USA
	D.C.D.® Cleaner	Concentrated product to disinfect, clean, and deodorize flower buckets, vases, containers, tools, work surfaces, coolers, shipping and packing areas	FloraLife
	D.C.D.® Cleaner RTU	Ready-to-use product to disinfect, clean, and deodorize flower buckets, vases, containers, tools, work surfaces, coolers, shipping and packing areas	FloraLife
	MicroBLOC® Disinfectant RTU	Ready-to-use product to disinfect and clean nonporous hard surfaces	FloraLife
	Floral Cleaner	Cleans and deodorizes floral buckets, tools, work surfaces, vases, containers, coolers, as well as shipping and packing areas	FloraLife
	Hand SOAP packets	All-in-one soap product that removes dirt from hands along with removing viruses	FloraLife
	Fresh-N-Clear	Cleans and disinfects work surfaces	Syndicate Sales

Thanks to Chrysal USA, FloraLife and Syndicate Sales for providing this list and descriptions of their care and handling products.



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The cost of these commercial products is less than a cent per stem. (And, by the way, homemade solutions, such as aspirin, table sugar, bleach, copper pennies, etc., are not effective.)

In the table of commercial products, several categories of products are presented. Hydration solutions, used as pretreatments and during or following storage and shipping, contain no sugar. They are designed to accelerate water uptake and to restore the water balance. Sugar is not included, since sugar will promote flower opening. Flower food solutions contain many of the same components as hydration solutions, but sugar is added to promote flower opening and to extend flower life.

The accompanying table provides a comprehensive list of the care and handling products in the U.S. Choosing the correct products to nurture cut flowers during their journey will extend flower life. Use each product according to the manufacturer's recommendations for best results. 🌸

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