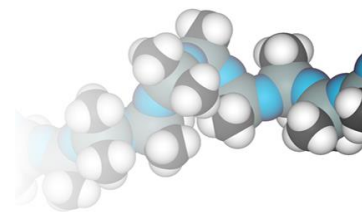
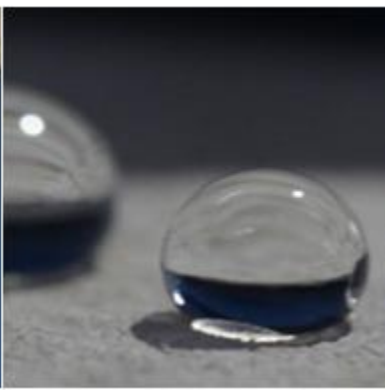


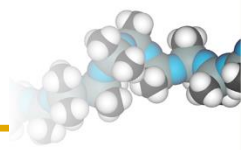
# AGRICULTURAL PRODUCT SERIES

AUG 2016



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# ABOUT ELKAY CHEMICALS

For 25 years, Elkay Chemicals Pvt. Ltd. has been manufacturing world class silicone based products. Elkay Chemicals is an economical, technology driven manufacturer.

ISO 9001-2008 (ICS) certified  
REACH registered  
State approved FDA facility

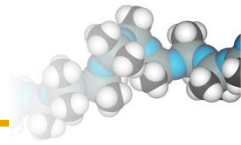
ELKAY has exported to 27  
countries for over 18 years



## The ELKAY Chemicals Advantage

- Long-standing relationships
- Flexible multi-purpose manufacturing facility
- Co-develop products with customers
- Confidentiality on sensitive projects
- Low cost, high quality products
- Excellent R&D facility and application lab

# INDUSTRY SEGMENTS SERVED



**De-foaming**



**Textile Finishing**



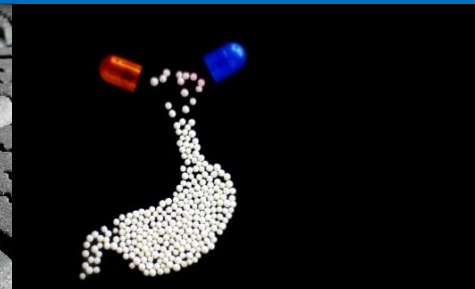
**Agriculture**



**Construction**



**Rubber & Tire**



**Pharmaceuticals**



**Petrochemicals**

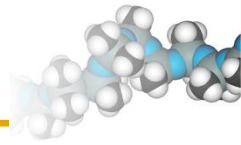


**Personal Care**

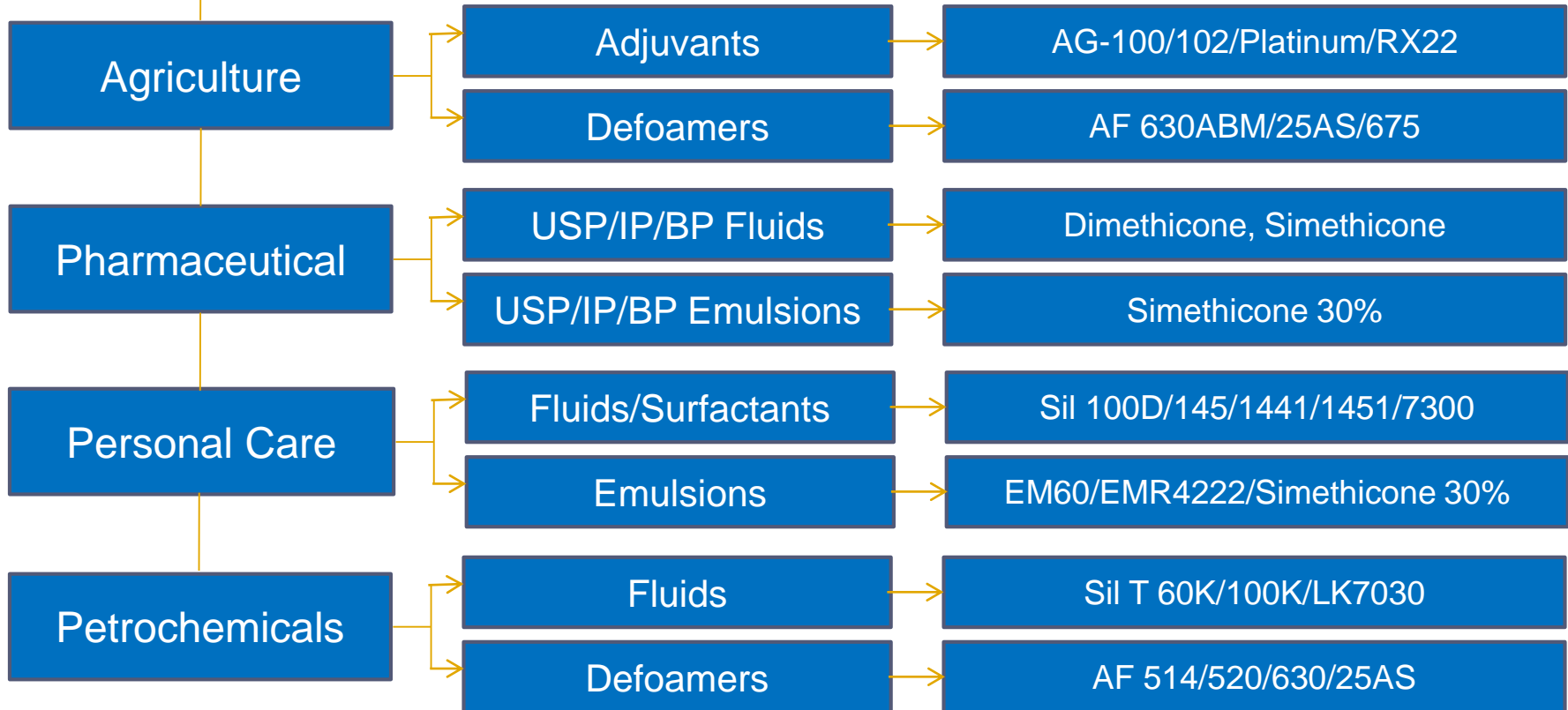


**Surface Treatment**

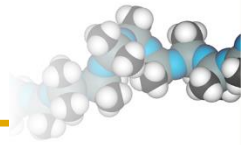
# PRODUCT RANGE



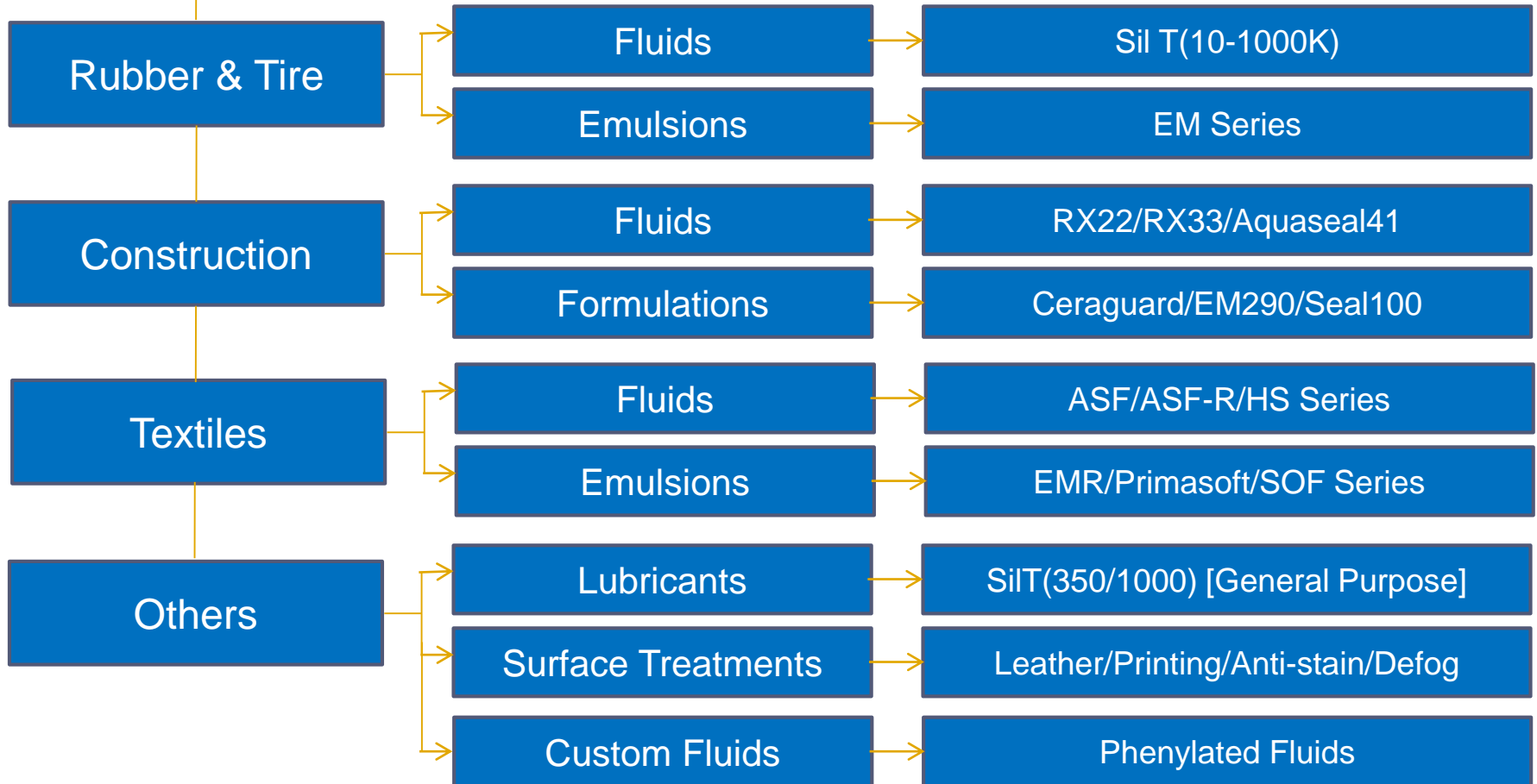
## Product Segments



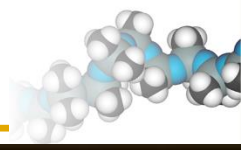
# PRODUCT RANGE

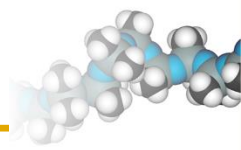


## Product Segments



# ELKAY AGRO DEFOAMING SOLUTIONS





# ELKAY AGRICULTURAL DEFOAMER

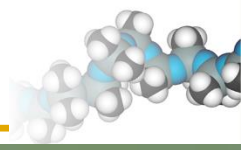
PRODUCT	Defoaming Ability	In-can/Tank Mix	pH Range	Unique Attributes
LK AF 675	✓✓✓✓✓	Both	3-12	Glyphosate/concentrate compatible.

- Non-reactive and compatible with active ingredients – both in tank and in-can mixes
- Compatible with surfactant concentrates
- Easy to disperse
- 35% solids, premium performance macro-emulsion
- Low dosage (10-50 ppm) kills foam and prevents foaming
- Stable at high temperatures and a wide pH range (3-12)

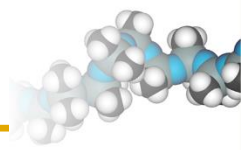
**SUPER PERFORMANCE**

**EXCELLENT STABILITY**

# ELKAY AGRO ADJUVANT SOLUTIONS







# SILICONE SUPERWETTERS

Most plants have waxy hydrophobic surfaces. Beaded water drops may look pretty on them – but during product application, this leads to ineffective coverage, product falling off plant into the soil and reduced time it remains on the plant.

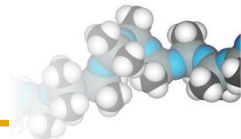
Silicone super-wetting adjuvants can be added to any agricultural product to enhance spreading and penetration.



**HIGHER CROP YIELDS**

**LOWER COSTS**

- Better pick-up of fertilizer and PGRs
- More effective pesticides/fungicides
- Lower spray volume and better coverage
- Reduced spray run-off and wastage



# ADJUVANT PRODUCT RANGE

LIQUIDS	Spreading Ability	Spreading Speed	Unique Attributes
AG-100	✓✓✓✓	✓✓✓✓	Excellent sticking
AG-102	✓✓✓✓	✓✓✓✓	Low foaming & clear in water
AG-Platinum Plus	✓✓✓✓✓	✓✓✓✓✓	Best spreadability & wetting
AG-Platinum	✓✓✓✓✓	✓✓✓✓✓	Excellent spread & rain fastness
AG-105*	✓✓✓✓	✓✓✓	Superior Economy
AG-1001	✓✓✓	✓✓	Ready to use

SOLIDS	Spreading Ability	Active Content	Unique Attributes
AG-PW*	✓✓✓✓	20%	Free Flowing powder

Rough concentrations requirements for AG100:

- Plant growth regulators (0.01-0.5%)
- Herbicides (0.01-0.05%)
- Insecticides (0.01-0.05%)
- Fungicides (0.01-0.05%)
- Fertilizers (0.01-0.1%)

Why silicones?

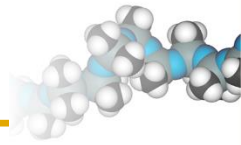
**EXTREMELY FAST**

**LARGE COVERAGE**

**LOW CONCENTRATIONS**

\*Beta Products

# KEY FEATURES OF AG PRODUCTS



AG products are organo-silicone based adjuvants

- Can super-wet soil, textiles, wood, other inorganic/organic substrates\*
- Can penetrate any surface with porosity quickly
- Safe, non-corrosive and effective
- No APEOs
- Compatible with most formulations - tank and in-can mixes\*\*
- Non-ionic
- REACH pre-registered

**SAFE AND COMPATIBLE**

**WET ANY SURFACE**

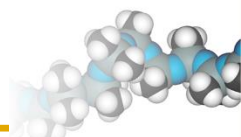
Drop with no  
surfactant

Addition of 0.1% AG-100 gives  
penetration into cellulose



\* This product is neither tested nor represented as suitable for medical or pharmaceutical uses.

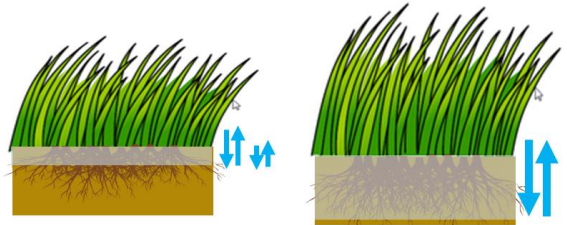
\*\*As a tank additive, ensure pH is 5-8 (use within 24 hours of addition). In formulations ensure pH is buffered to 6.5-7.5.



# ELKAY ADJUVANT STUDY DATA

## Water consumption reduction

- Water for lawn and turf care can be reduced by up to 50% when used at 0.05% in regular water without affecting grass quality



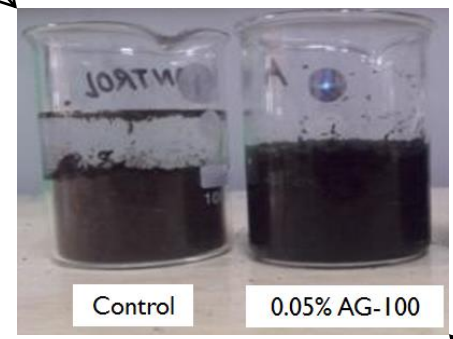
This prevents hydrophobization of soil, allows deeper roots and healthier grass



## Wetting of hydrophobic soils is possible

- Water logging in fields can be eliminated

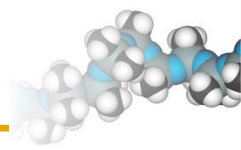
Hydrophobic soil prevents water penetration



Treated soil instantly absorbs water

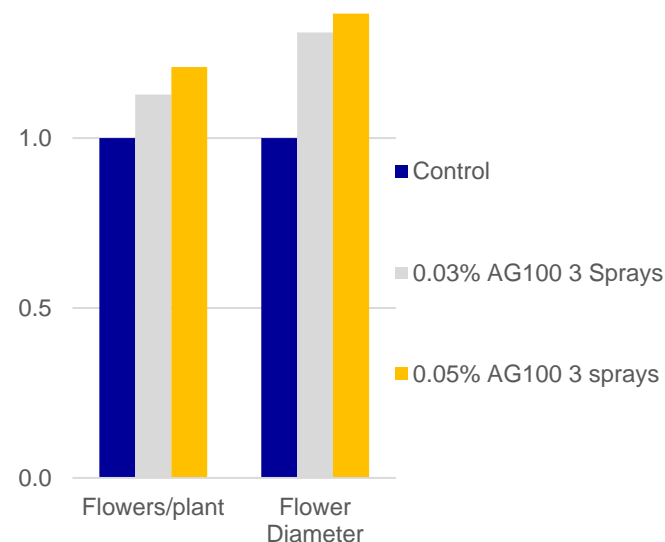
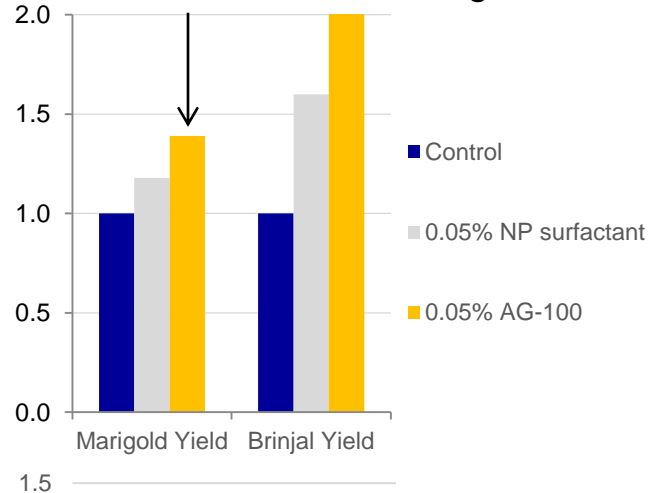
## Products are safe and non-toxic\*

\*Toxicity and phyco-toxicity studies when used at the recommended dosage from Government of India accredited laboratories.



# ADJUVANT STUDY DATA

Yield increase accompanied by larger and healthier flowers/vegetables



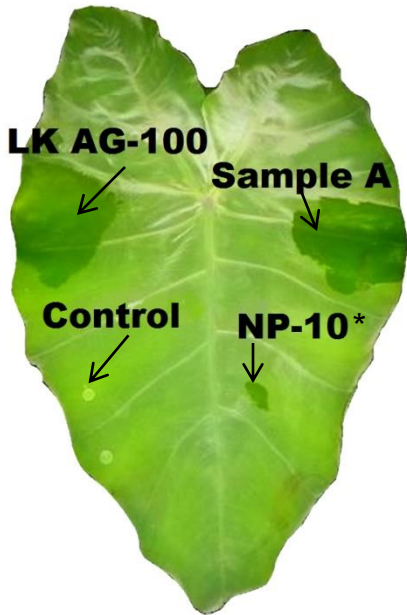
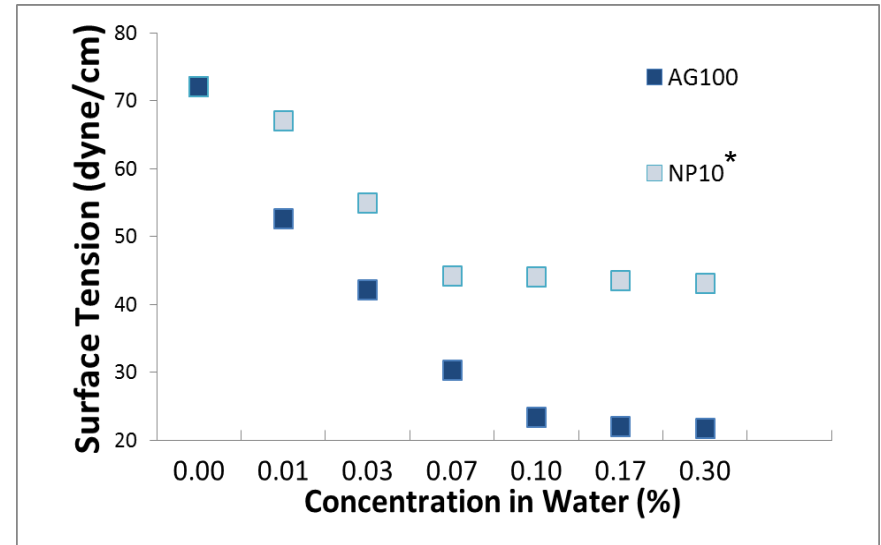
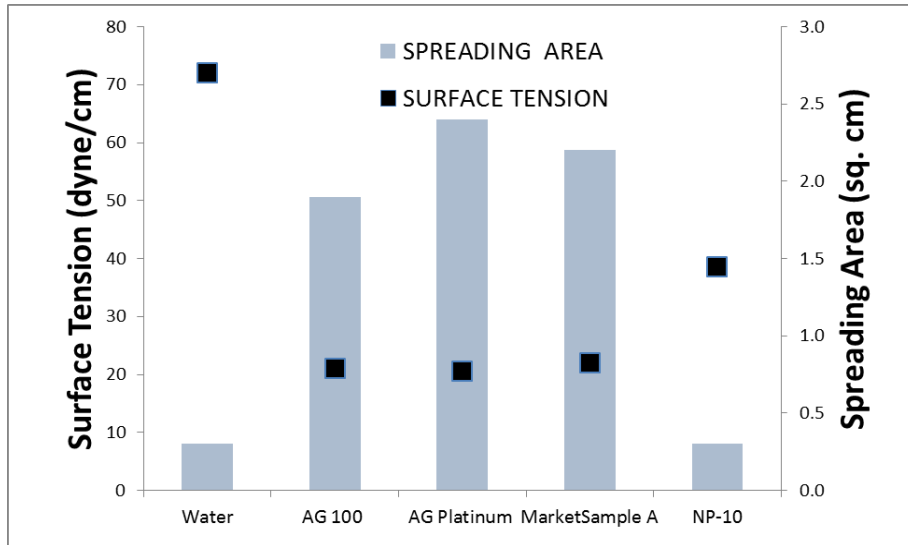
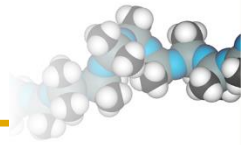
## External studies have shown

- With foliar NPK fertilizer, a 32% yield increase in marigold (floriculture) crop was observed and a 103% yield increase in brinjal (eggplant) crop was observed\*
- With foliar sprays of micronutrients, the yield of gerbera (floriculture) increased by 21%. This translates to 216,000 extra flowers per acre. Additionally the average flower diameter increased by 35%.\*\*

\* Elkay trial farm located near Bhor, Maharashtra, India. Trial data indicative of possible benefits, actual results depend on actual conditions.

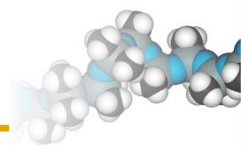
\*\*Government of India accredited field research. Trial data indicative of possible benefits, actual results depend on actual conditions.

# KEY FEATURES OF AG PRODUCTS



- Excellent wetting agent, useful at very low concentrations
- Surface tension range 20-22 dynes/cm.
- Due to the extremely low surface tension, aqueous solutions of the adjuvant show excellent spreading ability
- Low hydrodynamic volume gives fast action and eliminates possibility of drops falling before spreading - very useful for sprays to cover a surface quickly

\* NP10 is a commonly used surfactant - nonyl phenyl ethoxylate



# ELKAY AGRO ADJUVANTS

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- Silicone super-spreading surfactants can give higher yields and reduced costs
- Improves spray coverage, reduces wastage and run-off
- Unsurpassed aqueous spreading and spreading rate at low concentrations
- Lowers surface tension to 20-22 dynes/cm
- Typical usage range 0.01 – 0.5% based on formulation
- Shelf life of 4 years
- ELKAY's in-house application lab tests each shipment to ensure product quality.
- ELKAY's broad product range can fulfil customer requirements depending on application

## ELKAY CHEMICALS PVT. LTD.

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