

# Strawberry



## Crop Advice Sheet

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**ICL** Specialty  
Fertilizers



## Crop specification

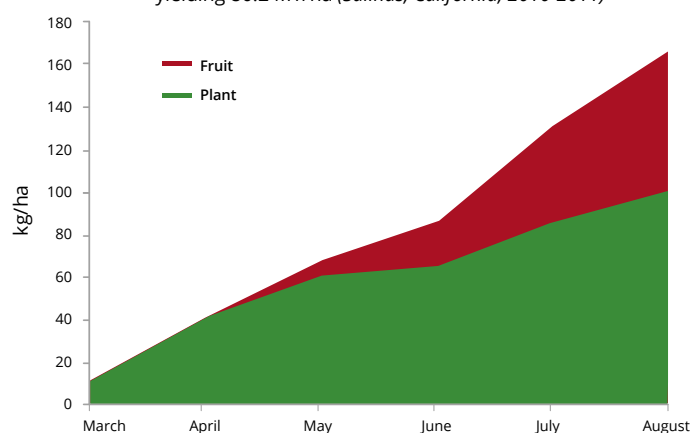
### Soil

Strawberry plants grow and produce well in a wide range of soil types, from sandy to clay-loams. They are not particularly pH-sensitive, however, they produce best at pH of 5.8 to 6.5.

### Temperature

Strawberries will flower and set fruits at temperatures between 15-27 °C. Flowers developing at sub-optimal temperatures (<14°C) will abnormally develop with significantly less stamen, producing considerably less pollen, and it will fail to germinate, thus impairing fruit production.

Nitrogen uptake dynamics in open field 'Albion' strawberries yielding 80.2 MT/ha (Salinas, California, 2010-2011)



Adapted from: Hartz et al., 2013

### Controlled Release & Granular Fertilizers

Analysis (%) / Longevity / Coated % / Dosage	Timing / Method of application	Remarks
<b>Polysulphate, 0-0-14+17CaO+6MgO+48SO<sub>3</sub></b> , 300-500 kg/ha	Pre-planting / Broadcasting or row	Important source of K, Ca, Mg and S
<b>Agrobien, 18-5-10+4CaO+2MgO, 2-3M or 3-4M, 100% NPK</b> , 300-450 kg/ha	Pre-planting / row	12-15gr per plant for Open Field (at 30.000 pl/ha) and 3-4gr per plant for Open Field – in Beds (at 100.000 pl/ha)
<b>Agrobien, 15-8-11+4CaO+2MgO, 5-6M, 100% NPK</b> , 250-350 kg/ha	Pre-planting / row	Ever-bearing plants
<b>Agromaster, 12-5-20+2CaO+4MgO, 1-2M, 40%N or 10-5-23+2CaO+5MgO, 2-3M, 60%N</b> , 300-400 kg/ha in Spring and 200-300 kg/ha in Summer/Autumn (after vegetation cutting)	Spring / In row Autumn / In row	For multi-annual crops which are not mulched with plastic foil

### Water soluble fertilizers

Analysis (%) / Dosage, kg/ha/day	Timing (weeks)
<b>Solinure GT — for normal water conditions</b>	
<b>20-20-20+TE</b> , 20-30 kg	2
<b>20-20-20+TE</b> , 40-50 kg	2
<b>12-5-35+2MgO+TE</b> , 40-50 kg	4
<b>10-5-39+2MgO+TE</b> , 40-50 kg	6
<b>Agrolution pH Low — for hard water conditions</b>	
<b>20-20-20+TE</b> , 20-30 kg	2
<b>20-20-20+TE</b> , 40-50 kg	2
<b>15-13-25+TE</b> , 40-50 kg	4
<b>10-10-40+TE</b> , 40-50 kg	6
<b>Agrolution Special — for soft water conditions</b>	
<b>14-7-14+14CaO+TE</b> , 20-30 kg	2
<b>14-7-14+14CaO+TE</b> , 40-50 kg	2
<b>13-5-28+2CaO+2.5MgO+TE</b> , 40-50 kg	4
<b>13-5-28+2CaO+2.5MgO+TE</b> , 40-50 kg	6

These recommendations are made based on certain conditions. Please choose the right dosage according to your soil analysis and fertilizing management!

For more information about our products, please visit [www.icl-sf.com](http://www.icl-sf.com) or contact your local ICL SF area sales manager!

The product range should be chosen based on water quality. Nova range can be used to fulfill the plant needs for Mg and Ca, if necessary. If base fertilizers were used, reduce the recommended dosage of WSF accordingly.

# Our solution with...



## ...Our Specialty Fertilizers

### Foliar Fertilizers & Specialties

Product name / Analysis (%) / Dosage		Timing / Method of application
<b>H2Flo</b> , wetting and water conservation agent / 1.2-2.4 ltr/ha—after planting / 0.6-1.2 ltr/ha—monthly		Irrigation
<b>Vitalnova rise-P</b> specific strain of <i>Bacillus Amyloliquefaciens</i> , 1 kg/ha		At planting or when soils temperature is above 10°C / Foliar or irrigation
<b>Agroleaf Power Total</b> — 20-20-20+TE / 3-5 kg/ha or <b>Agroleaf Power High N</b> — 31-11-11+TE / 3-5 kg/ha		1-2 applications Beginning of vegetation / Foliar
<b>Agroleaf Power High P</b> — 12-52-5+TE / 3-5kg/ha		1 application Before flowering / Foliar
<b>Agroleaf Special Mn</b> — 12% Mn EDTA / 0.3-0.5 kg/ha or <b>Agroleaf Special Zn</b> — 14% Zn EDTA / 0.3-0.5 kg/ha		During the entire period of vegetation, for preventing / correcting deficiencies / Foliar
<b>Agroleaf Power High K</b> — 15-10-31+TE / 3-5 kg/ha and <b>Agroleaf Power Magnesium</b> — 10-5-10+16MgO+32SO <sub>3</sub> +TE / 3-5 kg/ha		2 applications, alternating the products after petal fall / Foliar
<b>Vitalnova IntraCell</b> , 97% glycine betaine, 2 kg/ha		2 applications At Flowering & 2 weeks before harvest / Foliar
<b>Agroleaf Power Calcium</b> — 11-5-19+9CaO+2.5 MgO+TE / 3-5 kg/ha or <b>Agroleaf Liquid Calcium+</b> — 8-0-13.8CaO / 3-5 ltr/ha		Several applications, from Flowering - Harvest / Foliar
<b>pHixer</b>	<b>Water hardness</b>	<b>Dosage in 100 ltr water</b>
	Soft Medium Hard	40-50 ml 100-180 ml 180-200ml
		A water conditioner for every foliar application

# 16% more marketable yield!

**Objective:** Prove that using Agrolution pHLow will result in higher yields compared to grower practice (single fertilizers).

**When:** Planting Summer (July) - Picking May, June (next year)

**Trial Station:** Official trial station in Germany

**Crop:** Strawberry, variety Sonata

**Growing method:** Strawberry grown in tunnels on tabletop (Growing media: 30% peat and 70% coco fibers)

**Assessments:** Total yield and marketable yield

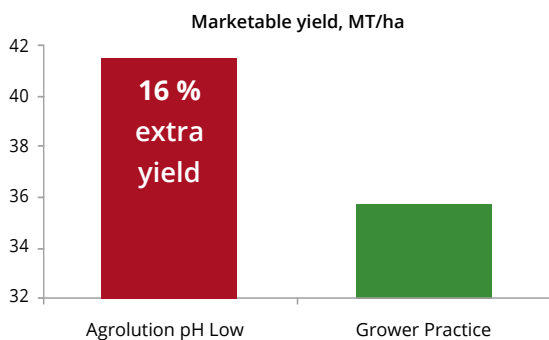
## ICL SF recommendation:

Stage	Formula	Dosage (ppm)					
		N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O	CaO	MgO	E.C.
Vegetative growth - Flowering	Agrolution pHLow 15-13-25+TE +MgSO <sub>4</sub>	108	90	180	160	40	2.0
Flowering - Harvest	Agrolution pHLow 15-13-25+TE and 10-10-40+TE +MgSO <sub>4</sub>	90	80	220	160	45	1.9

## Grower Practice:

Stage	Tank A 100 ltr. (kg)					Tank B 100 ltr. (kg)							Nutrient content in drip line (ppm)					
	CaNO <sub>3</sub>	KNO <sub>3</sub>	AN 18%	HNO <sub>3</sub> 38%	Fe- EDDHA	KNO <sub>3</sub>	MKP	MgNO <sub>3</sub>	MgNO <sub>3</sub>	HNO <sub>3</sub> 38%	HNO <sub>3</sub> 38%	Micro	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O	CaO	MgO	E.C
Vegetative growth - Flowering	1.5	2.1	1.1	2.8	0.3	0.7	3	0.7	2.8	2.8	-	-	220	140	210	194	40	1.7
Flowering - Harvest	1.9	3	-	3.2	-	0.7	3.4	0.9	3.2	3.2	-	-	200	140	235	200	40	1.7

## Results & Conclusions:



Using Agrolution pHLow increased the total yield by 12% and the commercial yield by 16%, compared to grower practice, providing an extra income of 7925 euro/ha.

Applying 1-2 Agrolution pHLow formulas instead of 10 different single fertilizers will result in less human mistakes.

### Attention

Recommendations in this trial info sheet are based on local soil and/or water analyses. Please contact your local ICL Specialty Fertilizers adviser for your personalized fertilizer recommendation. Consult [www.icl-sf.com](http://www.icl-sf.com) for your contact in the region.

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