



Pioneering the Future

# Advanced Agriculture Solutions

Supporting Water and Nutrient use efficiency

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# The Holistic Approach

Satisfy both  
grower and crop



**Precise timing**



**Precise composition**



**Precise place**



**Precise rate**

# Focusing on the Grower

**Save on  
OPEX**



**Convenience**  
Usage and Knowledge

**Yield the  
Benefit**

Meet all  
**regulatory**  
demands

# Focusing on the Crop

**Standby** for stress events

**Supply** all the needed nutrients

**Encourage/boost** at the right growth stage

**Correct** Deficiencies



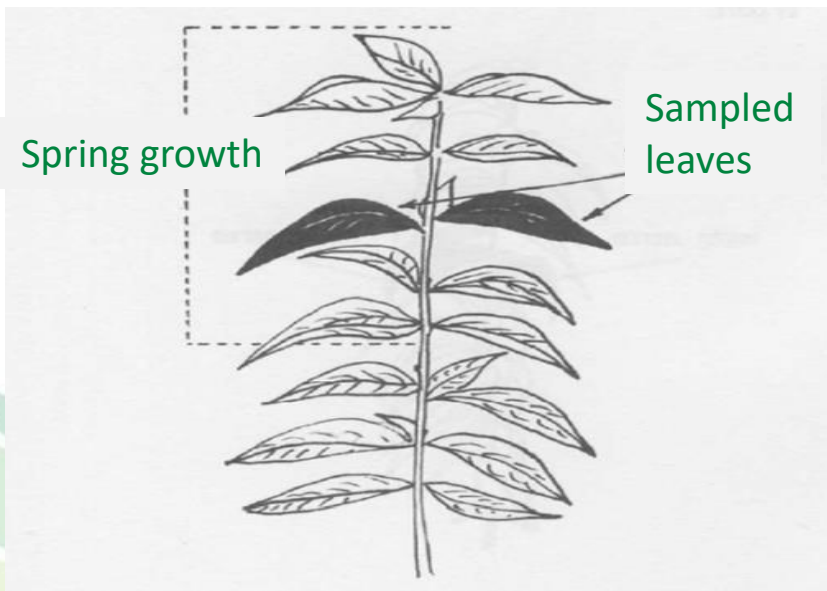
**2015**



Case Study:  
Apple Orchard Fertilization  
Russia

# Leaf sampling

- Timing - 110-120 days after flowering.
- Tree age – at least 4 years old.



nutrient	dry matter content
N	2.4% - 2%
$P_2O_5$	0.15 - 0.13%
$K_2O$	1.4% - 1%
CaO	1.5% - 1%
MgO	0.4% - 0.2%
Zn	10-15 ppm
Mn	20-40 ppm
B	20-25 ppm
Cu	7-12 ppm

# Fertilizer Application Methods

## 🌿 Nutrigation™ - irrigation system

- Main nutrient supply



## 🌿 Foliar nutrition

- Complementary nutrition
- Efficient and fast acting nutrition
- N-P-K, Mg, Ca, B, Zn



# Fertilization of apple orchard

## Mature trees

Stage	Application method	Poly-Feed	kg/ha/week
Dormancy brake	Nutrigation™	12-43-12 +ME 15-30-15+ME	20
Blooming to Flowering	Nutrigation™	19-19-19+1MgO+ME	25
	Foliar	Magnesium Nitrate 11-0-0 +16	0.5- 1 %
Flowering to Fruit Set	Nutrigation™	21-11-21+2MgO+ME	210* for the whole period
	Foliar	11-44-11+2MgO+ME	0.5-1 %



# Apple Orchard Fertilization – Case Study



2017





## Farmer's Mind: From needs to products

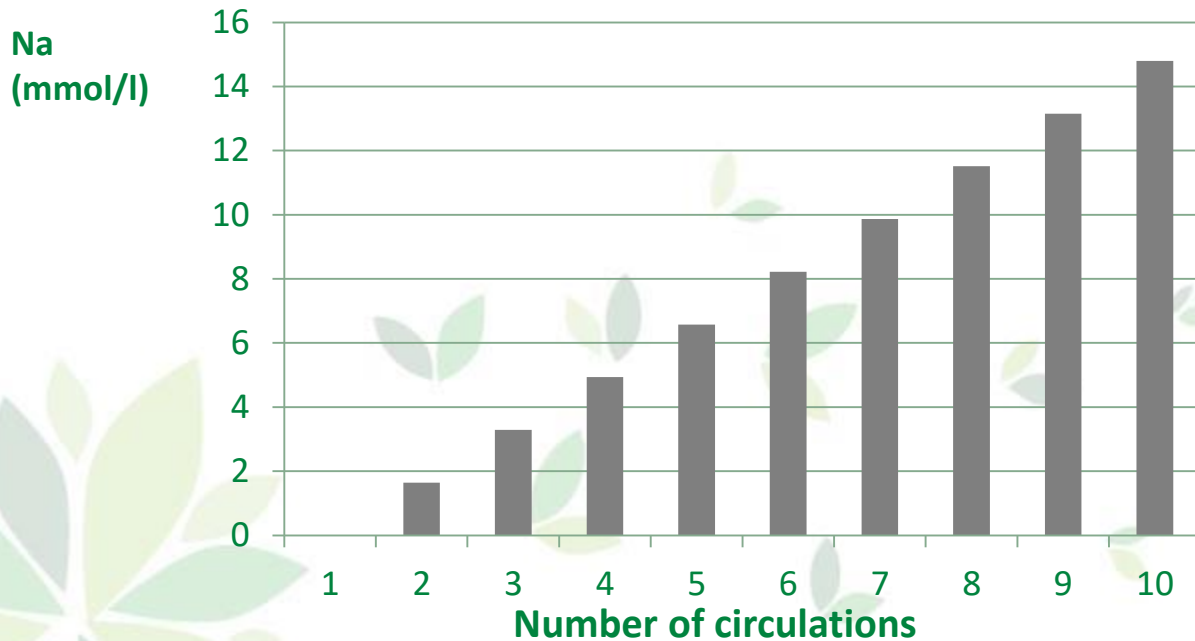
# Solution driven product development

## Circulated irrigation water



# Pioneering Solutions

The challenge: retain the quality of irrigation water



# Pioneering Solutions

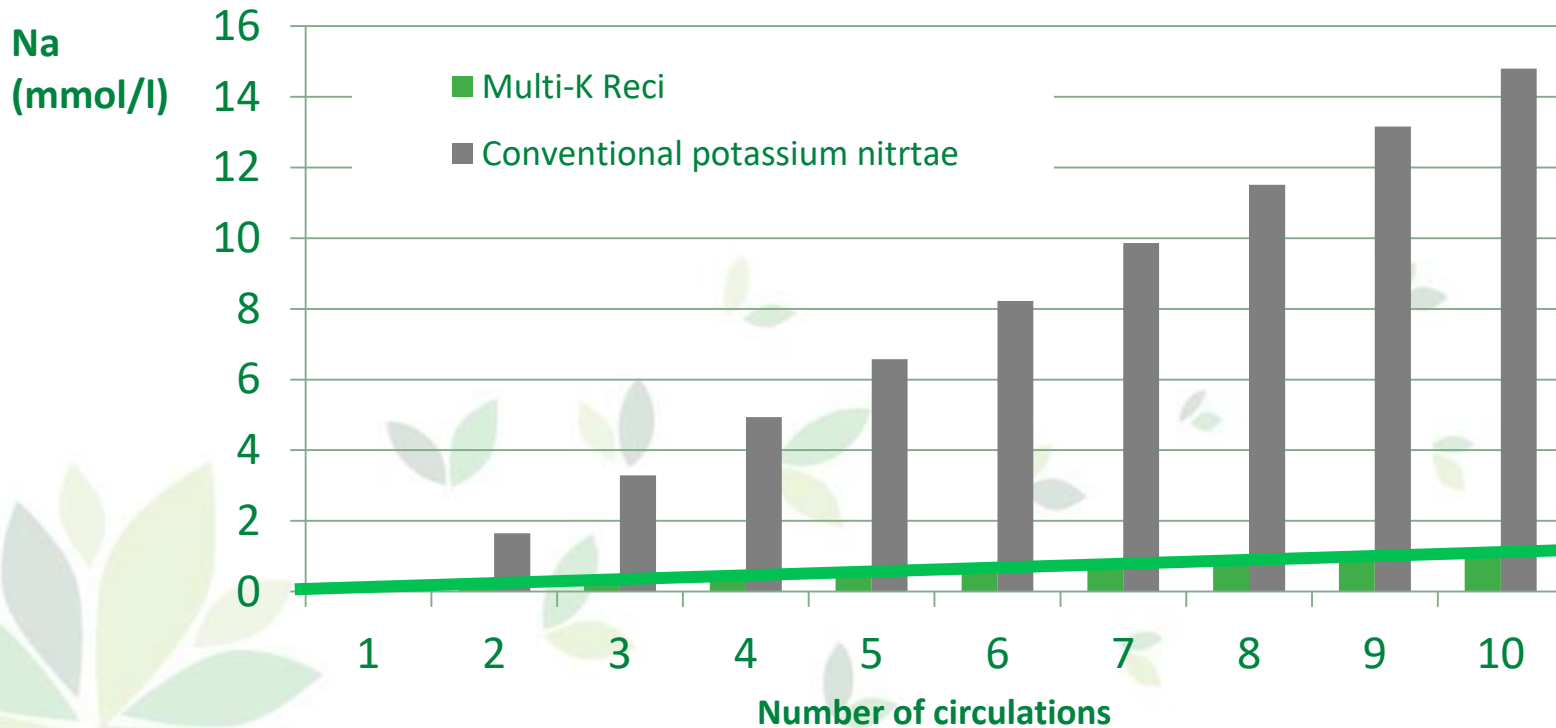
## Haifa solution:



N-total	13.5%
N-NO <sub>3</sub>	13.5%
K <sub>2</sub> O	46.5%
K	38.6%
Sodium (Na) Typical	150 ppm
Max.	300 ppm
pH (10% soln.)	7.0
Insoluble matter	350 ppm
Bulk density	1.1 g/cm <sup>3</sup>

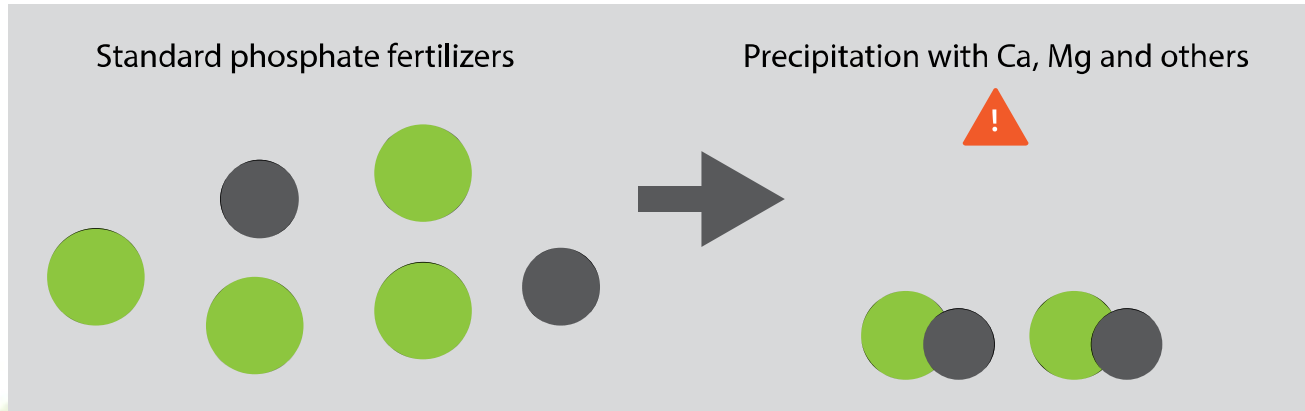
# 90% less Na

# Pioneering solutions



# Solution driven product development

## The challenge: adequate P supply in soilless systems



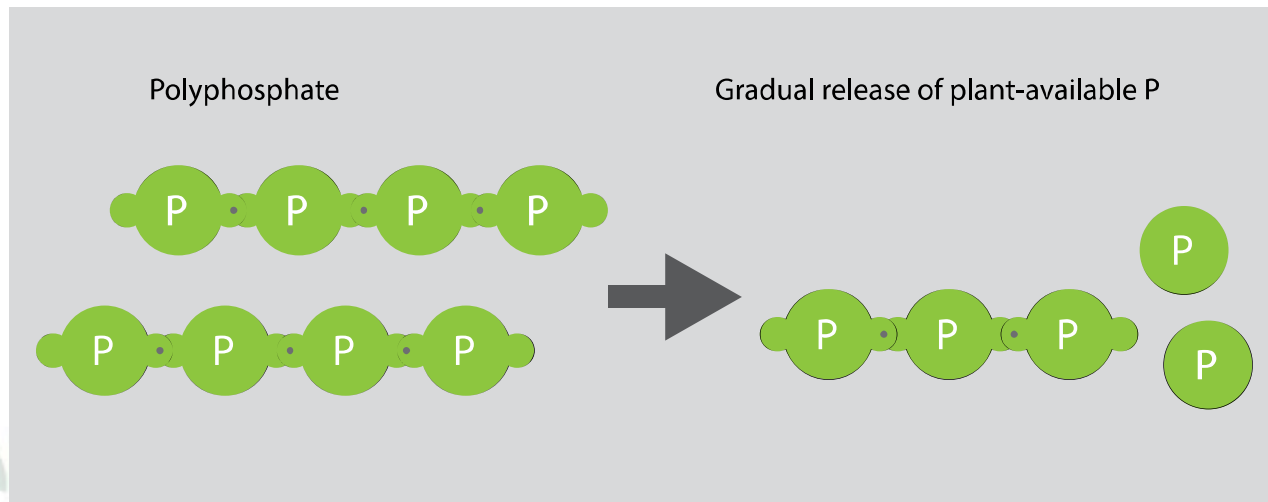
**Clogging**



**Loss of nutrients**

# Pioneering Solutions

Haifa solution:



**No precipitates**  
**No losses**  
**Adequate supply**



# Holistic solutions

Nutritional programs may include a combination of products and application methods.



Granular NPK fertilizer

{ Soil applications



Controlled Release Fertilizers

Nutrigation™

Water soluble based }



Foliar nutrition



Before sowing / planting

Throughout the season



## The merging layer: Knowledge Sharing

# Knowledge sharing – the merging layer

NEW

## Haifa NutriNet™

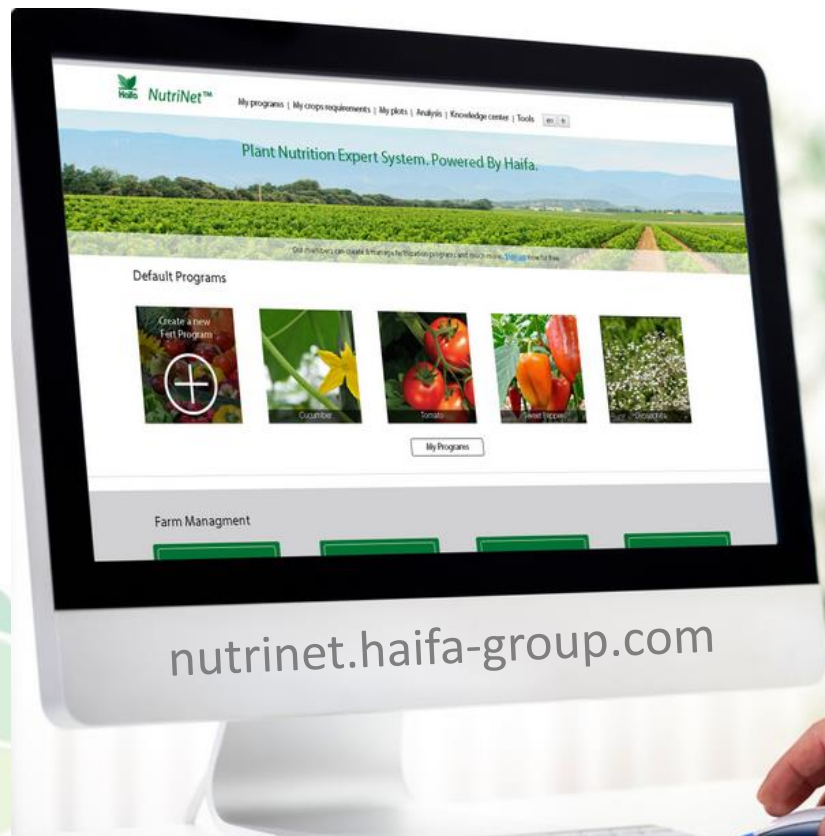
- 🌿 Plant nutrition expert system
- 🌿 Reach and updated database about crops and the Haifa solutions
- 🌿 Generating step-by-step Nutrigration™ program
- 🌿 Incorporating local meteorological data, soil analysis, irrigation water quality, and more
- 🌿 The service is Free of Charge

[nutrinet.haifa-group.com](http://nutrinet.haifa-group.com)

**This is Knowledge Sharing**



# NutriNet™



# 8 steps and you're an expert

- Basic program setup
- Define crop, location, soil type, Nutrigation™ system
- Easy to use

“Simplicity is the ultimate sophistication.”

Leonardo da Vinci

Haifa NutriNet™ [My programs](#) | [My crops requirements](#) | [My plots](#) | [Analysis](#) | [Knowledge center](#) | [Tools](#) [en](#) | [fr](#) [About us](#) [Contact us](#) [Hi, tal rappoport \(Logout\)](#)

## Create New Fertilization Program

1. Program name  [Next step >](#)
2. Program starting date  [Next step >](#)
3. Choose plot  [Create new](#) [Next step >](#)
4. Choose crop  [Create new](#) Fertigation method: Quantitive [Next step >](#)
5. Nutrigation system  [Create new](#) [Next step >](#)
6. Expected yield  Ton/Ha [Next step >](#)

# The Holistic Approach

Satisfy both  
grower and



Feed plants  
precisely

**Thank You**  
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From needs to  
Solution