

# The apple tree in the biodynamic year



Goetheanum - Dornach

12.02.2025

Klaus Oberhofer



# Klaus Oberhofer, Venosta Valley - Vinschgau, Latsch – South Tyrol, Italy







Bio since 1998, Demeter since 2017



Apple Farm with 9 ha



Apple juice and vinegar production



Member of Vip Bio Vinschgau Cooperative



# **Contents**

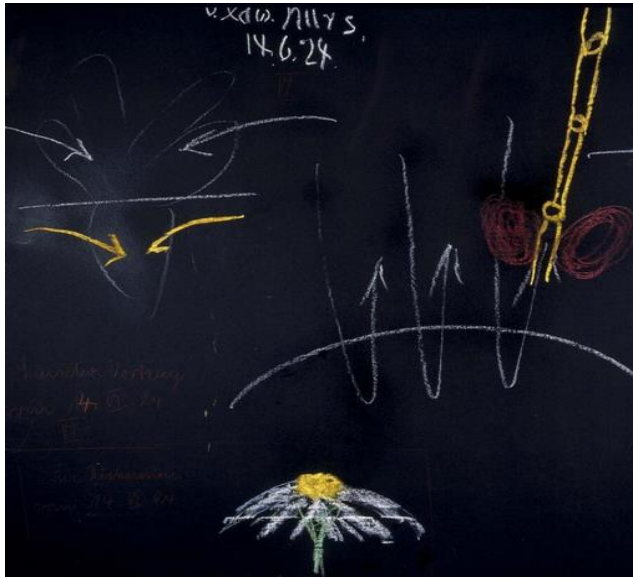
**The apple tree in constellation with the sun and the biodynamic preparations**

**The cell division phase**

**The formation of flower buds**

**Cell elongation**

**Plant hormones and biodynamic agricultural principles**



“It is about balancing what we extract from the earth in terms of substance by applying appropriate forces, while remaining within the realm of **the living world.**”

"The farmer acts as a mediator between cosmic forces and earthly substances. Their production and application result from his **free** and **conscious decisions.**"



## Entry of the sun into the zodiac signs

January	February	March	April	May	June	July	August	September	October	November	December	
18.Jan	15.Feb	12.Mrz	19.Apr	14.Mai	20.Jun	20.Jul	11.Aug	16.Sep		02.Nov	19.Nov	20.Dez
Sagittarius	Capricorn	Aquarius	Pisces	Aries	Taurus	Gemini	Cancer	Leo	Virgo	Libra	Scorpio	Sagittarius

20. März →

“One does not really know what kind of specialized being the sun is. In fact, the sun is not the same when it shines on the Earth from Taurus during the course of the year or the day, as opposed to when it shines from Cancer, and so on. It is always something different. It is actually quite nonsensical—though forgivable—to speak of "the sun" in general. One should really say: Aries sun, Taurus sun, Cancer sun, Leo sun, and so on”. R. Steiner

"At the summer solstice, the sun stands between the horns of Taurus and the feet of Gemini."



"At the winter solstice, the sun stands between Scorpio and Sagittarius."

January	February	March	April	May	June	July	August	September	October	November	December
---------	----------	-------	-------	-----	------	------	--------	-----------	---------	----------	----------

18.Jan      15.Feb      12.Mrz      19.Apr      14.Mai      20.Jun      20.Jul      11.Aug      16.Sep      02.Nov      19.Nov      20.Dez

Sagitt arius	Capricor n	Aquarius	Pisces	Aries	Taurus	Gemini	Cancer	Leo	Virgo	Libra	Scorpio	Sa git
-----------------	---------------	----------	--------	-------	--------	--------	--------	-----	-------	-------	---------	-----------

Fruit	Earth Root	Light Flower	Water Leaf	Fruit Fruit	Earth Root	Light Flower	Water Leaf	Heat Fruit	Earth Root	Light Flower	Water Leaf	He at
-------	---------------	-----------------	------------	----------------	------------	-----------------	---------------	------------	------------	-----------------	---------------	----------

Winter rest

Budding

Nitrogen  
fertilization for  
shoot growth in  
the young  
orchards <>  
shoot  
maturation in  
prodictive  
orchards

January	February	March	April	May	June	July	August	September	October	November	December	
18.Jan	15.Feb	12.Mrz	19.Apr	14.Mai	20.Jun	20.Jul	11.Aug	16.Sep		02.Nov	19.Nov	20.Dez

Sagittarius	Capricorn	Aquarius	Pisces	Aries	Taurus	Gemini	Cancer	Leo	Virgo	Libra	Scorpio	Sagittarius
-------------	-----------	----------	--------	-------	--------	--------	--------	-----	-------	-------	---------	-------------

Fruit	Earth Root	Light Flower	Water Leaf	Fruit Fruit	Earth Root	Light Flower	Water Leaf	Heat Fruit	Earth Root	Light Flower	Water Leaf	Heat
-------	------------	--------------	------------	-------------	------------	--------------	------------	------------	------------	--------------	------------	------

Winter rest

Budding

Flowering

Cell division

Nitrogen fertilization for shoot growth in the young orchards <> shoot maturation in productive orchards

Assimilates Cytokinins



January	February	March	April	May	June	July	August	September	October	November	December	
18.Jan	15.Feb	12.Mrz	19.Apr	14.Mai	20.Jun	20.Jul	11.Aug	16.Sep		02.Nov	19.Nov	20.Dez

Sagittarius	Capricorn	Aquarius	Pisces	Aries	Taurus	Gemini	Cancer	Leo	Virgo	Libra	Scorpio	Sagittarius
-------------	-----------	----------	--------	-------	--------	--------	--------	-----	-------	-------	---------	-------------

Fruit	Earth Root	Light Flower	Water Leaf	Fruit Fruit	Earth Root	Light Flower	Water Leaf	Heat Fruit	Earth Root	Light Flower	Water Leaf	Heat
-------	------------	--------------	------------	-------------	------------	--------------	------------	------------	------------	--------------	------------	------

Winter rest

Budding

Flowering

Stop Shoot growing

Cell division

Nitrogen fertilization for shoot growth in the young orchards <> shoot maturation in productive orchards

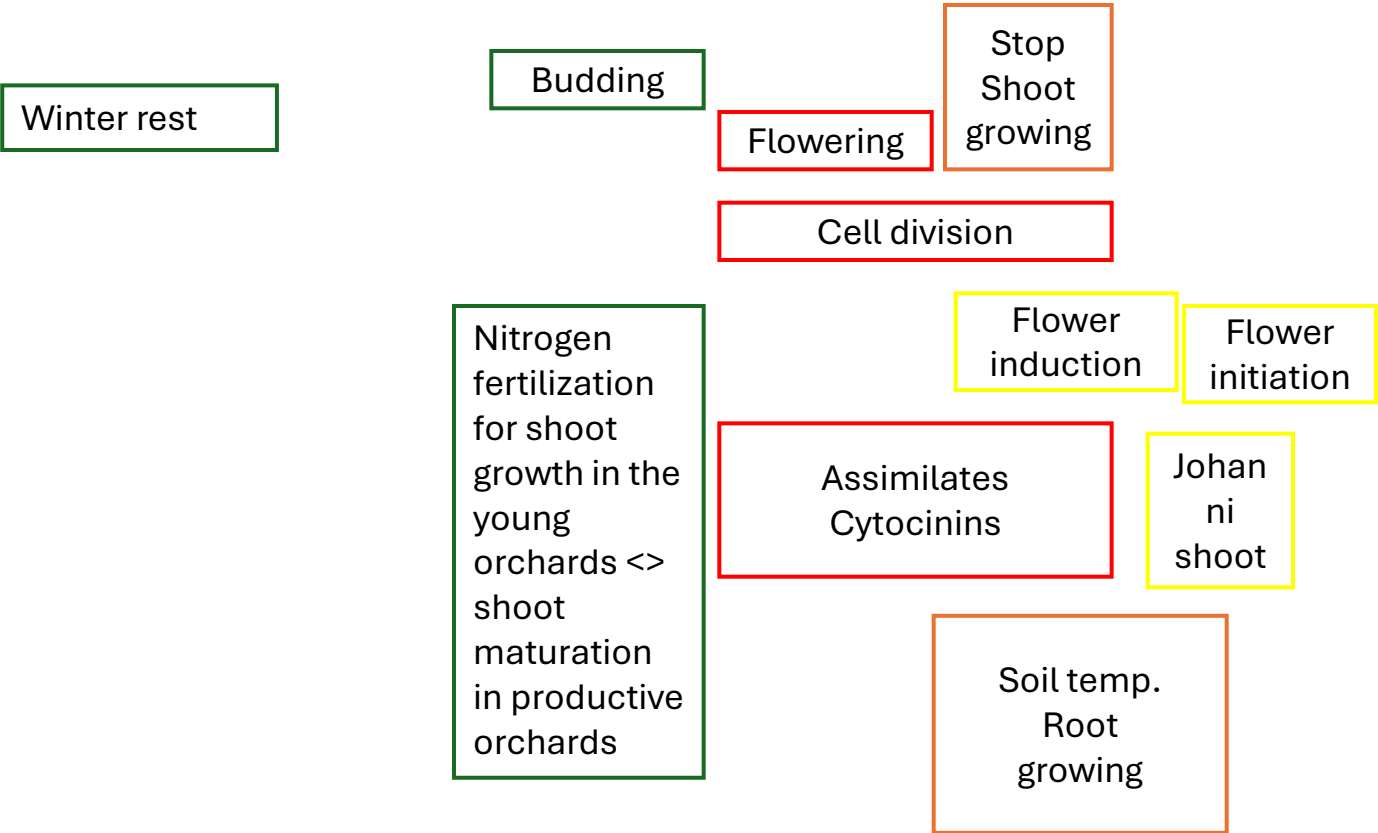
Assimilates Cytokinins

Soil temp. Root growing

January	February	March	April	May	June	July	August	September	October	November	December	
18.Jan	15.Feb	12.Mrz	19.Apr	14.Mai	20.Jun	20.Jul	11.Aug	16.Sep		02.Nov	19.Nov	20.Dez

Sagittarius	Capricorn	Aquarius	Pisces	Aries	Taurus	Gemini	Cancer	Leo	Virgo	Libra	Scorpio	Sagittarius
-------------	-----------	----------	--------	-------	--------	--------	--------	-----	-------	-------	---------	-------------

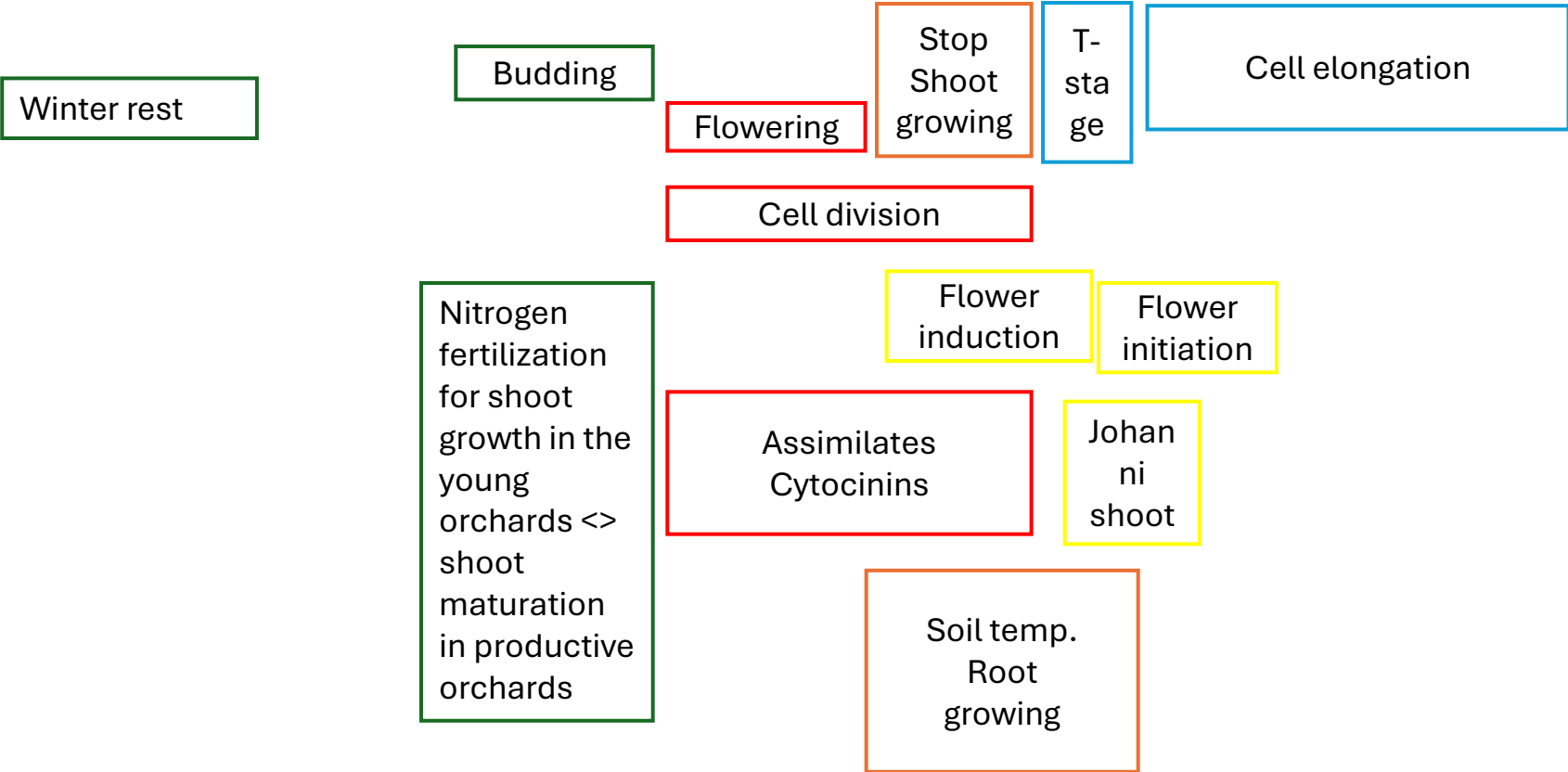
Fruit	Earth Root	Light Flower	Water Leaf	Fruit Fruit	Earth Root	Light Flower	Water Leaf	Heat Fruit	Earth Root	Light Flower	Water Leaf	Heat
-------	------------	--------------	------------	-------------	------------	--------------	------------	------------	------------	--------------	------------	------



January	February	March	April	May	June	July	August	September	October	November	December	
18.Jan	15.Feb	12.Mrz	19.Apr	14.Mai	20.Jun	20.Jul	11.Aug	16.Sep		02.Nov	19.Nov	20.Dez

Sagittarius	Capricorn	Aquarius	Pisces	Aries	Taurus	Gemini	Cancer	Leo	Virgo	Libra	Scorpio	Sagittarius
-------------	-----------	----------	--------	-------	--------	--------	--------	-----	-------	-------	---------	-------------

Fruit	Earth Root	Light Flower	Water Leaf	Fruit Fruit	Earth Root	Light Flower	Water Leaf	Heat Fruit	Earth Root	Light Flower	Water Leaf	Heat
-------	------------	--------------	------------	-------------	------------	--------------	------------	------------	------------	--------------	------------	------

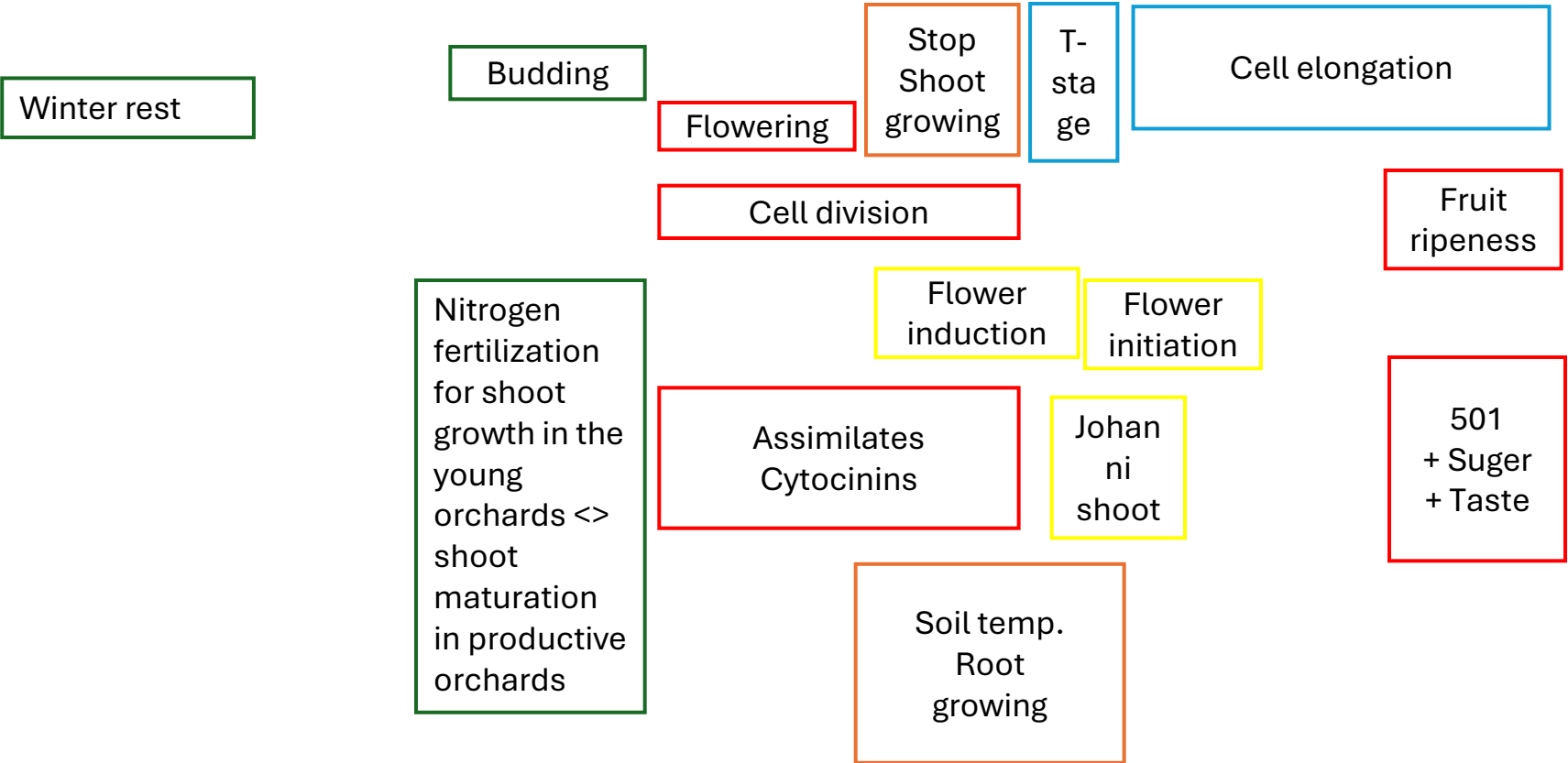




January	February	March	April	May	June	July	August	September	October	November	December	
18.Jan	15.Feb	12.Mrz	19.Apr	14.Mai	20.Jun	20.Jul	11.Aug	16.Sep		02.Nov	19.Nov	20.Dez

Sagittarius	Capricorn	Aquarius	Pisces	Aries	Taurus	Gemini	Cancer	Leo	Virgo	Libra	Scorpio	Sagittarius
-------------	-----------	----------	--------	-------	--------	--------	--------	-----	-------	-------	---------	-------------

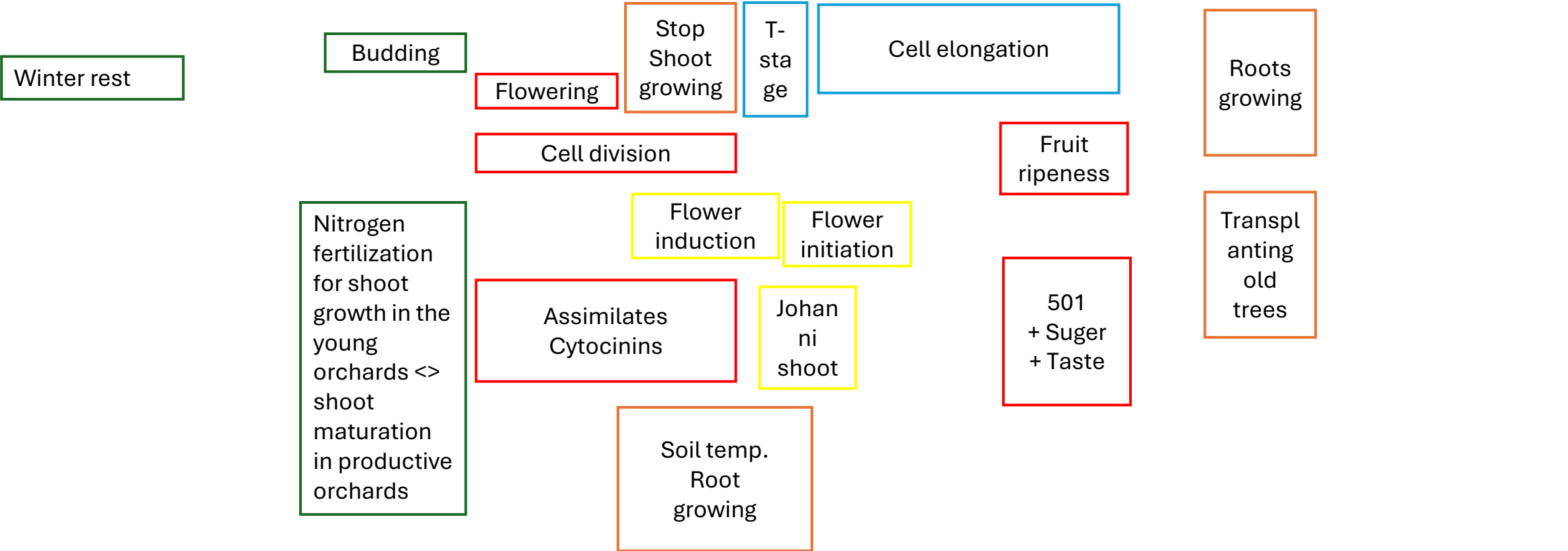
Fruit	Earth Root	Light Flower	Water Leaf	Fruit Fruit	Earth Root	Light Flower	Water Leaf	Heat Fruit	Earth Root	Light Flower	Water Leaf	Heat
-------	------------	--------------	------------	-------------	------------	--------------	------------	------------	------------	--------------	------------	------



January	February	March	April	May	June	July	August	September	October	November	December	
18.Jan	15.Feb	12.Mrz	19.Apr	14.Mai	20.Jun	20.Jul	11.Aug	16.Sep		02.Nov	19.Nov	20.Dez

Sagittarius	Capricorn	Aquarius	Pisces	Aries	Taurus	Gemini	Cancer	Leo	Virgo	Libra	Scorpio	Sagittarius
-------------	-----------	----------	--------	-------	--------	--------	--------	-----	-------	-------	---------	-------------

Fruit	Earth Root	Light Flower	Water Leaf	Fruit Fruit	Earth Root	Light Flower	Water Leaf	Heat Fruit	Earth Root	Light Flower	Water Leaf	Heat
-------	------------	--------------	------------	-------------	------------	--------------	------------	------------	------------	--------------	------------	------



# Cell division

März	April	Mai	Juni
------	-------	-----	------

12.Mrz

19.Apr

14.Mai

20.Jun

Pisces - Leaf

Aries – Fruit - **Mars**

Taurus - Roots

# Fruit health

Strengthening of Cell Walls of the Fruit – Calcium & Silicon  
Ca/K Ratio & Storage Diseases -> Bitter pit, softening and decay during storage

## Oak bark - 505

**“One must then supply calcium to the soil through fertilization. But it will be of no use at all if one supplies the calcium to the soil while bypassing the living realm; rather, if it is to have a healing effect, the calcium must remain within the domain of the living.”**

"To moderate and regulate excessive vitality in the plant world, so that it does not lead to pests and diseases.“

Oak bark 505: Regulating the lunar forces  
The oak tree represents Mars



# Cell division

März	April	Mai	Juni
------	-------	-----	------

12.Mrz

19.Apr

14.Mai

20.Jun

Pisces - Leaf

Aries – Fruit - **Mars**

Taurus - Roots

## Plant health

Proper nitrogen – Nitrate, Ammonium, Aminos acids

Leaf Chlorophyll Formation → Fe, **Mars** carbohydrate synthesis, cytokinins for Cell division"

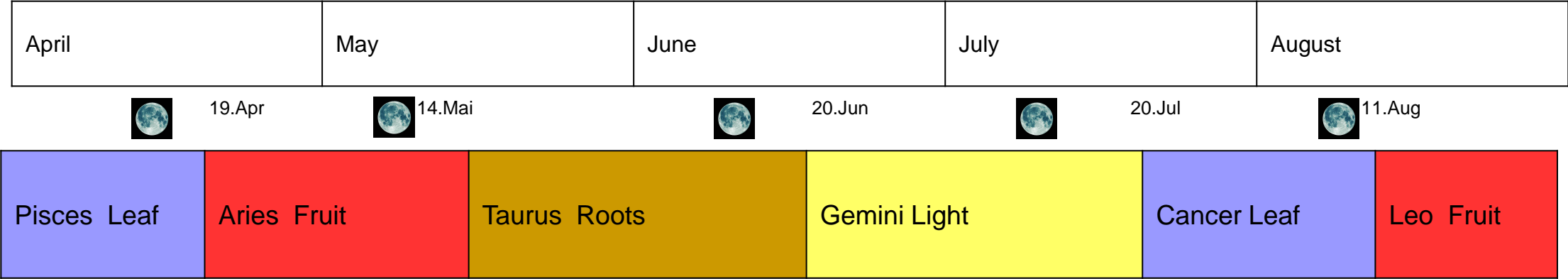
### Stinging Nettle 504

*"In addition to carrying potassium and calcium in its radiations and currents, the stinging nettle also has a kind of iron radiation."*

plant resilience against diseases and pests.  
the stinging nettle is associated with Mars forces. Mars represents energy, strength, metabolism, and resilience

Practical Test: Dark, vital Leaves – repellent against aphids

# Formation of flower buds



## Flowering

Gibberellins – Shoot tips  
Auxins – Seeds  
Sink effect for Assimilates – Inhibition of flower induction

Flower induction  
39 – 53 days after Full Bloom  
Length of day >14h  
Temperature  
Light  
Positive Carbon balance  
Assimilate +  
Cytokinins +  
Gibberellins –  
Auxin -

Flower initiation  
75 days after Full Bloom  
Light  
Positive Carbon balance

Flower Buds Differentiation  
120 days after Full Bloom

## Horn Silica 501

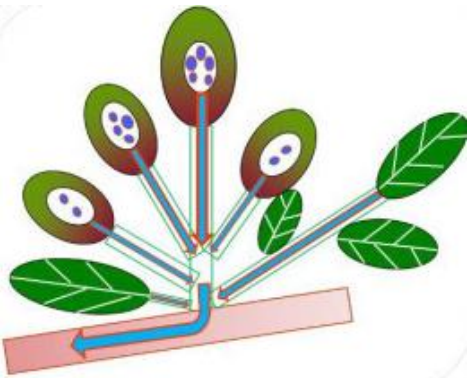
Enhances Light and Growth Processes –  
Strengthens photosynthesis, leaf health  
Positive Carbon Balance

## Valerian Preparation 508

Phosphor Promotion  
Shoot maturation is promoted  
Flowering impulse  
Valerian - Saturn

Praxis Test: Valerian 508 spraying around the flower – generative Trees

- Gibberellins und Auxin  
+ increase Ethylene  
+ Blossom- und Fruit Fall



Juni	July	August	September	Oktober
------	------	--------	-----------	---------

20.Jun

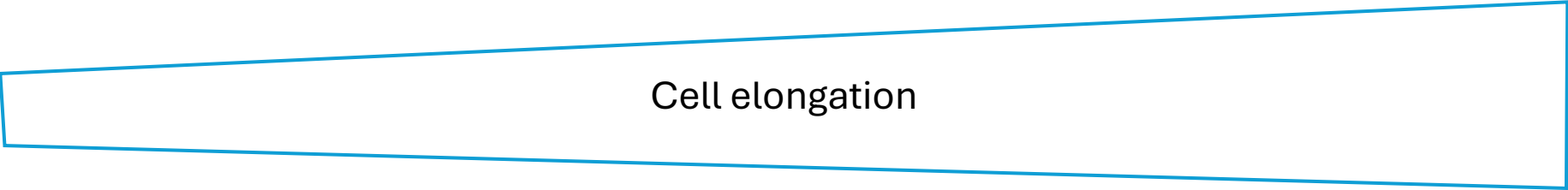
20.Jul

11.Aug

16.Sep



T-  
Stage



Potassium - cell filling, water supply, flavor compounds, taste

Yarrow - Potassium processes

"Yarrow primarily develops its sulfur power in the potassium formation process. Therefore, it contains sulfur in exactly the amount necessary to process potassium."

Radish experiment H. Spiess: The most significant yield and nutrient effects were observed when using yarrow flower extract.

Practical experiment	Control group			Yarrow	3 x 1 lt Yarrow tea		weekly
Nr. of Tree	1	2	3	1	2	3	
Apple size in mm	73,0	73,7	77,7	74,1	74,4	76,3	
Number of Apple	74	75	68	76	89	117	



As early 1924, Rudolf Steiner described 5 influences on plant growth:

- Sun – alone
- Moon – as reflector from sunlight
- Sun – Mars, Jupiter, Saturn UNDER the earth
- Sun – Mars, Jupiter, Saturn ABOVE the earth - Astral power
- Sun – Moon, Venus, Merkur ABOVE the earth

As early 1924, Rudolf Steiner described 5 influences on plant growth:

- a. Sun – alone
- b. Moon – as reflector from sunlight
- c. Sun – Mars, Jupiter, Saturn UNDER the earth
- d. Sun – Mars, Jupiter, Saturn ABOVE the earth - Astral power
- e. Sun – Moon, Venus, Merkur ABOVE the earth

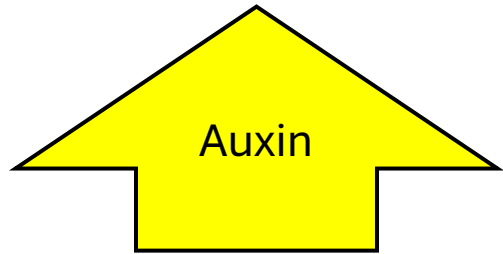
Planthormones were discovered in 1930-1963

- a. Auxin
- b. Cytokinins
- c. Gibberelins
- d. Ethylene
- e. Abscissic Acid



In the book ‘Biologisch-dynamische Pflanzenbaugrundlagen’ from Jürgen Fritz, University of Kassel, describes the biodynamic influences on plants according to Rudolf Steiner and the effect of plant hormones in a parallel experiment.

A



Plants grow to the light,  
green plant parts,  
formed in shoots and leaves.

Promotes **lateral root** formation.  
Inhibits **lateral shoot** growth.

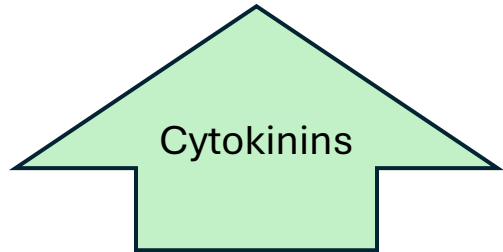
**Apical dominance – No flower  
buds in the following year**

#### **Sun alone**

Carrier of etheric forces – life forces  
Active only during the day  
Green + leaf area  
Form + shape  
Builds the energy potential for life  
processes in photosynthesis

How can we enhance solar and  
etheric forces?

B



cell division  
chlorophyll formation  
leaf area  
Water, potassium, calcium, nitrate  
is formed in the root tips

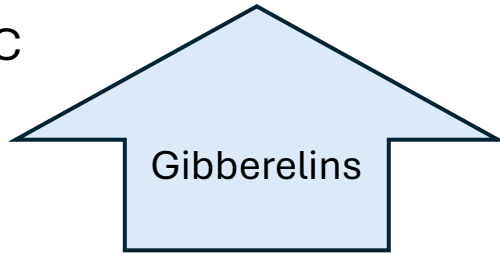
#### **The moon as a reflector of sunlight.**

The full moon increases the GROWTH  
forces of the earth to FORMATION  
forces multiplication of the cells, which  
enable plants to multiply (flowering)  
Steiner 1924.  
Full moon makes the earth in the  
etheric more alive.  
The effects of the full moon are  
absorbed by the water in the soil.  
The lime has a mediating function





C



Length growth  
Fruit formation  
Formed in the root tips  
Dark light (Hail nets, weather)  
the plant increased gibberellin

**Sun through Mars, Jupiter, Saturn  
BELOW the earth's surface**

Guided life forces that promote plant growth that does NOT tend to become rampant.  
Silica in the soil mediates heat reflection.  
Clay promotes the upward movement in the plant.  
Affects stem and seed formation.  
Radiates into the leaves and flowers only.  
Thin, vine-like stems

Horn silica (Silicea praeparata) influences plant growth through the regulation of gibberellins, which play a key role in various developmental processes.

•**Bush beans:** Horn silica can promote gibberellin production, positively affecting growth.

•**Pears:**

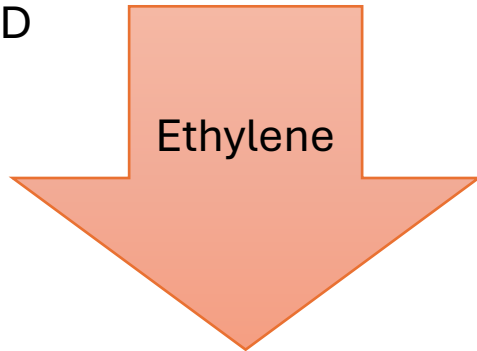
•Early horn silica treatments inhibit growth during the juvenile development phase, especially in vigorously growing plants.

•A targeted gibberellin treatment during flowering can stimulate fruit development.

•**Viticulture (grape growing):** Horn silica sprays promote looser grape clusters, possibly due to gibberellin regulation.

Overall, horn silica interacts with the hormonal balance of gibberellins, leading to either inhibitory or stimulating effects depending on its application.

D



Inhibits shoot growth  
Promotes flower bud formation  
Ripening of fruits  
Senescence – aging process

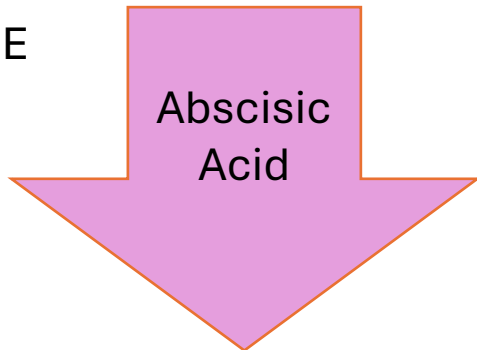
**Sun through Mars, Jupiter, Saturn  
as astral forces ABOVE the Earth's.**

The cosmic archetype  
Inhibiting and guiding the life processes of the plant.  
Silica and warmth make plants receptive to cosmic influences.  
Shaping plants into good food.  
Formation of beautiful leaves and colorful flowers and buds.

Practical observations on the use of horn silica:

- Calming effect on growth
- Aging
- Promotes fruit ripening
- More sugar and color

E



Reversible inhibition (winter-summer) in seeds and flower buds  
Water balance in leaves regulated by potassium  
Promotes fruit drop and senescence  
Geotropism: downward growth of roots

**The Sun through the Moon, Venus,  
and Mercury above the Earth as**  
terrestrial astral forces.

Interaction between winter and summer.  
"External digestion" – decomposition processes of organic matter.  
Terrestrial forces

Potatoes require abscisic acid for tuber growth. A reduction in abscisic acid and an increase in gibberellins lead to less tuber growth and more shoot growth

## **Source references**

Fruchtbehangsregulierung bei Äpfeln und Birnen

Arbeitsbuch Biodynamische Präparate

Biologisch-dynamische Pflanzenbaugrundlagen

Physiological, metabolic and molecular basis of biennial bearing in apples

Gerhard Baab

Vincent Masson

Jürgen Fritz

Jens Wünsche

Henryk Flachowsky

A close-up photograph of a person's hand holding a small, white rectangular card. The hand is positioned on the left side of the frame, with fingers gently gripping the card. The card is held up, displaying the text 'THANK YOU FOR YOUR ATTENTION' in a bold, brown, serif font. The background is a soft, out-of-focus blue, suggesting a professional or office setting. The lighting is bright and even, highlighting the texture of the skin and the card.

**THANK YOU  
FOR YOUR  
ATTENTION**