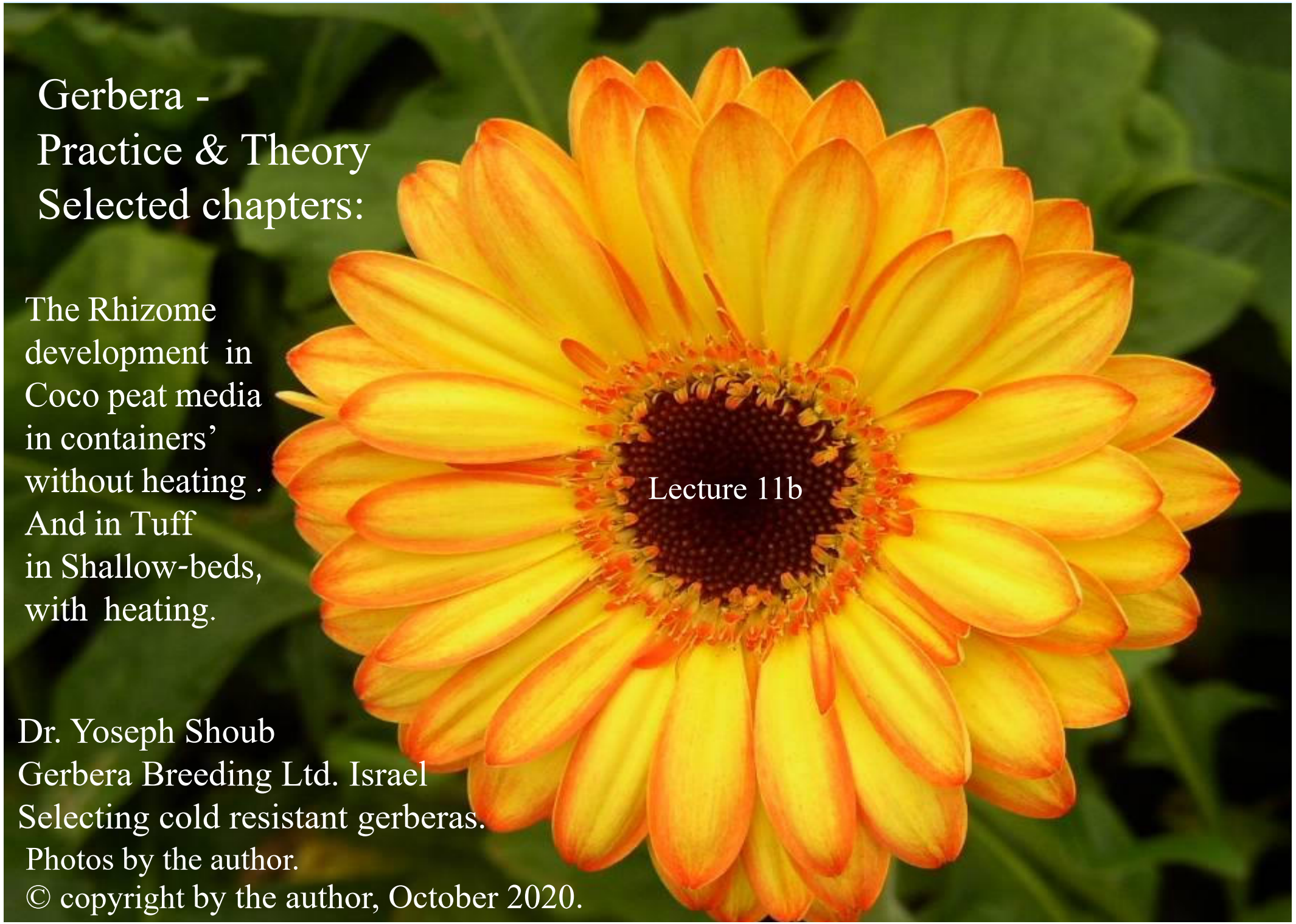

Gerbera -
Practice & Theory
Selected chapters:
The Rhizome
development in
Coco peat media
in containers'
without heating .
And in Tuff
in Shallow-beds,
with heating.
Lecture 11b
Dr. Yoseph Shoub
Gerbera Breeding Ltd. Israel
Selecting cold resistant gerberas.
Photos by the author.
© copyright by the author, October 2020.

The Gerbera plant in short -

Botany - Family Asteraceae *(Section of the Compositae grand family).*

Origin - Barberton, Mpumalanga province *(Transvaal),* South Africa.
Yearly average temperatures in Barberton region - Max 15C - 23C (rarely above 31C)
Min 8C - 18C (rarely lower than 6C)

Plant type - Perennial plant, having thickened rhizomes, created from series of compacted short branches, that carry many perennial adventitious roots.*

Morphology - Short branches (2 - 5mm long), of 4 emarginated leaves, terminated by 2 flowers-stems, each one of 1 node of 20 - 80cm long, carrying the inflorescence.
Inflorescence - Many small flowers sit on receptacle unit, wrapped by many bracts.*

Physiology - Self-inductive plant - regarding flowering induction. Sensitive to long periods of low temperatures below 7C - 5C.

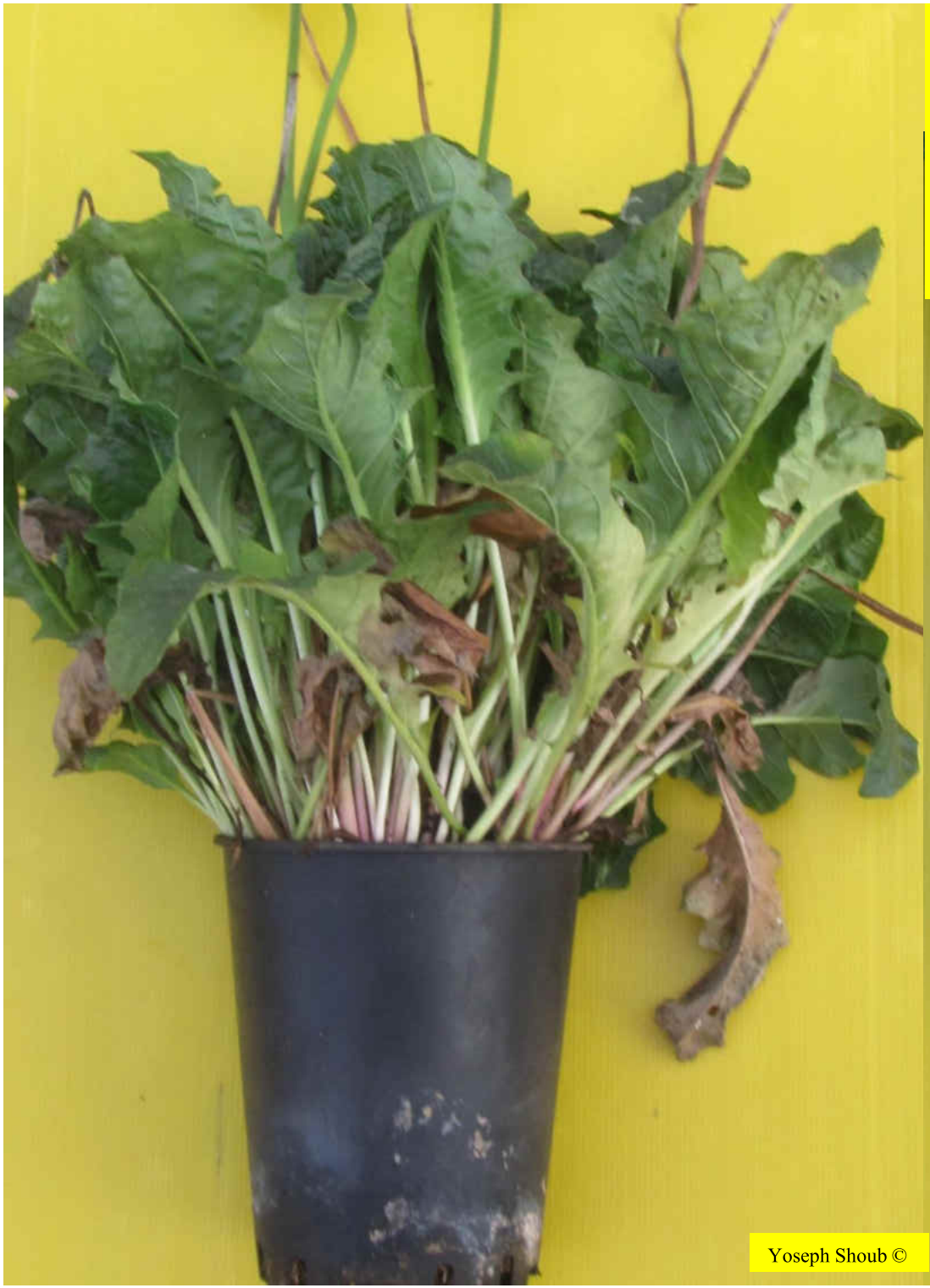
---

* For more information - www.gerberaisrael.com

Is it a scary creatures?

They are the sub-soil plant-branches - the Rhizomes (*root-stock*), that carry roots, and on their edges are the growing centers that produce, above the soil level, leaves and flowers. In the photo - 5 year old rhizomes in tuff, develop towards open living space around them.

02. 08. 2017 - Our cold resistant gerbera lines, propagated by AVT India, were just planted for hardening in Danziger Nurseries Israel. We will plant them later in our Unheated-greenhouse for further observations in 4 liter containers filled with Coco-peat.



4 year old gerbera plant - that grew in coco peat in 4 liter container without heating the greenhouse in the winter's cold nights. All the plants in our greenhouse are Controlled by the 'AutoAgronom' irrigation control system.

4 year old gerbera plant in Coco peat -

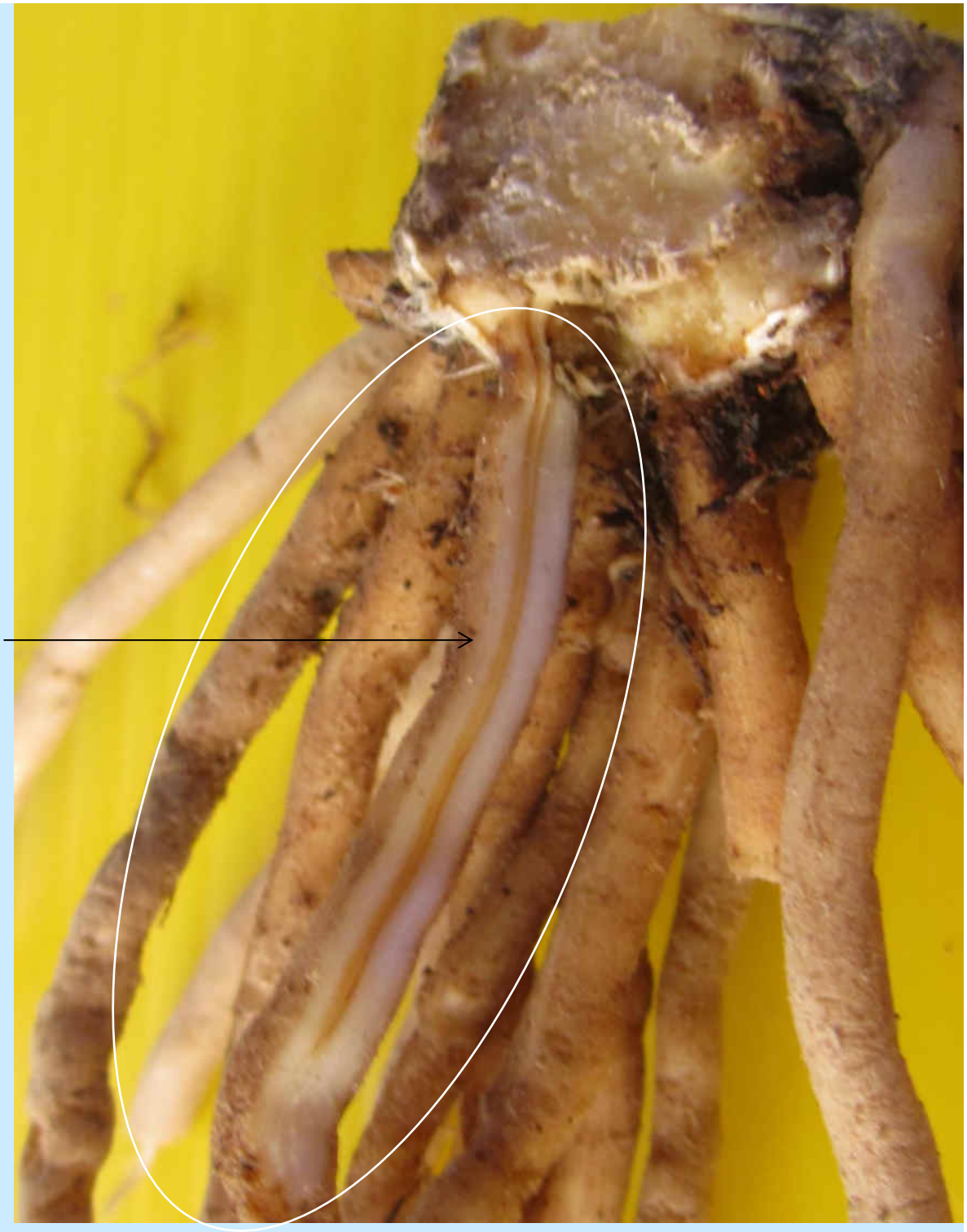
The Adventitious roots begin from the base of the young branches.

The Secondary roots develop from the adventitious roots, and are renewed constantly.

The two roots types, develop and act through the entire container volume. *(For exposing the roots we washed the Coco peat outer-surface).*

The secondary roots absorb the soil solution. The soil solution is transported to the above soil organs via the adventitious roots. The adventitious roots perform their activities as water transporters and as photosyntates storing sites at list for 5 years.

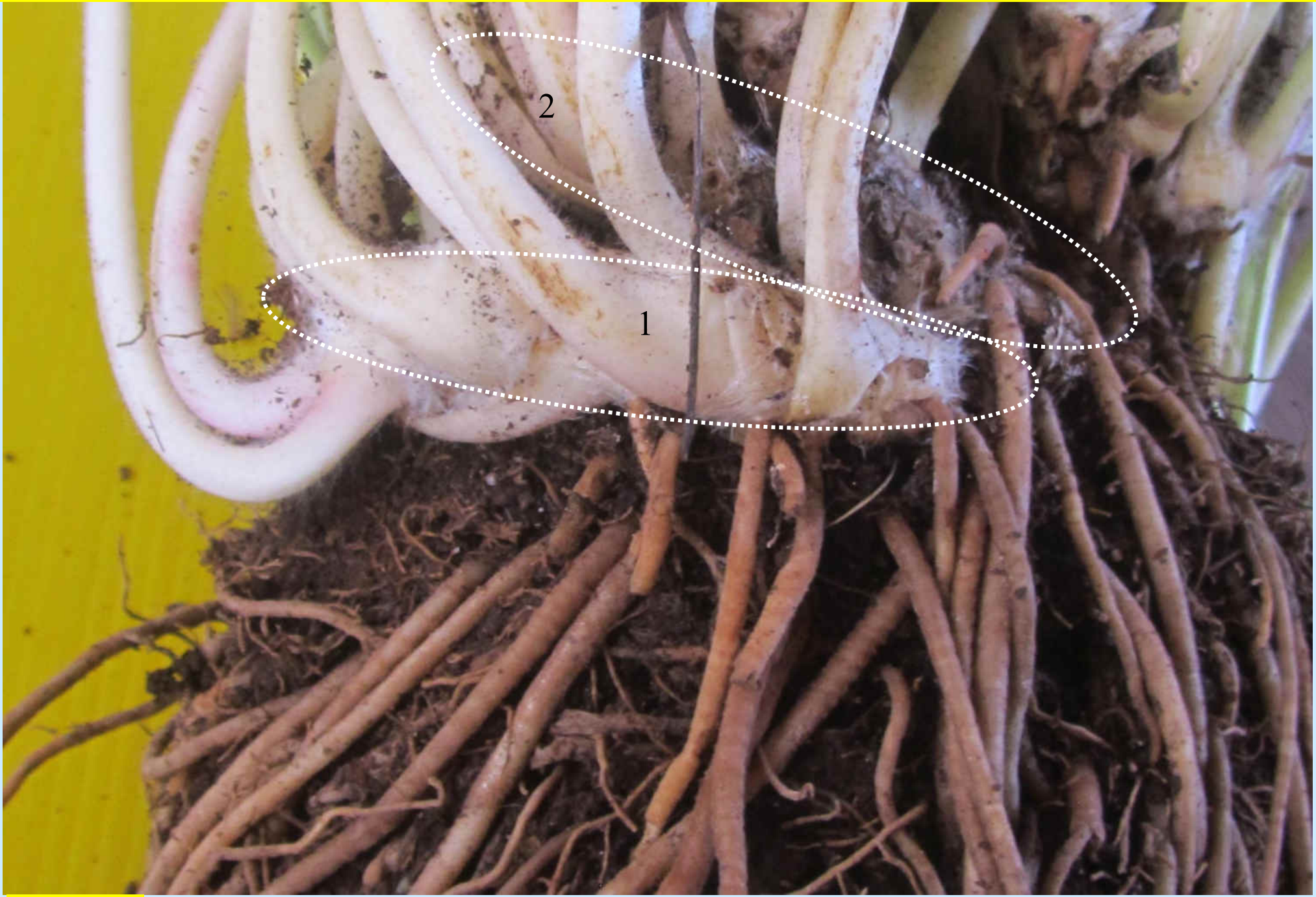
An evidence for the vitality of the old adventitious gerbera roots, one can see in the longitudinal-section made to 5 year old root.

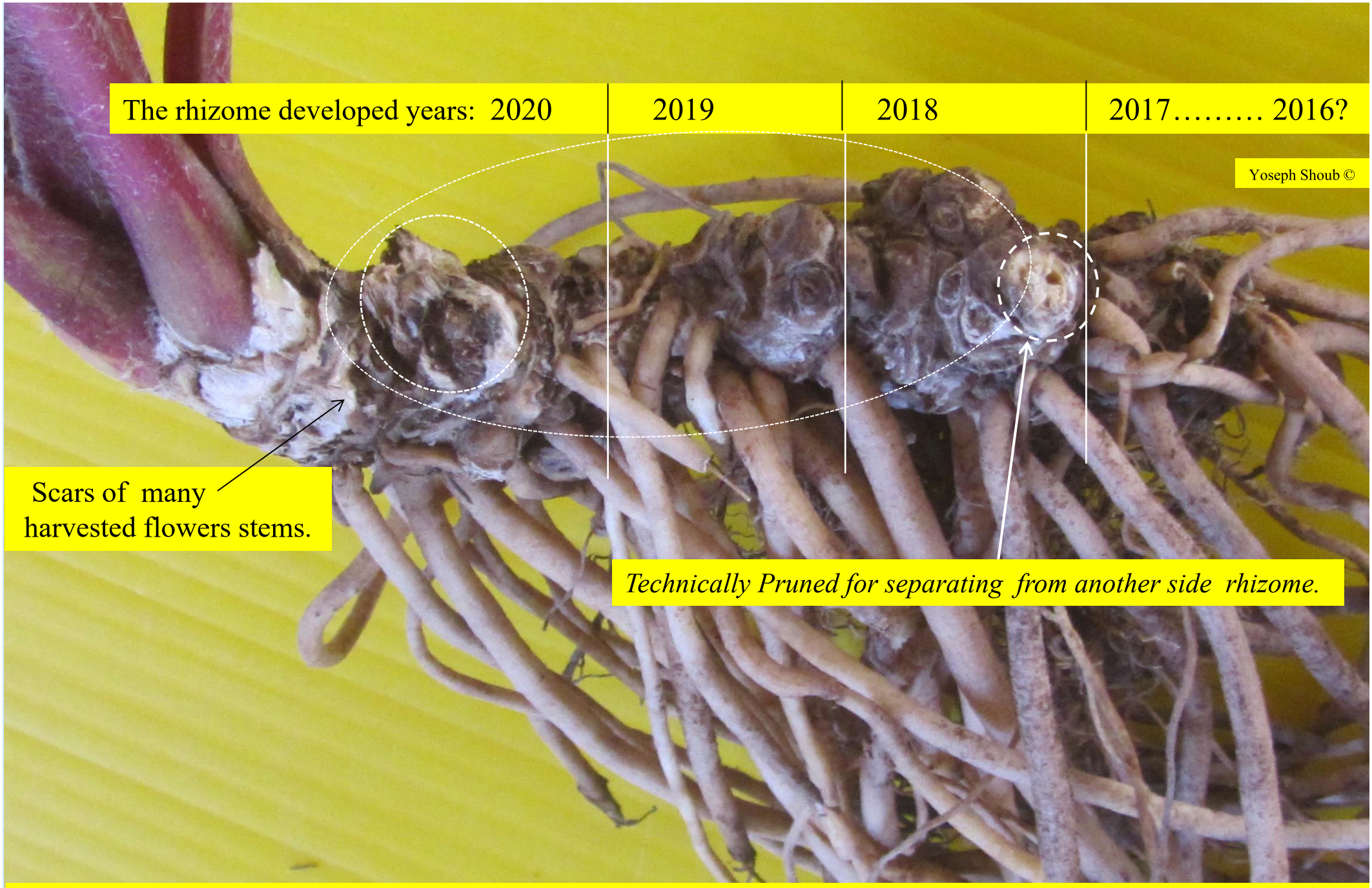


Cross-section of a developed roots system, about 10cm below the location from where the adventitious roots begin.


A Split gerbera unit to be replanted, is made of : 2 new branches,
1 young rhizome,
and fresh young roots system.
Yoseph Shoub ©

2 Rhizomes develop along the inside containers' round wall, in a circular living-space course.



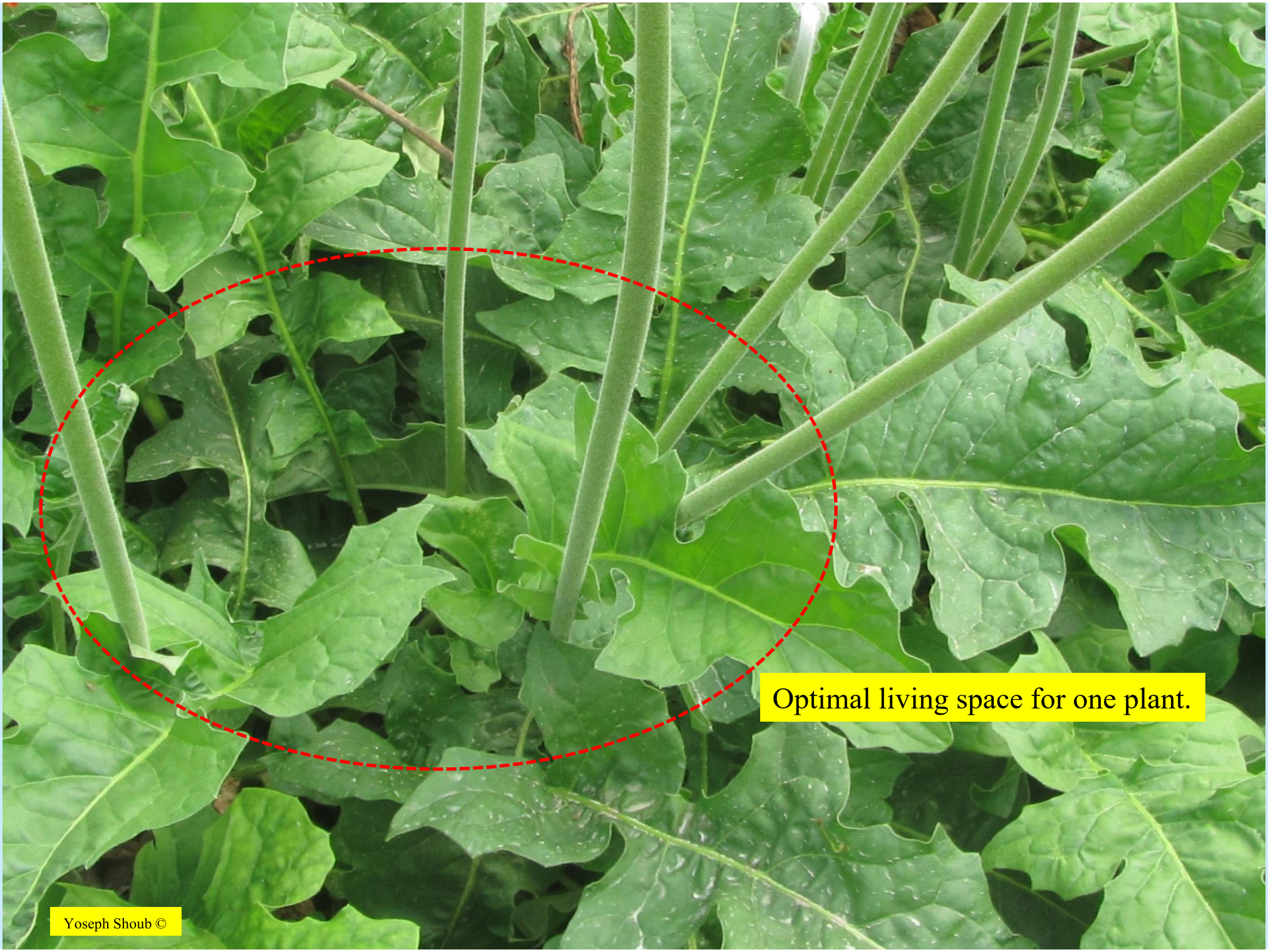


Under the growing-conditions of our unheated greenhouse, the side-rhizome produce many cut flower stems. It leaves on its body scars, as of the harvested stems *(about 4 - 7 per year, per rhizome).*

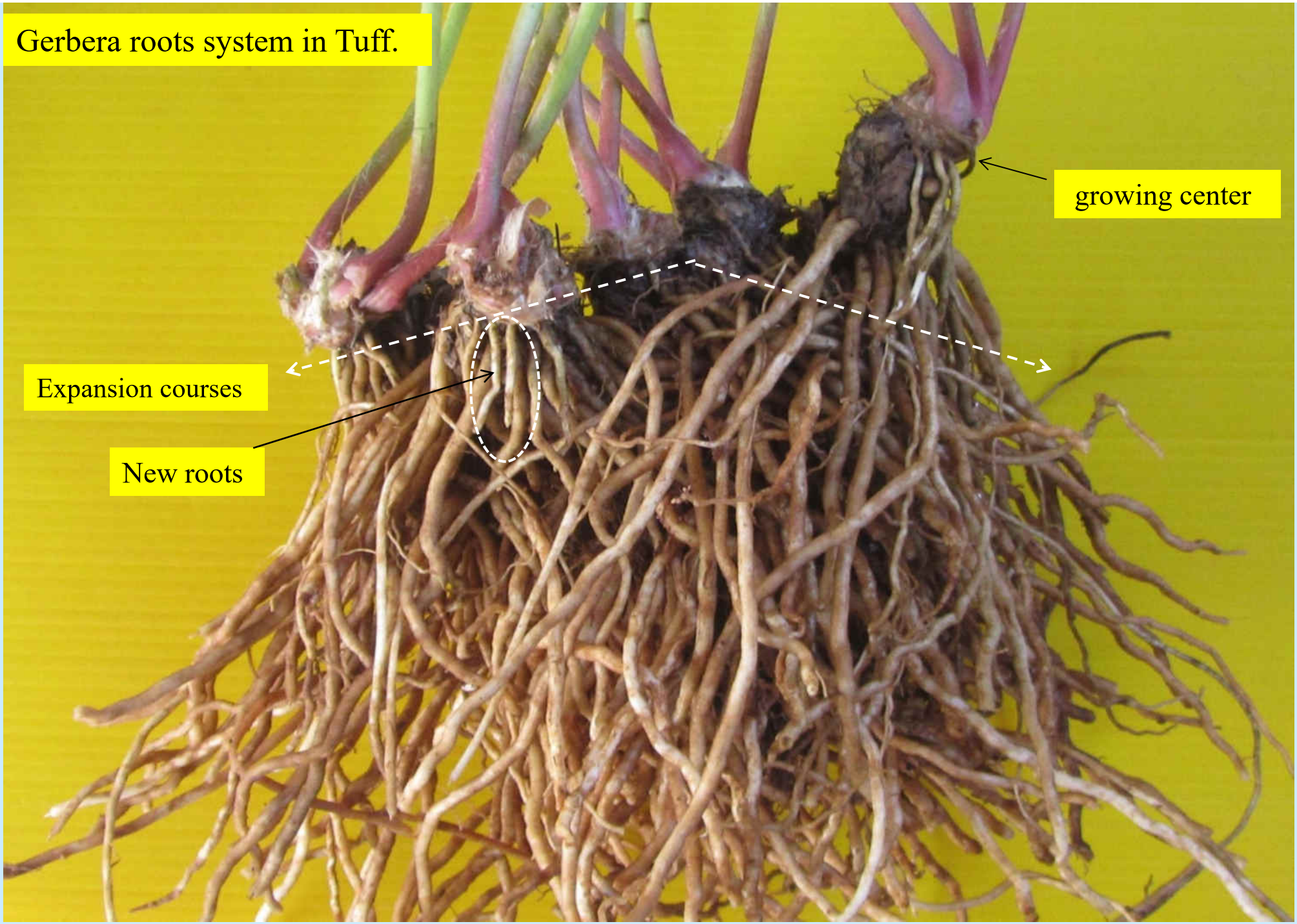
Overhead look on 11 *(pruned)* healthy strong side-rhizomes of one of our selected cold resistant lines. It react positively to the year round climatic conditions in our greenhouse. And to the optimal conditions created by the 'AutoAgronom' in the roots system volume the year round through such long period of 4 b- 5 years.

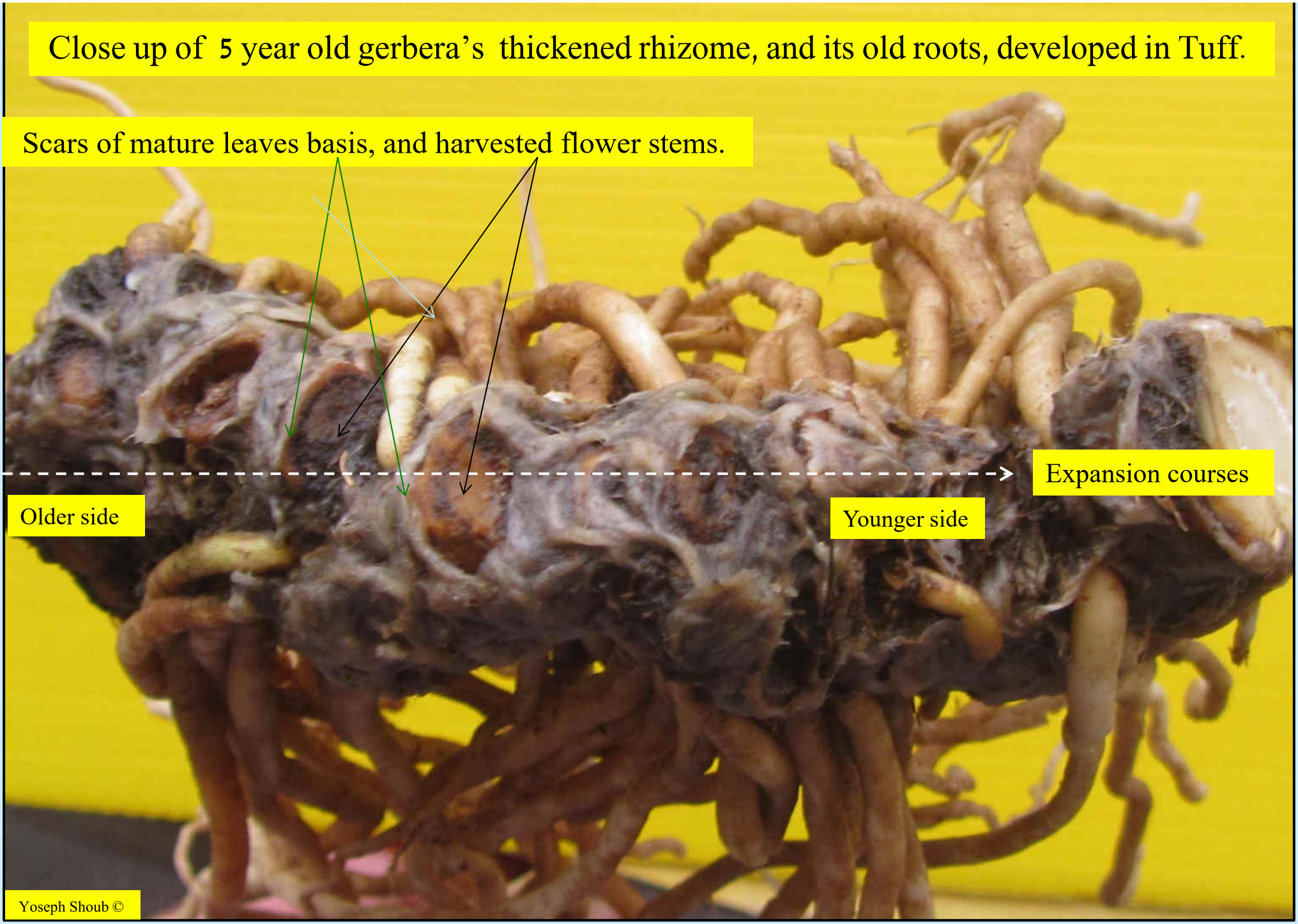
Gerbera Rhizomes and the roots development in Shallow-beds of Red Tuff.

5 Year old gerbera plant in shallow-bed of Tuff, in heated greenhouse. 29 Apr 2018


Optimal living space for one plant.
Yoseph Shoub ©

Planted 5 years ago as ‘A Plug’. Today it built of 5 side rhizomes, and 8 active growing centers.





Thanks for your attention ! Yoseph