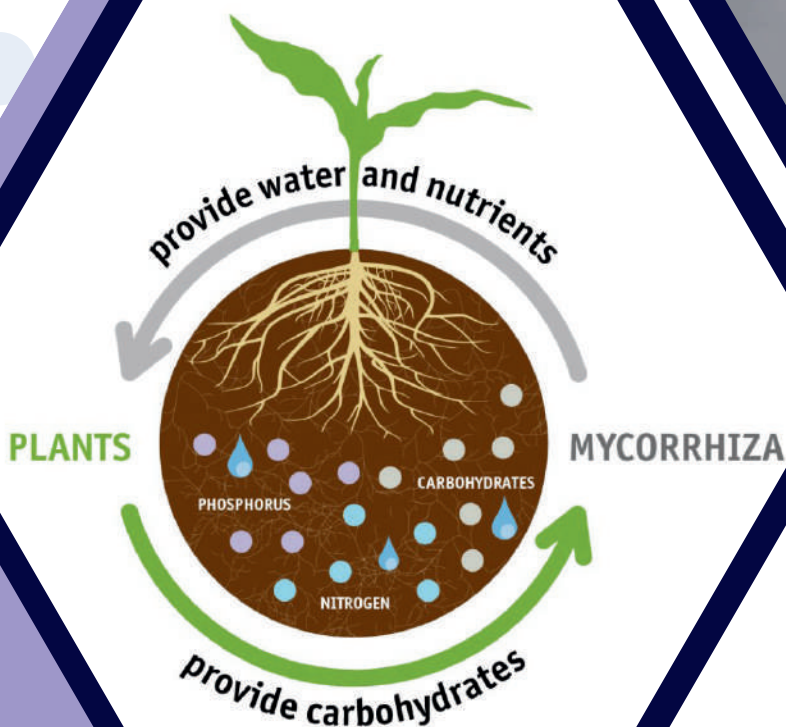


# MYCORRHIZA



**KR LIFESCIENCES**

"FARMER'S  
PROSPERITY IS OUR  
PRIORITY"



## CONTACT US

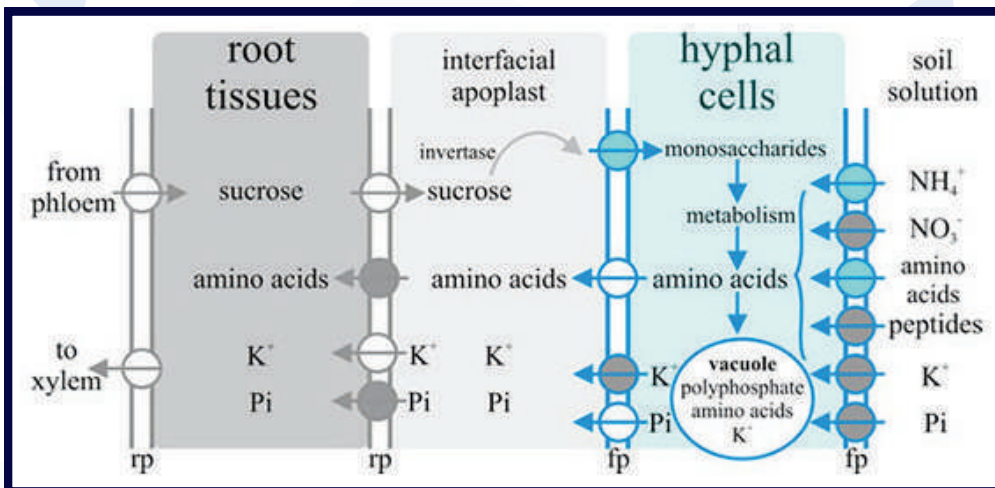
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- 29, Lala Lajpat Rai Sarani (Elgin Road),  
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Vesicular Arbuscular Mycorrhiza(VAM) is a specially formulated Mycorrhiza, consisting of viable endospores that is formed by the symbiotic relations between certain fungi and angiosperm roots. This formulation consists of naturally derived phyto-compounds and amino acids. Upon application, VAM stimulates various plant biochemical processes related to growth enhancement and yield. VAM is a non-phytotoxic product designed to apply through drip irrigation system or mixed with media, at all vegetative structure. The product is designed by trying various combinations of plant growth stimulants in various ratios. And is standardized by the efficacy trials which is analyzed via field trials.

An Endomycorrhiza arbuscular mycorrhiza (plural mycorrhizae or mycorrhizas) is a type of mycorrhiza in which the fungus penetrates the cortical cells of the roots of a vascular plant. Arbuscular mycorrhizae (AMs) are characterized by the formation of unique structures such as arbuscules and vesicles by fungi of the phylum Glomeromycota (AM fungi). AM fungi help plants to capture nutrients such as phosphorus and micronutrients from the soil. It is believed that the development of the arbuscular mycorrhizal symbiosis played a crucial role in the initial colonization of land by plants and in the evolution of the vascular plants.

Other most important active ingredient is bio catalyst. The present formulation helps the overall growth of plants and utilizes maximum from field. The combination is effective for use as Drip irrigation as well as broadcasting along with FYM or other commonly used chemical fertilizers.

## MODE OF ACTION



Mycorrhiza makes symbiotic association with plants. The plant makes organic molecules such as sugars by photosynthesis and supplies to the fungus, in turn mycorrhizal fungus supplies (to plants) additional mineral nutrients (such as phosphorus, potash etc.) taken from the soil. When mycorrhiza is present, plants are less susceptible to drought stress. Upon application, mycorrhiza enhance various biochemical processes within the plant by switching on gene expression and active compound production, that stimulates plant growth.

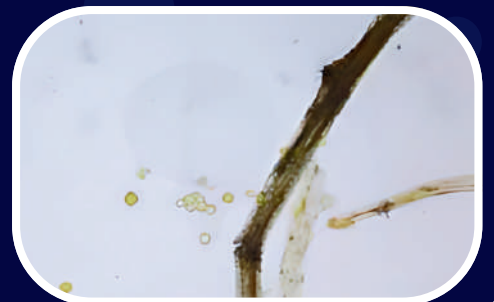
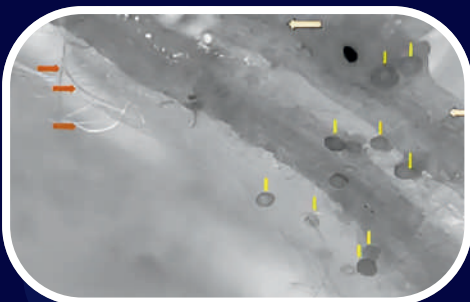
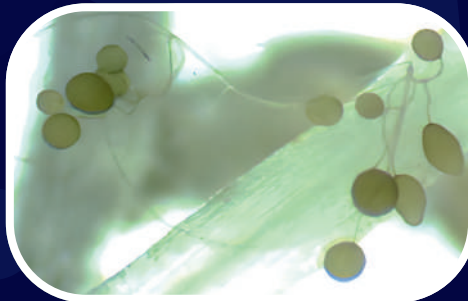
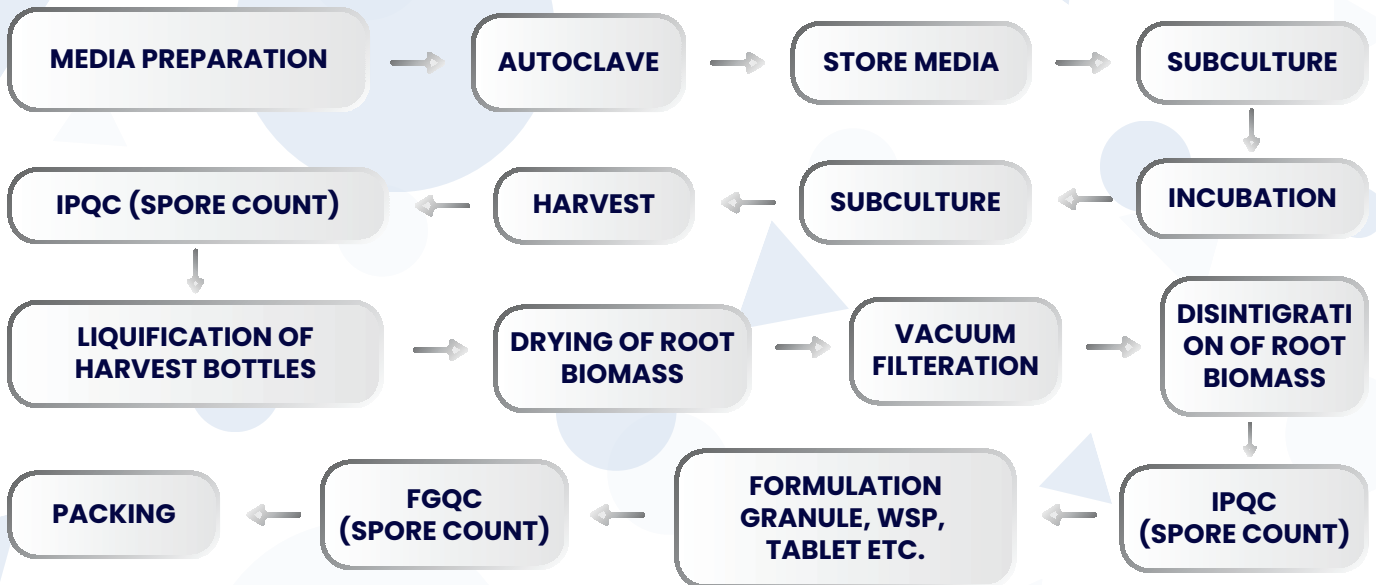
AMONG ALL VAM, RHIZOPHAGUS SP. IS THE MOST COMMON AND EFFECTIVE ON VARIETY OF CROPS AND ACCLIMATIZES WELL UNDER VARIOUS AGRO CLIMATIC SITUATION.

## OUR MYCORRHIZA PRODUCTION

### PROCESS & TECHNOLOGY

There are many ways, VAM can be produced. In order to get better spores in term of quality and quantity, VAM is being cultured/ produced in vitro by using genetically transformed (by *Agrobacterium* sp.) root of carrot. Statistically optimized media was used during the production work in order to get hairy roots, symbiotic relation between roots and VAM and sporulation.

### MICORRHIZA PRODUCTION FLOW CHART





## RECOMMENDED CROP

### Vegetables :

- Tomato
- Brinjal
- Chilli
- Capsicum
- Onion
- Garlic
- Potato
- Cucumber
- Gourds
- Cauliflower
- Cabbage
- Peas
- Oil seed & Pulses

### Cereals :

- Rice
- Wheat
- Maize

### Cash crops :

- Sugarcane
- Cotton
- Tea
- Coffee

### Fruit crops :

- Banana
- Papaya
- Melon
- Grape
- Apple
- Citrus
- Pomegranate and all other crops.

## CONFIDENTIAL

Analytical test report of Endomycorrhiza (technical)

**Name of the Product** : Vesicular Arbuscular Mycorrhiza  
**Batch No.** : 7/25/23  
**Name of Buyer** : KR Life Sciences Pvt Ltd  
**Date** : 30/10/23  
**Lot Qty** : 2200 gm

Sl No	Particulars	Acceptable Specification	Result	Compliant
1	Physio-Chemical characters form and appearance	Root biomass mixed with suitable carrier	Root Biomass found with suitable carrier	YES
2	Moisture Content (%)	< 8%	2.56%	YES
3	pH	6.0 – 7.5	6.48	YES
4	Viable spore count /gm of material	33,000 spores/gm	36000	YES

### CRITERIA:

1. Take 100 mg sample and suspend in 100 ml water in a beaker
2. Place the beaker on a magnetic stirrer and stir gently with a magnetic flea for atleast 1 hr
3. Pass sample through 50 micron (275 mesh) sieve, give washes to remove carrier( Talc) as much as possible for better visibility of spores under a microscope
4. Collect the retained spores on sieve carefully to avoid any loss of spores
5. The volume of retained has to be decided on the basis of expected number of spores which is 100 ml in the present case
6. Take 0.5 ml or 1.0 ml sample in counting chamber, count the spores for atleast five different sample under the stereo microscope
7. Consider an average number per ml from minimum five replicas
8. Calculate the number of spores per gm of sample considering the dilution factor

This is to certify that the product passed the required limits.

FOR KRISHI RASAYAN PVT LTD



Authorized Signatory

## FORMULATIONS

S.No	Formulation	No.of spores/ g of FG	Dosage	Application	Packing	Customers
1	Spore concentrate	33000 minimum	NA	NA	Mettalocene Polyethylene	Industry (for formulation)
2	WSP	Customizable as per federal guideline	100 to 200 gram/ Acre	Drip irrigation, broadcasting, spot application, nursery stage application by seedling dip	Self-soluble pouch	Commercial cultivator
3	WP	Customizable as per federal guideline	1 to 2 KG/ Acre	Broadcasting & Spot	Mettalocene Polyethylene	Commercial cultivator
4	WDG	Customizable as per federal guideline	500g to 1Kg/ Acre	Broadcasting & Spot	Jar	Commercial cultivator
5	Granule	Customizable as per federal guideline	4 to 8 Kg/ Acre	Broadcasting & Spot	Mettalocene Polyethylene/Jar	Commercial cultivator
6	Capsule	2500 minimum	10 capsules/ Acre	Drip irrigation, Spot	Capsule bottle	Suburban cultivator & domestic gardener

## FIELD TRIAL REPORT:

Field trial was conducted on cucumber crop at WB-IN, in order to check the field performance of the formulated product with ROC-VAM. Mentioned below are some real time data captured during trial.



**T1**      **T2**      **T3**      **T4**

Crop Name	Cucumber
Place	Nadia, WB-IN
Soil type	Alluvial Soil, good soil moisture
Area of treatment	100 SQM
Application type	Ring Type (Circle wise near plants root)
Identification of treatment	
T1	KrishiZA – inhouse granular formulation
T2	Leading Competitor 1
T3	Leading Competitor 2
T4	Control (RDF)

S No.	Parameters	Observations 1				Observations 2			
		T1	T2	T3	T4	T1	T2	T3	T4
1	No of flowers	18	18	17	14	15	11	12	10
2	No of lateral branches	2	1	1	1	3.6	1.8	2	2.6
3	Inter-node Length (cm)	6	6	6	7	9.2	9.3	9.3	9.1
4	No of new branches	9	5	7	4	3.6	3	1.6	1
5	Root (Main) length (cm)	6.5	6.5	4.2	4	NA	NA	NA	NA
6	No of white root	21	14	18	12	NA	NA	NA	NA
7	Plant length (cm)	NA	NA	NA	NA	160	138	139	139
8	No. of fruits	NA	NA	NA	NA	3.8	1.8	2	3.4

## CONCLUSION

Present formulation of ROC VAM shows better result and yield in comparison with leading competitors in Indian market. The product can be taken forward to the international market for better exposure to international farmers. Formulated ROC VAM helps in early root establishment, stress management, uniform growth and improved crop health. ROC VAM cares proper plant growth in much better way than conventional fertilizers.