



Acertos e erros:
A dialética da
**AGRICULTURA
REGENERATIVA**

RODRIGO ALESSIO

A ideia é pensar a explanação em
3 recortes:

1 – Estrutural

2 – De Ciclo

3 – Durante o Ciclo



1 - ESTRUTURAL

Fluxo de Energia (Carbono Lábil)

Khatounian (100%)

SPD (*Stricto sensu*)

Trofobiose/Ciclo Etileno/Trans. Biol. (Kervran)

Plant Health Pyramid (J. Kempf)

Fertilidade Estrutural

- Qualidade de superfícies disponíveis
- Dinâmica do Carbono no solo
- Capacidade de dispor de nutrientes BIOdisponíveis
- Dinâmica de Agregados
- Capacidade de Homeostases de PH e oxi-red
- MICROBIOMA capaz de atender a demanda da cultura para funcionalidades fundamentais
- (cresc. nutrição e supressão)



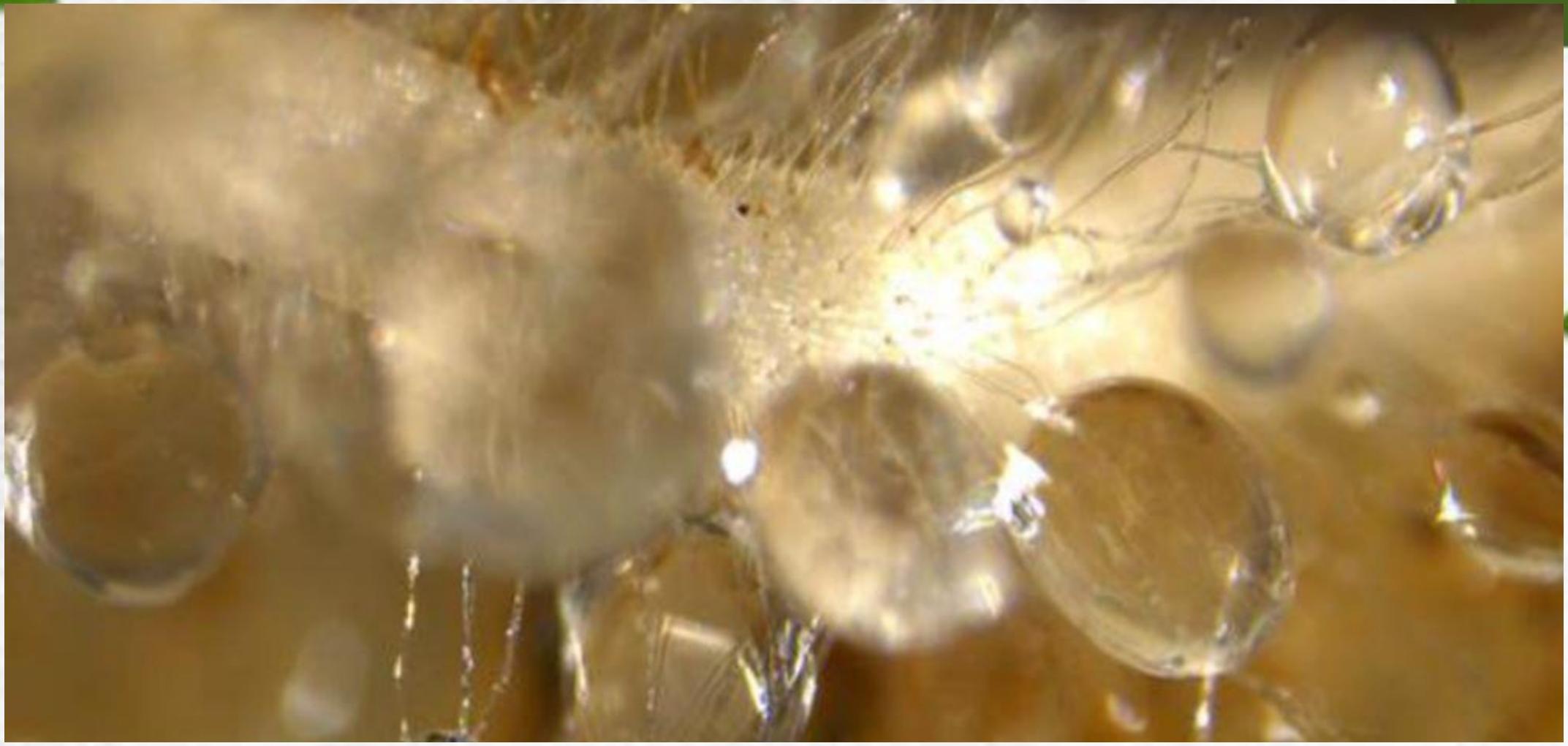
PHOTOSYNTHESIS

Carbon Dioxide + Water

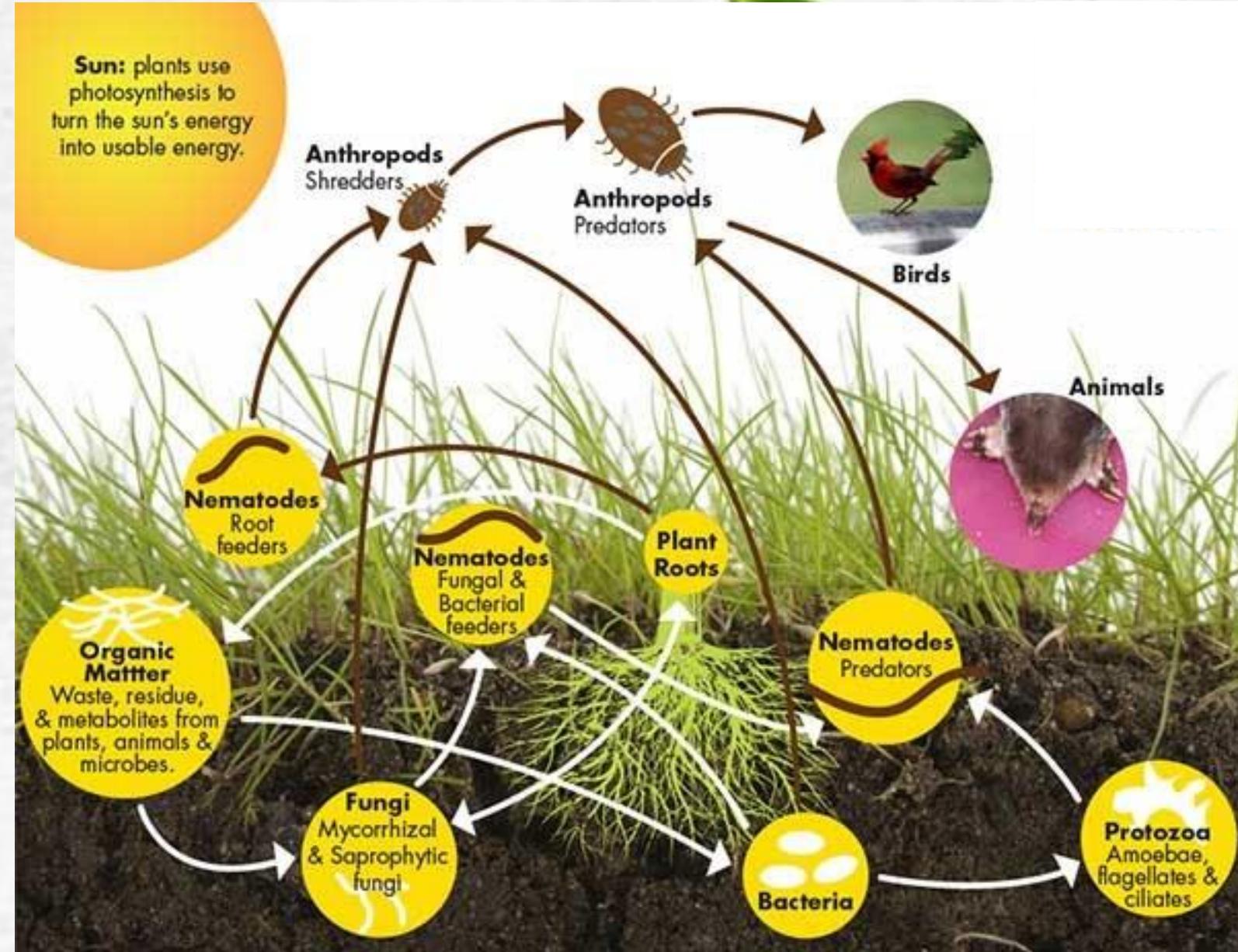


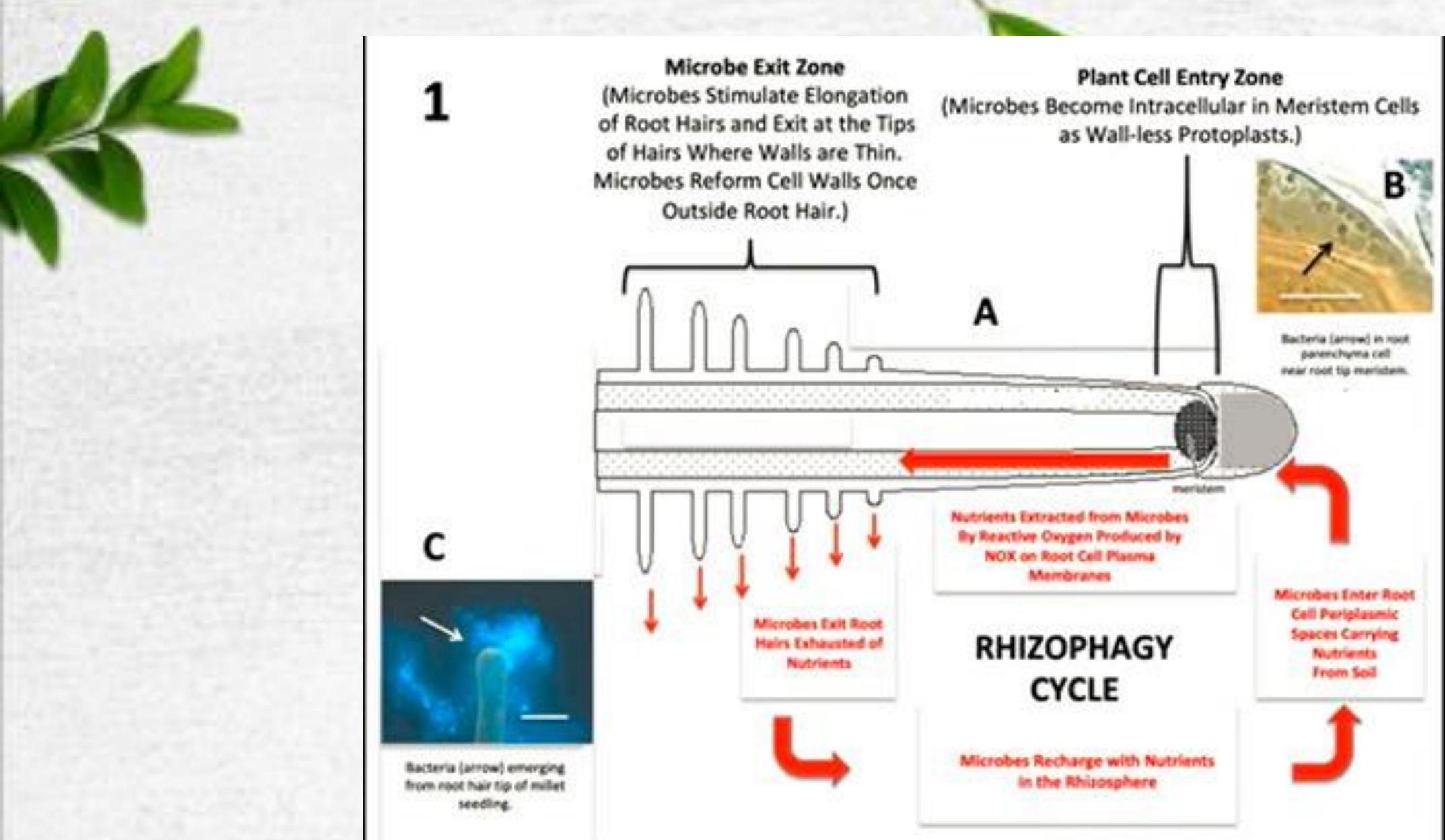
Glucose (sugar) + Oxygen

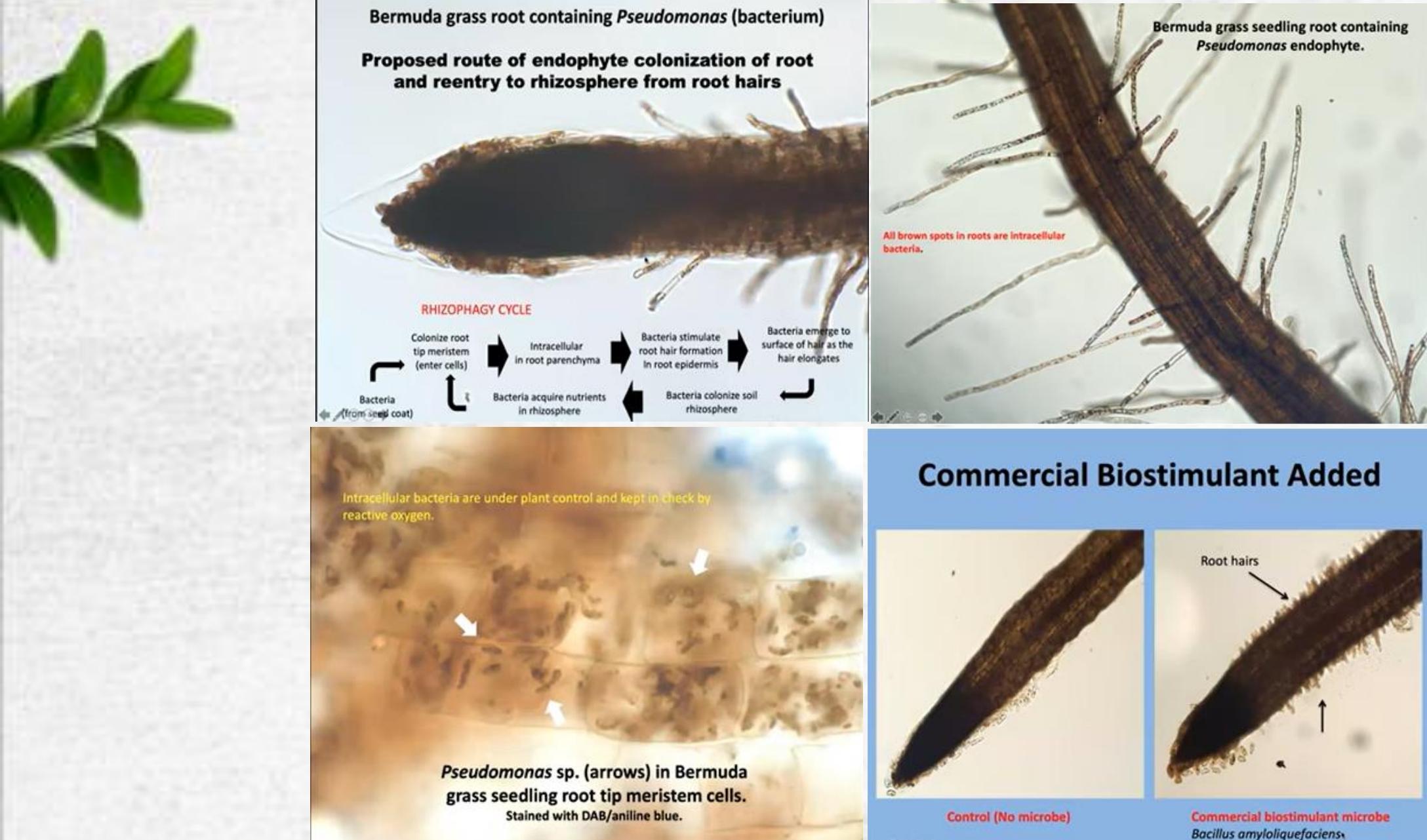
Mineral Nutrition/Catalysts









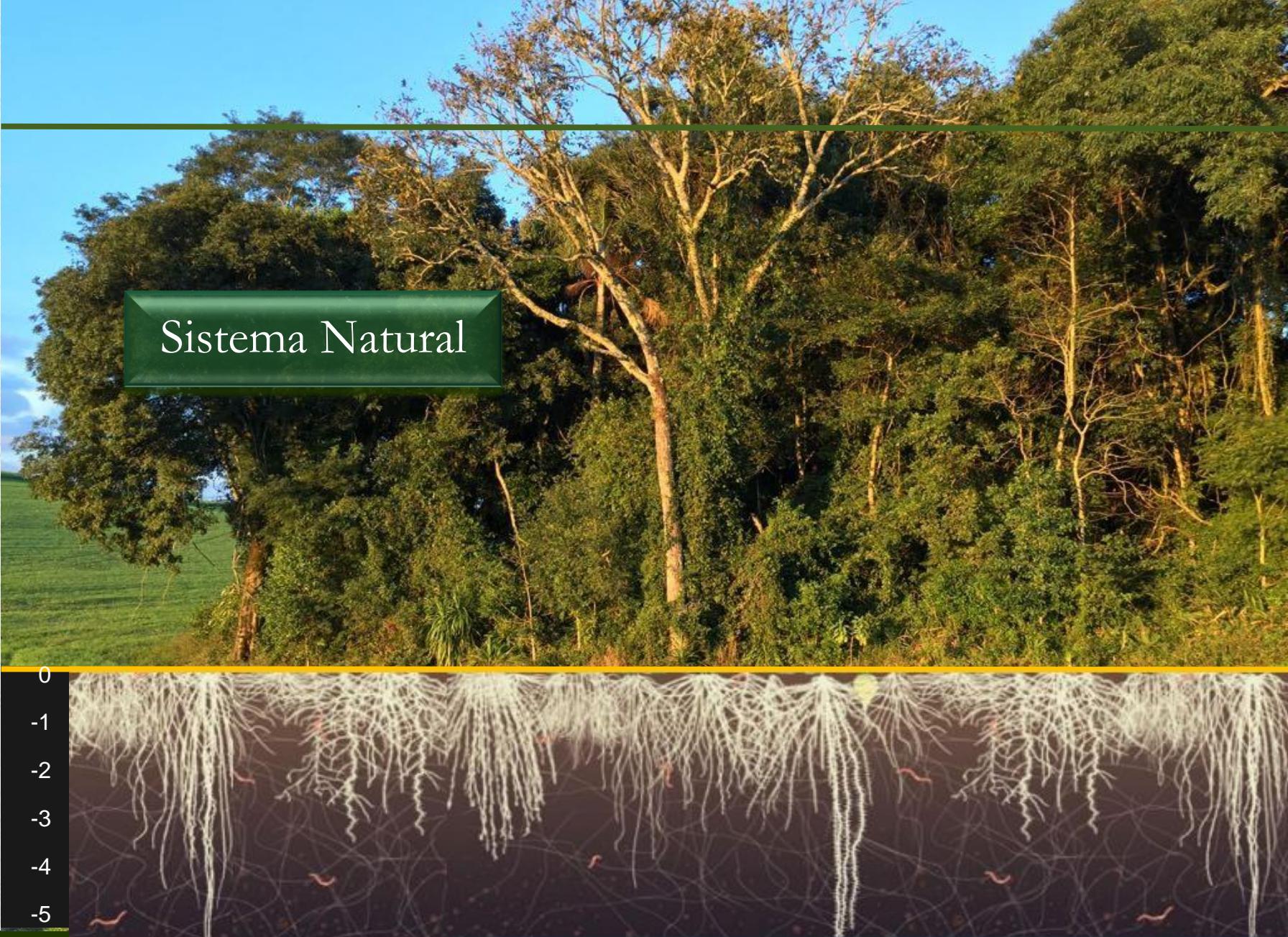


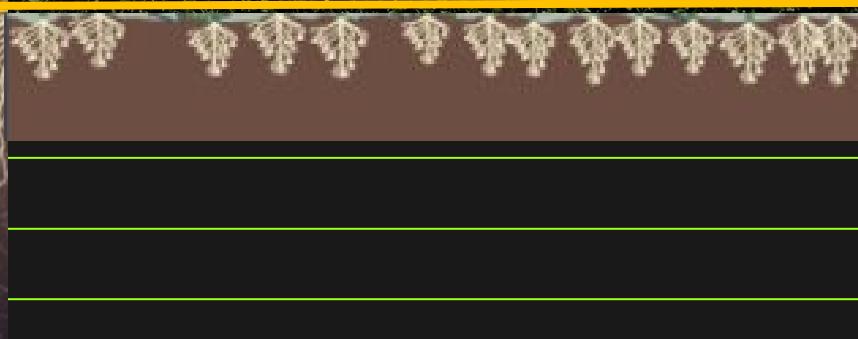


Agricultura Convencional



Agricultura Regenerativa







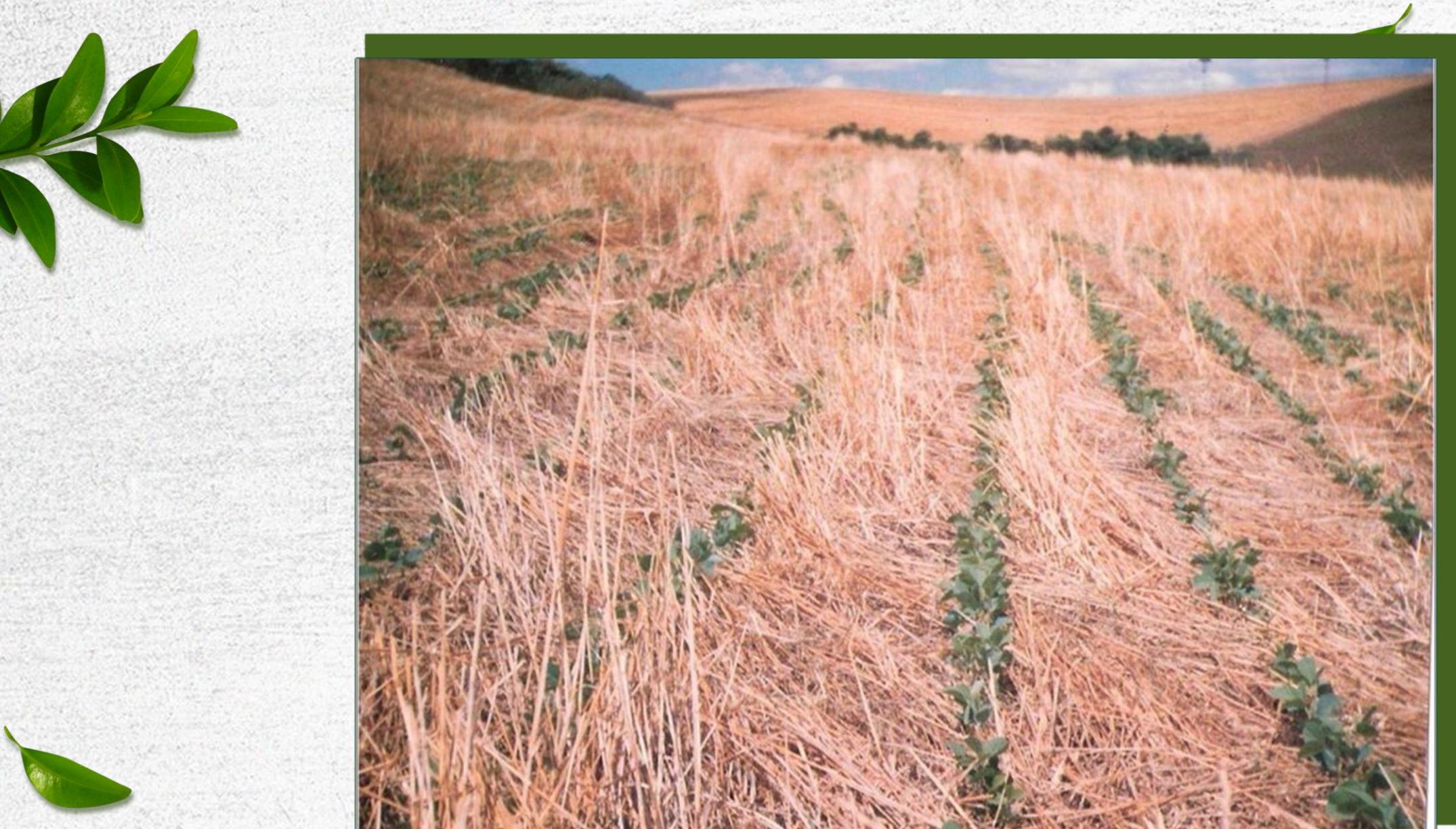






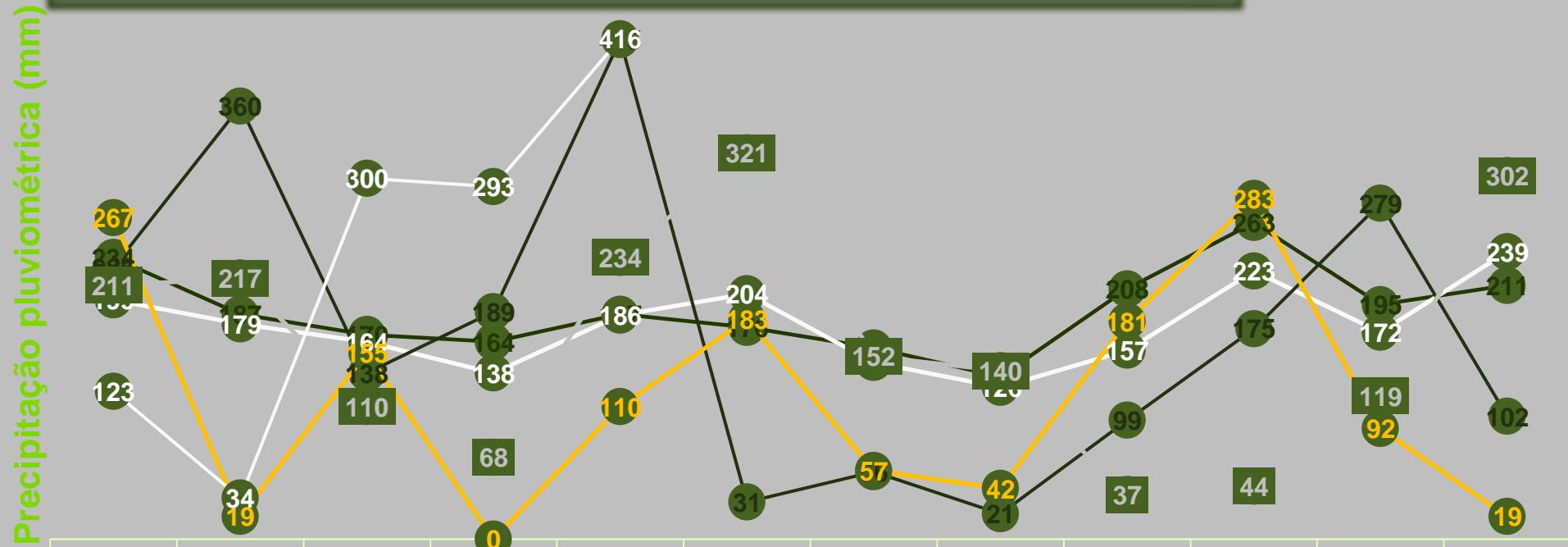






Histórico de Chuvas

Faz. Banhado Verde (1992-2022)



	Jan	Fev	Mar	Abr	Mai	Jun	Jul	Ago	Set	Out	Nov	Dez
Média 30 anos	234	187	170	164	187	176	159	135	208	263	195	211
Média 10 anos	199	179	164	138	186	204	147	126	157	223	172	239
Ano 2019	226	360	138	189	415	31	56	21	99	175	279	102
Ano 2020	211	217	110	68	234	321	152	140	37	44	119	302
Ano 2021	267	19	155	0	110	183	57	42	181	283	92	19
Ano 2022	123	34	300	293	416	321	152	140	37	44	119	211



ID	Rend.	Argila	pH-Água	Índice	P	K	% M.O.	Al	Ca	Mg	H + Al	pH7.0	Al	Bases	K	Ca	Mg	Ca/Mg	Ca/K	Mg/K
1	79.30	33	5	6.5	20.3	209.8	2.9	0.8	4.2	1.2	2.32	8.21	11.96	71.74	6.54	51.16	14.05	3.64	7.83	2.15
2	81.40	33	5.2	6.5	8.4	136.2	4.6	0.6	5.1	1.9	2.32	9.62	7.59	75.9	3.62	53.01	19.27	2.75	14.64	5.32
3	82.92	35	5.1	6.6	8.4	184	3.2	0.7	5.3	1.8	2.14	9.74	8.44	78.01	4.83	54.41	18.76	2.9	11.26	3.88
4	80.60	39	4.6	5.9	7.9	173	5.2	1.9	4.1	0.9	4.89	10.36	25.55	52.82	4.27	39.58	8.97	4.41	9.27	2.1
5	89.82	31	4.8	5.7	17.6	253.9	3.3	1.5	5	1.4	5.88	12.88	17.65	54.35	5.04	38.82	10.49	3.7	7.7	2.08
6	84.70	38	5.4	6.5	20.8	228.2	4.6	0.3	6.6	2.4	2.6	12.18	3.04	78.69	4.79	54.19	19.71	2.75	11.31	4.11
7	83.88	35	5.3	6.3	14.4	239.2	3.8	0.6	8.6	3.2	3.2	15.66	4.59	79.55	3.91	54.92	20.73	2.65	14.06	5.31
8	77.67	44	5	6.4	10.8	180.3	6.1	1	4.9	1.1	2.85	9.32	13.39	69.37	4.95	52.58	11.85	4.44	10.63	2.4
9	97.08	30	7	7.3	42.4	121.4	3.7	0	9.9	4.6	0.95	15.72	0	93.99	1.98	62.98	29.03	2.17	31.89	14.7
10	98.50	43	5.1	6.3	5.7	143.5	5.6	0.6	6.6	2.2	3.09	12.25	6.15	74.77	3	53.88	17.89	3.01	17.98	5.97
11	94.80	49	5	6	17.9	143.5	5	0.8	6.1	1.9	4.12	12.54	8.68	67.12	2.93	48.64	15.55	3.13	16.62	5.31
12	98.55	50	4.8	5.9	9.5	206.1	5	1.5	4.4	1.2	4.89	11.03	19.64	55.63	4.78	39.89	10.96	3.64	8.35	2.29
13	97.73	31	5.6	6.2	9	195	3.5	0	7.5	3.3	3.47	14.72	0	76.43	3.39	50.95	22.1	2.31	15.04	6.52
14	95.52	46	4.8	5.9	4.8	110.4	5.8	1.7	5.1	1.4	4.73	11.49	20.09	58.86	2.46	44.39	12.02	3.69	18.06	4.89
15	97.58	46	4.9	6.1	45.2	165.6	5.6	1.4	5.3	1.8	3.71	11.24	15.68	66.97	3.77	47.15	16.05	2.94	12.51	4.26
16	85.07	43	5.3	6.2	4.3	139.8	5.2	0.5	6.4	2.4	3.55	12.71	5.17	72.09	2.81	50.35	18.92	2.66	17.9	6.73
17	95.30	45	5.3	6.4	5.4	161.9	5.1	0.6	5.9	2.3	2.72	11.32	6.52	76	3.66	52.12	20.22	2.58	14.25	5.53
18	90.75	45	5.5	6.6	7.8	139.8	4.8	0	5.4	2.1	2.24	10.08	0	77.82	3.55	53.57	20.7	2.59	15.1	5.84
19	77.60	48	5	6.3	5.5	176.6	5.6	0.6	5.4	2.2	2.95	10.99	6.94	73.19	4.11	49.14	19.95	2.46	11.96	4.85
20	81.58	50	5.7	6.8	9.1	143.5	4.7	0	6.1	2.9	1.74	11.09	0	84.32	3.31	55	26.01	2.12	16.62	7.86
21	82.72	51	5.1	6.4	4.9	125.1	4.4	0.6	4.5	1.8	2.75	9.33	8.36	70.48	3.43	48.23	18.82	2.56	14.06	5.49
22	82.33	52	5.4	7.1	6.5	136.2	4.5	0	5.2	2.1	1.26	8.92	0	85.93	3.91	58.3	23.73	2.46	14.93	6.08
23	75.60	31	5.4	6.6	41.7	213.4	3	0	8.2	3.3	2.12	14.14	0	85	3.86	57.99	23.15	2.5	15.02	6
24	100.23	51	5	6.2	3.4	125.1	4.8	0.8	4.7	1.6	3.47	10.08	10.8	65.55	3.17	46.63	15.75	2.96	14.69	4.96
25	94.27	40	5.1	6.5	11.9	239.2	4.9	0.4	6.6	2.7	2.43	12.34	3.88	80.3	4.96	53.48	21.86	2.45	10.79	4.41
26	78.87	36	4.4	5.6	18.3	246.6	5.2	4.6	3.6	0.9	6.82	11.95	47.27	42.95	5.28	30.13	7.54	3.99	5.71	1.43
27	102.30	47	5.1	6.2	7.6	357	5.1	0.8	6.4	2.3	3.31	12.92	7.69	74.35	7.07	49.54	17.75	2.79	7.01	2.51
28	98.72	41	5.2	6.3	11.1	147.2	4.8	0.5	5.9	2.5	3.2	11.96	5.4	73.25	3.15	49.33	20.77	2.38	15.67	6.6
29	98.05	55	5	6.3	3.4	95.7	4.9	0.9	4.3	1.5	2.95	9	12.94	67.26	2.72	47.78	16.76	2.85	17.57	6.16
30	104.00	50	5.4	6.5	5.8	121.4	4.9	0	5.5	2	2.54	10.31	0	75.34	3.01	53.35	18.98	2.81	17.71	6.3
31	97.83	52	5.1	6.2	7.5	143.5	5.4	0.6	4.3	1.3	3.59	9.59	9.09	62.54	3.83	44.84	13.87	3.23	11.72	3.62
32	102.10	50	5.4	6.5	5.3	187.7	5.8	0	5.8	2	2.48	10.76	0	76.96	4.46	53.9	18.59	2.9	12.08	4.17
33	101.50	47	5.2	6.3	5.1	110.4	5.7	0.7	5.2	1.6	3.05	10.16	8.96	69.97	2.78	51.18	16.01	3.2	18.42	5.76
34	98.70	45	4.9	5.8	2.7	110.4	5.5	1.3	5.1	1.7	5.49	12.53	15.59	56.16	2.25	40.7	13.2	3.08	18.06	5.86
35	101.93	51	5	6.1	6.1	81	5.4	1	4.6	1.5	3.93	10.29	13.6	61.76	2.01	44.7	15.04	2.97	22.2	7.47
36	100.38	46	5.2	6.2	5.3	128.8	4.6	0.7	5.1	1.9	3.35	10.63	8.77	68.5	3.1	47.98	17.43	2.75	15.48	5.62
37	91.60	49	5	6.2	5.4	125.1	4.7	1	4.2	1.4	3.55	9.45	14.5	62.39	3.39	44.44	14.56	3.05	13.13	4.3
38	105.90	41	5.3	6.4	10.1	106.7	4.7	0.6	4.6	1.6	2.85	9.29	8.52	69.32	2.94	49.52	16.87	2.94	16.86	5.74
39	116.63	45	5.1	6.5	4.8	202.4	4.8	0.8	6	2.4	2.57	11.47	8.25	77.56	4.51	52.31	20.74	2.52	11.59	4.6
40	105.58	50	5.2	6.5	5.3	99.4	5.5	0.7	5.3	1.8	2.54	9.89	8.69	74.37	2.57	53.59	18.21	2.94	20.85	7.08
41	107.75	46	5	6.5	6.5	158.2	5.1	0.9	6	2.1	2.6	11.1	9.58	76.55	3.65	54.05	18.85	2.87	14.83	5.17
42	111.00	48	5.2	6.6	3.8	161.9	5.5	0.6	5.5	2	2.16	10.09	7.03	78.59	4.1	54.51	19.98	2.73	13.28	4.87
43	114.83	46	5	6.2	4.8	173	6	0.9	4.8	1.5	3.47	10.2	11.79	66	4.34	47.06	14.61	3.22	10.85	3.37
44	114.58	48	4.8	5.9	3.7	206.1	5.6	1.5	5.4	1.7	4.67	12.35	16.23	62.15	4.27	43.72	14.15	3.09	10.24	3.32
45	113.88	45	5	6.3	3	139.8	5	0.9	5.8	2.4	3.13	11.67	9.54	73.15	3.06	49.7	20.38	2.44	16.22	6.65
46	107.83	48	5	6.1	5.3	103	5.2	0.8	4.5	1.5	3.71	10	11.28	62.92	2.63	45	15.28	2.94	17.08	5.8
47	108.70	50	4.8	5.9	3.1	187.7	4.9	1.7	5.6	2.1	4.89	13.07	17.05	62.61	3.67	42.85	16.09	2.66	11.67	4.38

Correlação **0.409** -0.038 -0.133 -0.335 -0.184 **0.394** -0.032 -0.028 -0.011 **0.083** 0.019 -0.041 -0.073 -0.256 0.069 -0.008 -0.182 **0.193** 0.138

2 – RECORTE DE CICLO

Adubação de sistema (pó de rocha, dejeto, fosfato natural, K-forte...)

Mix de Plantas de Serviços (Outonais/invernais)

Inundação com EM, Bocashi...

Monitoramento constante das culturas que precedem as culturas comerciais (quando necessário intervir com isolados tbm)

























22/07/2021







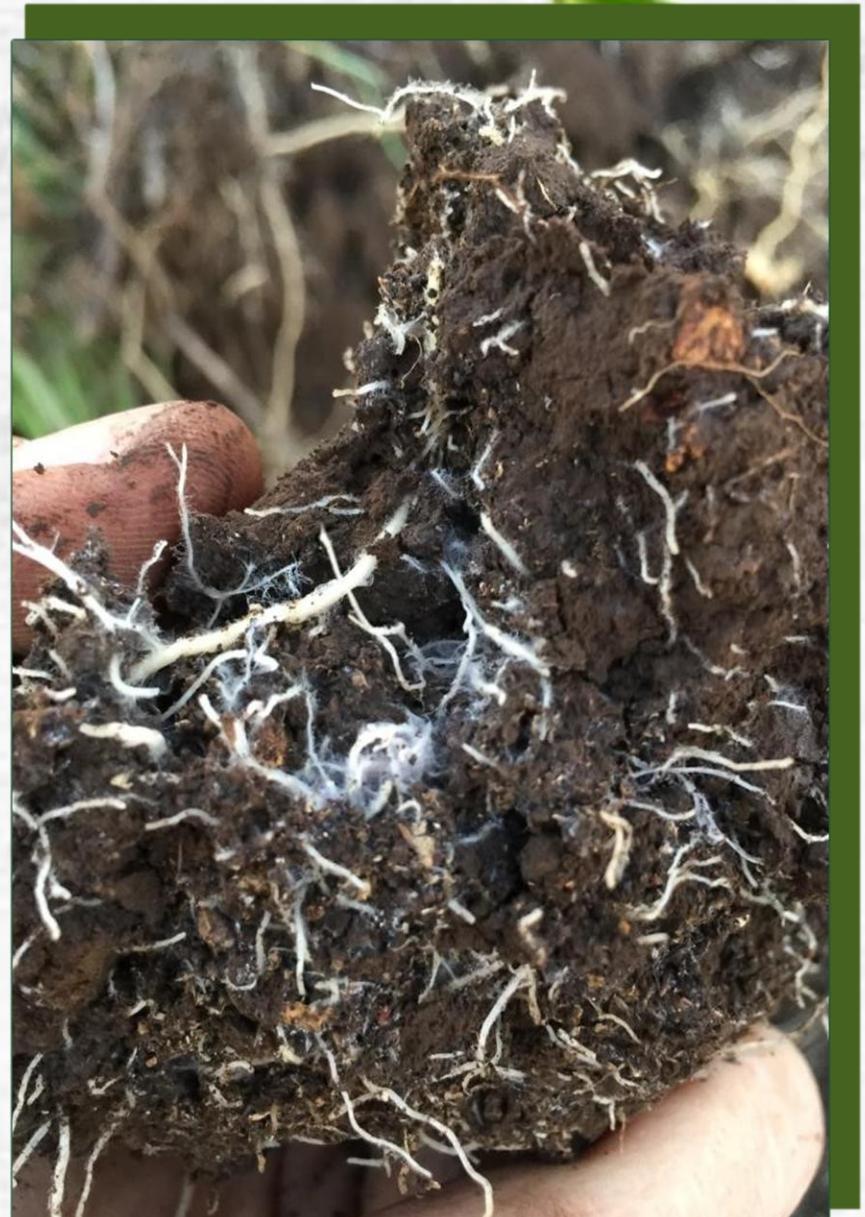












3 – RECORTE DURANTE O CICLO

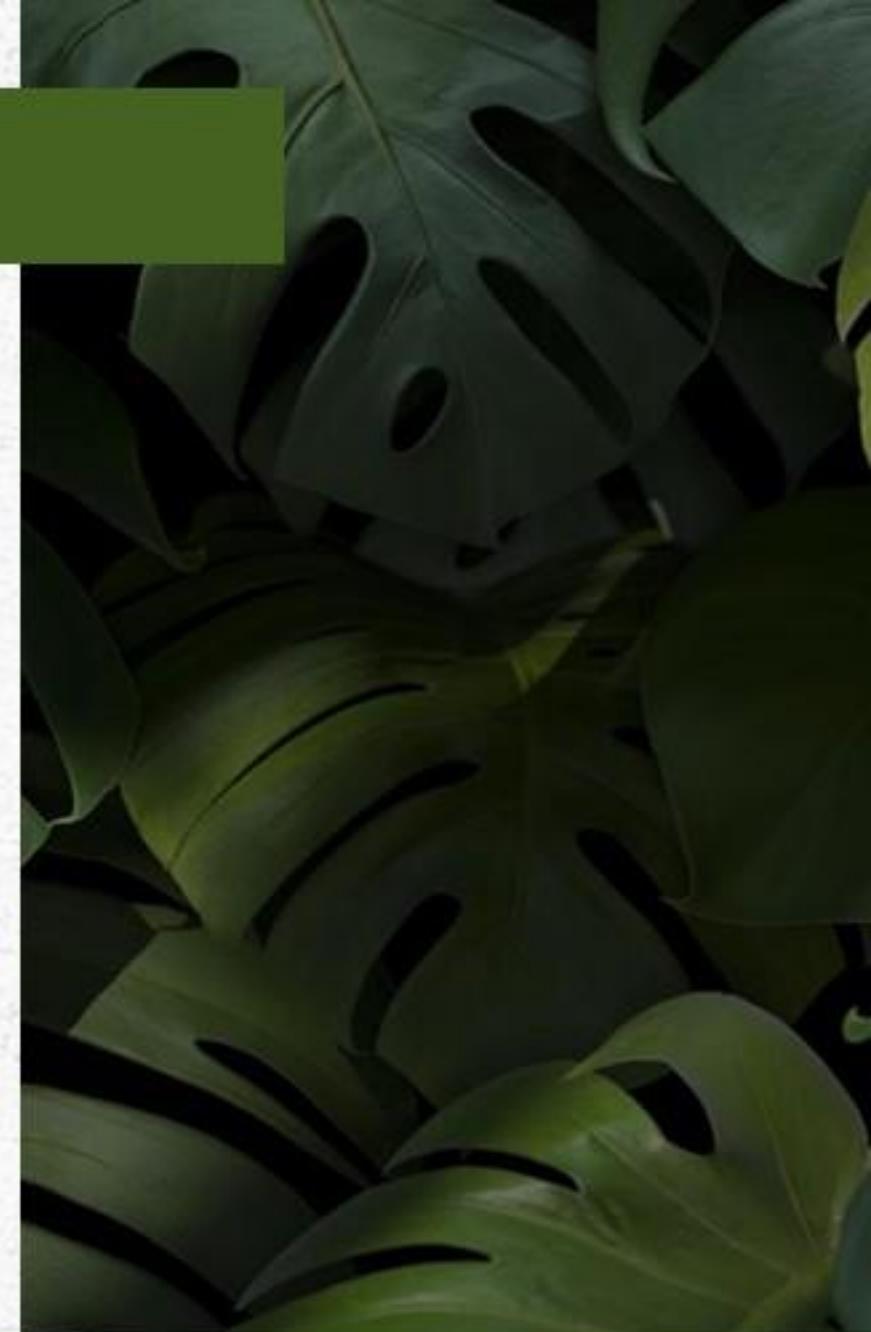
Inundação com Isolados

Inundação com Comunidades

Uso de xenobióticos com critério

**Conhecimento da dinâmica dos
balanços e requerimento foliares**

Sobresemeadura





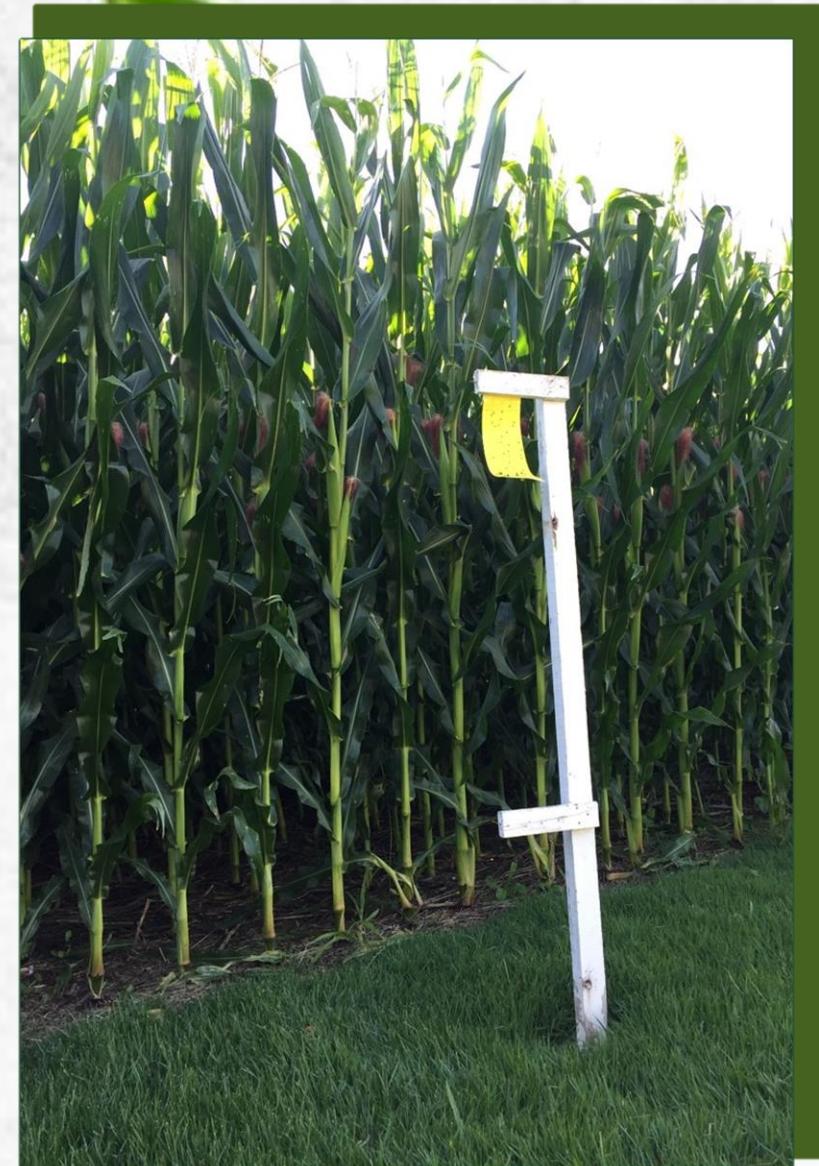
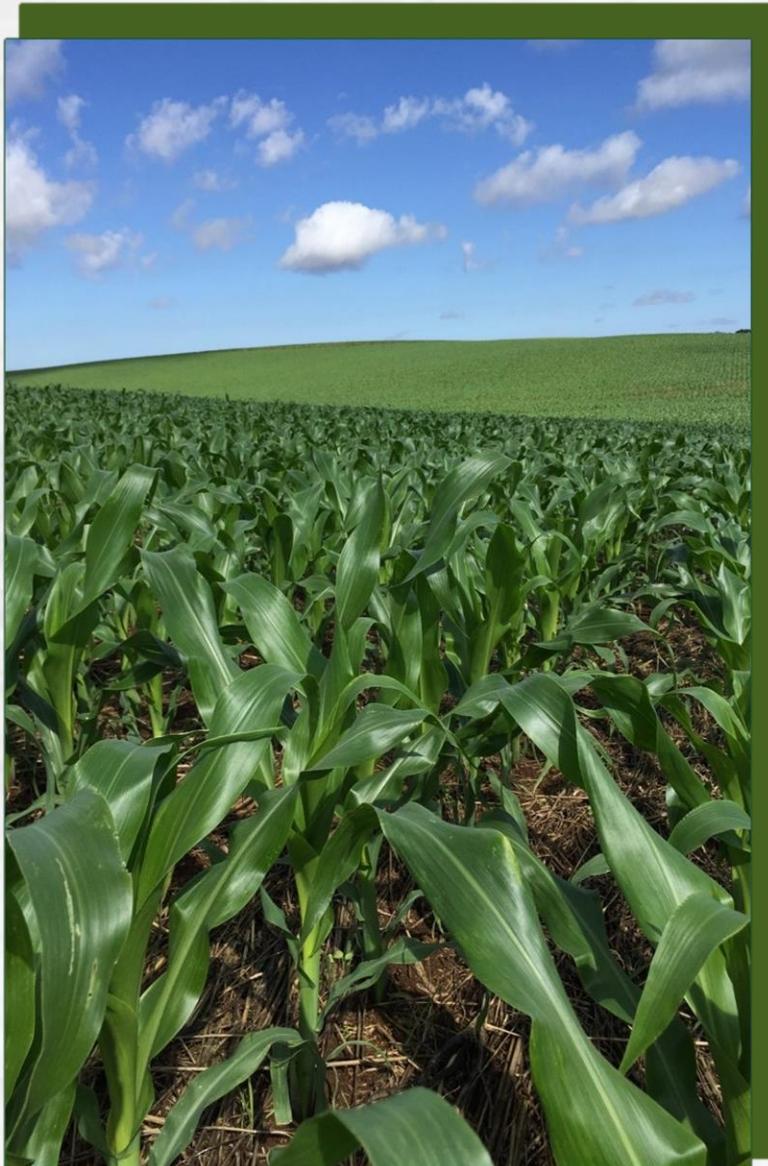
















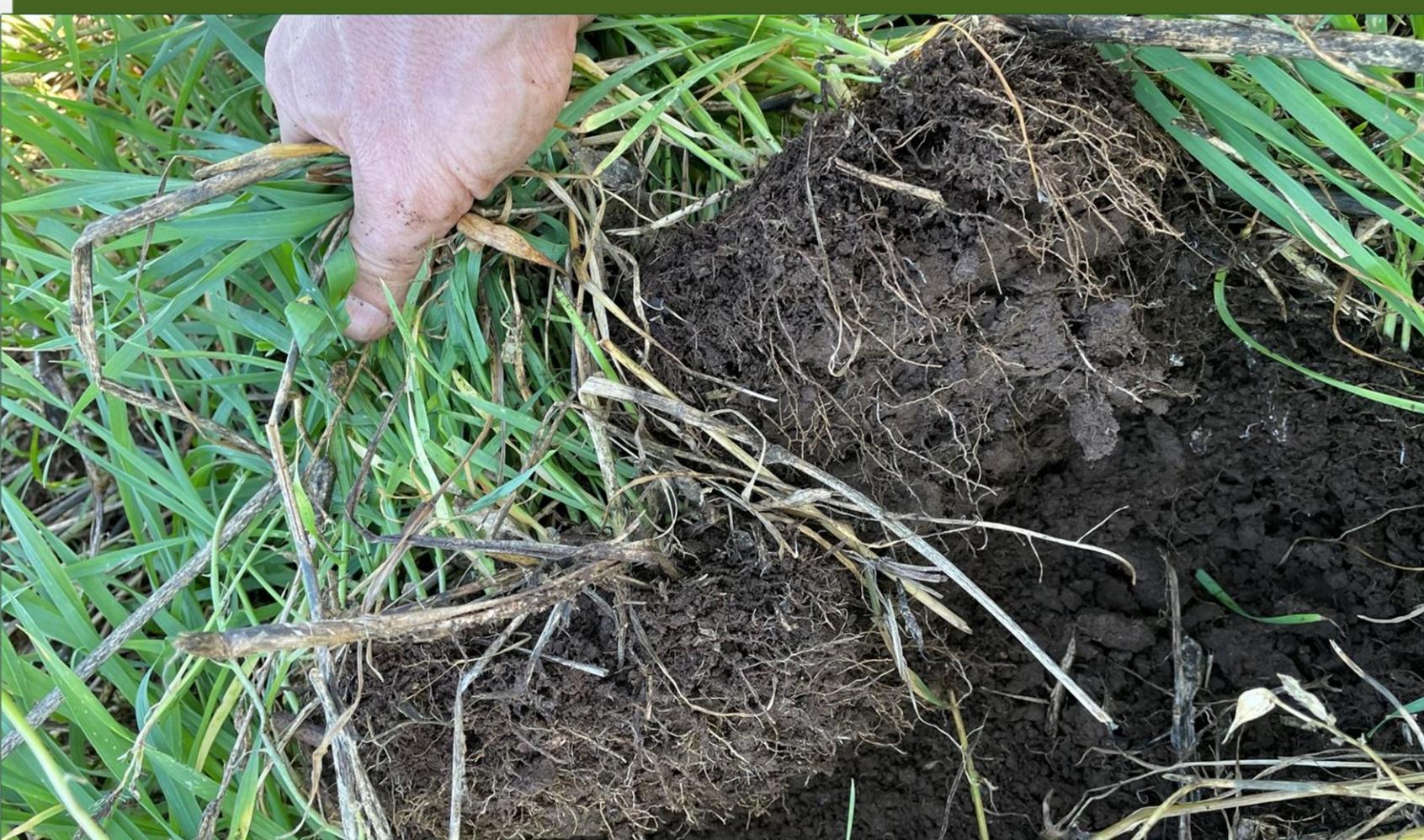






















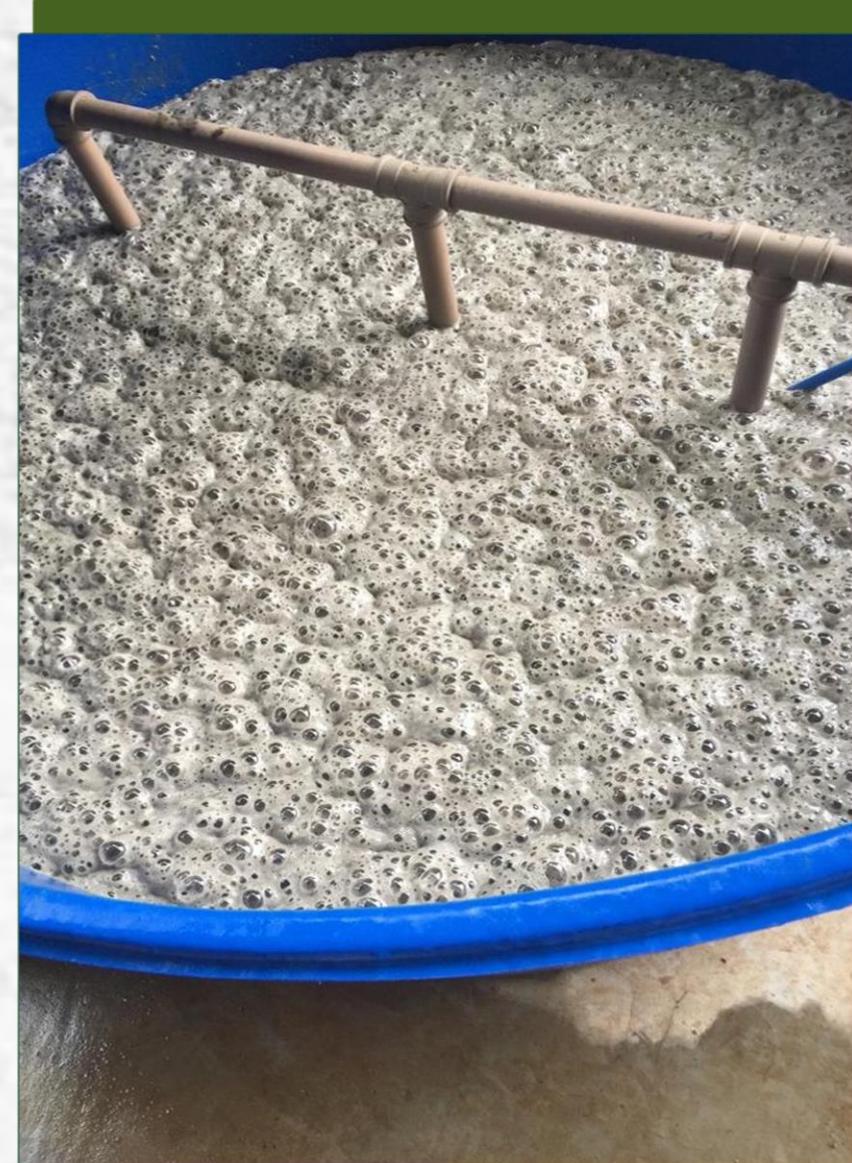










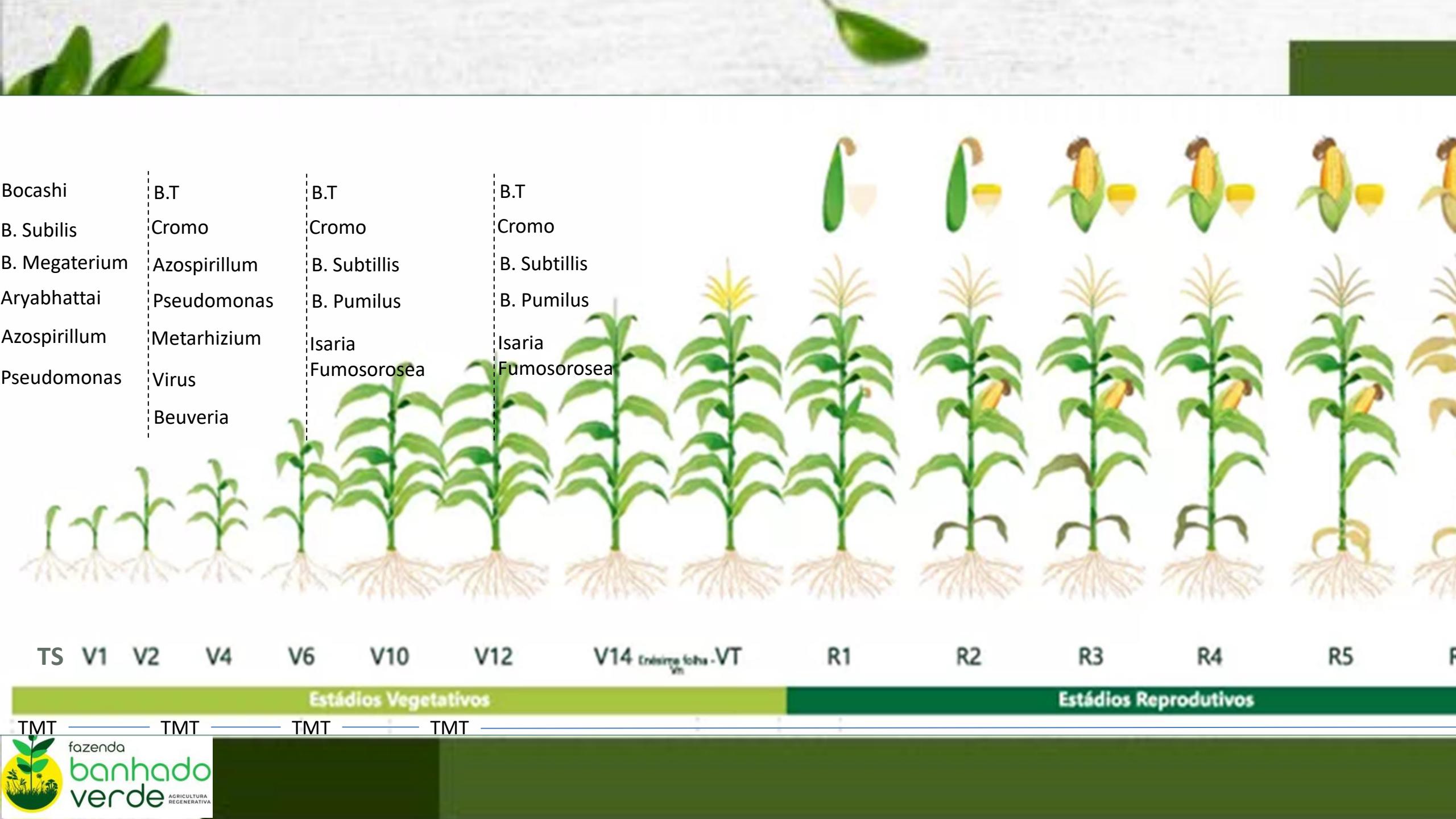


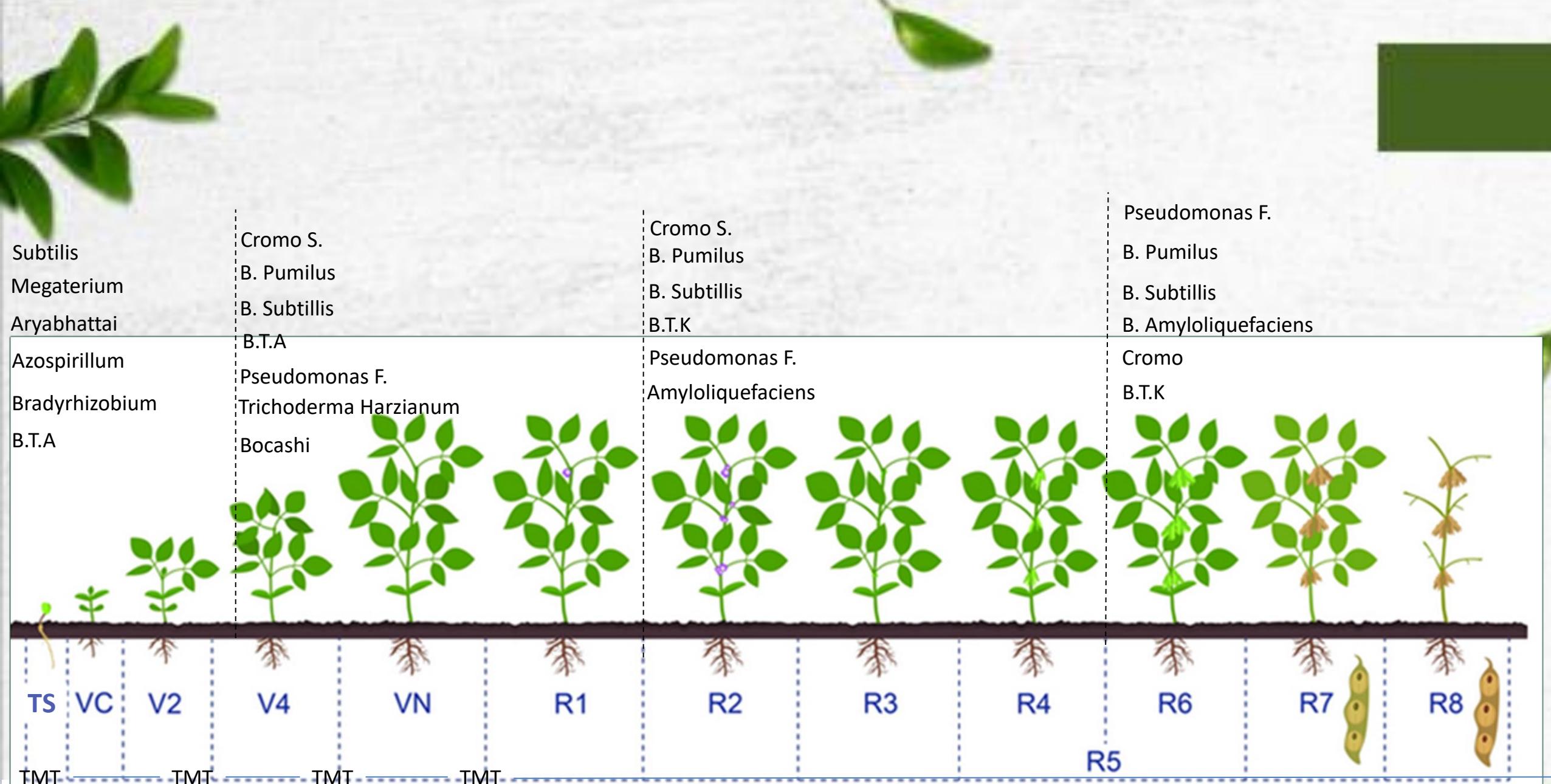






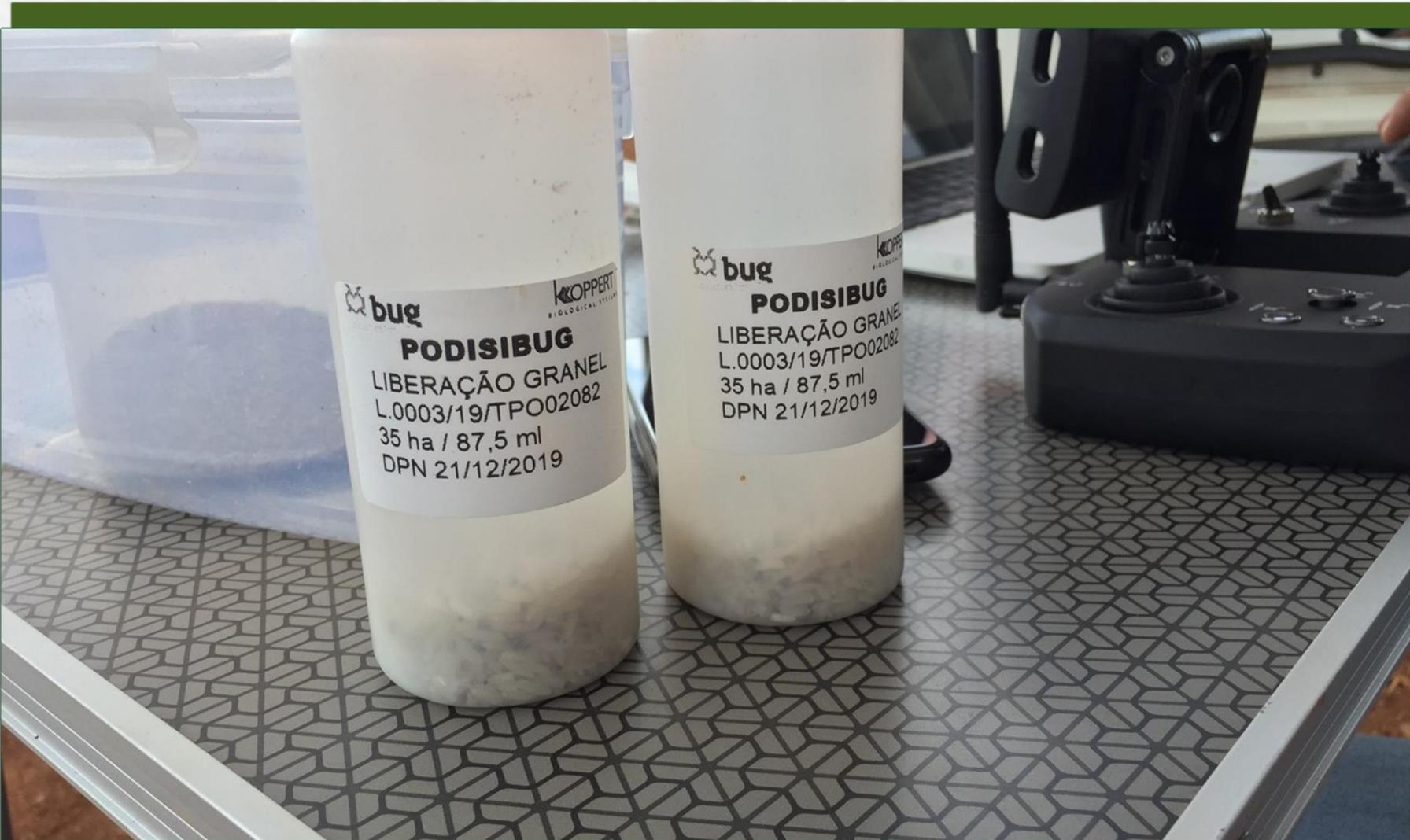












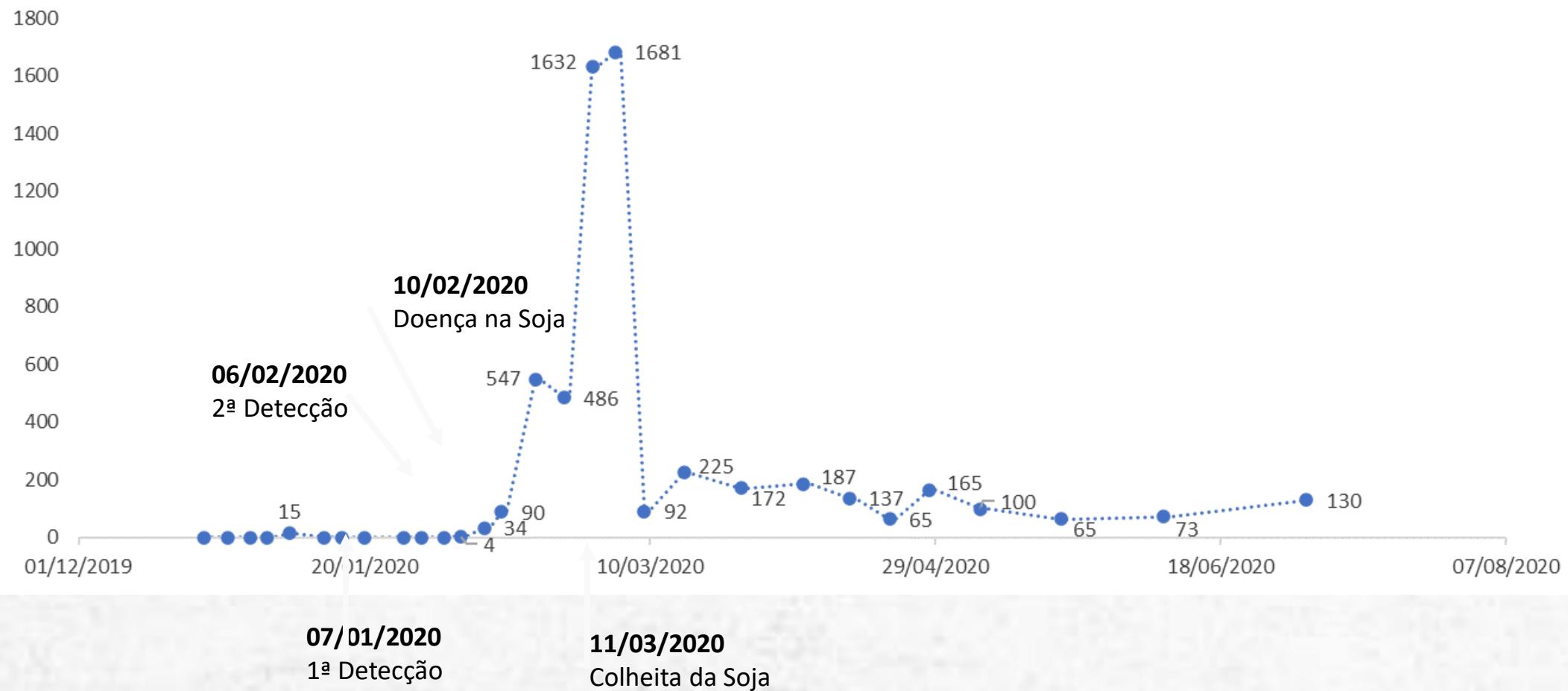




Data: 07.01.2020



Monitoramento - *Phakopsora phachyrhizi* (esporos.lâmina)













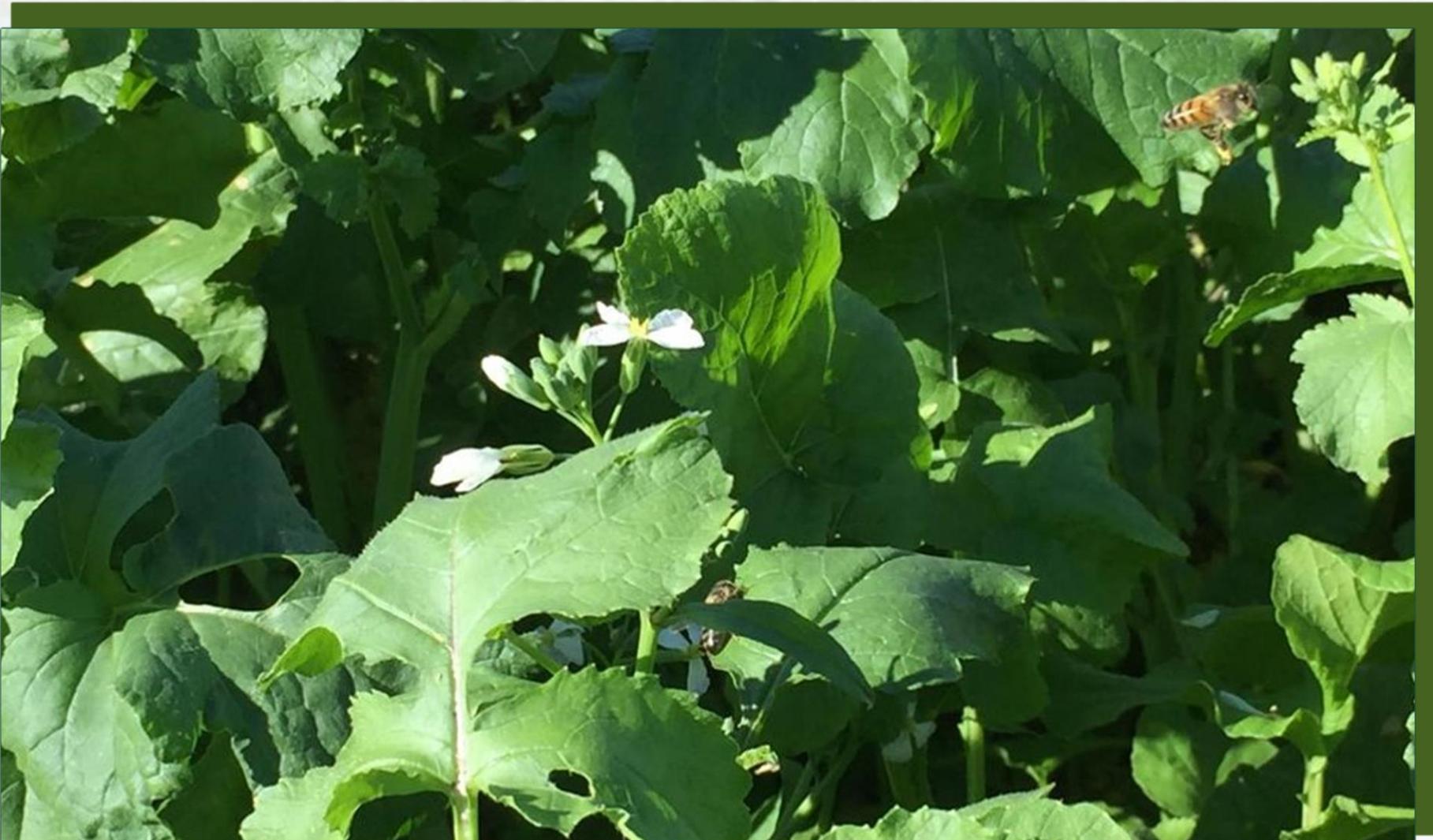


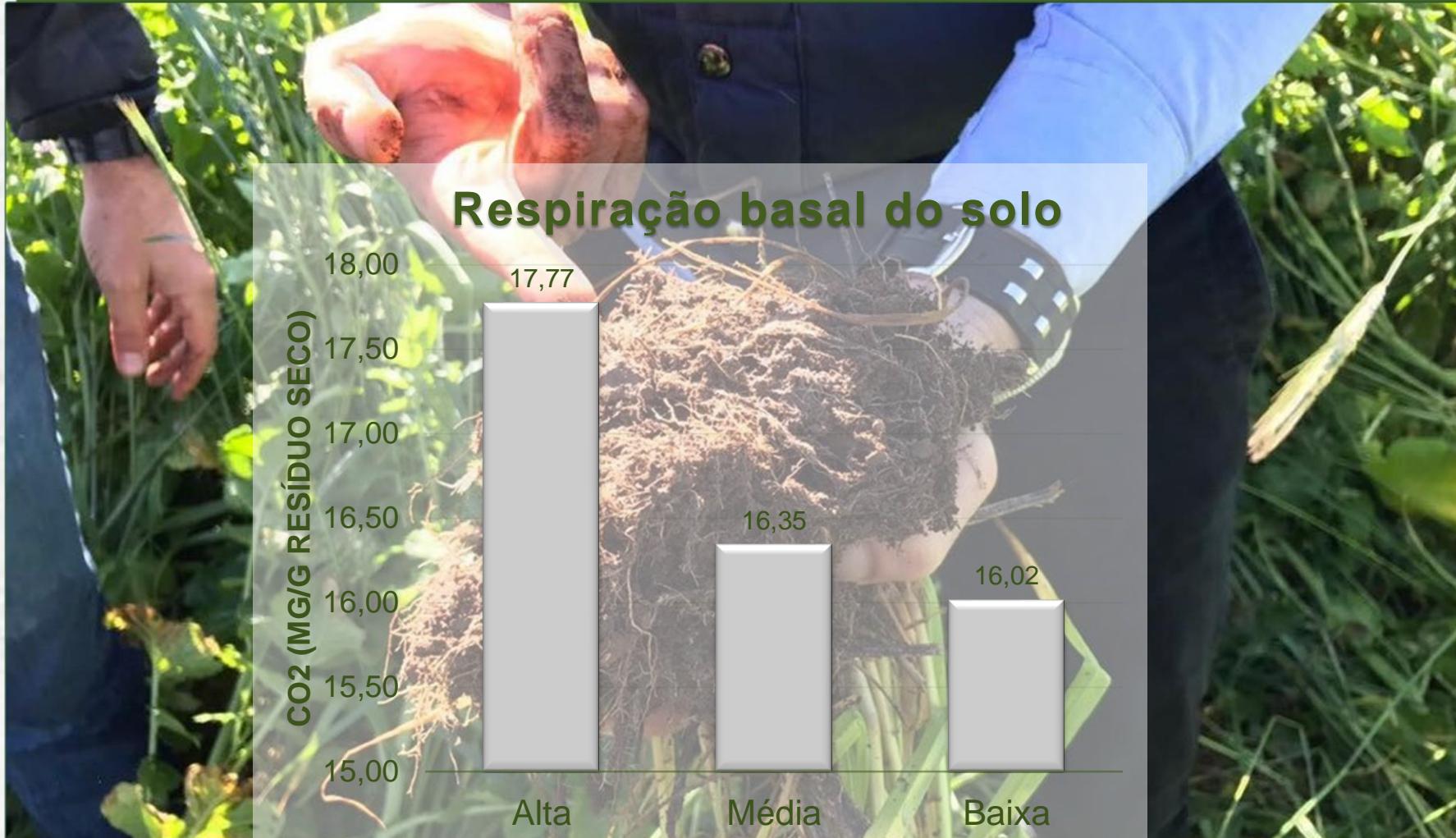




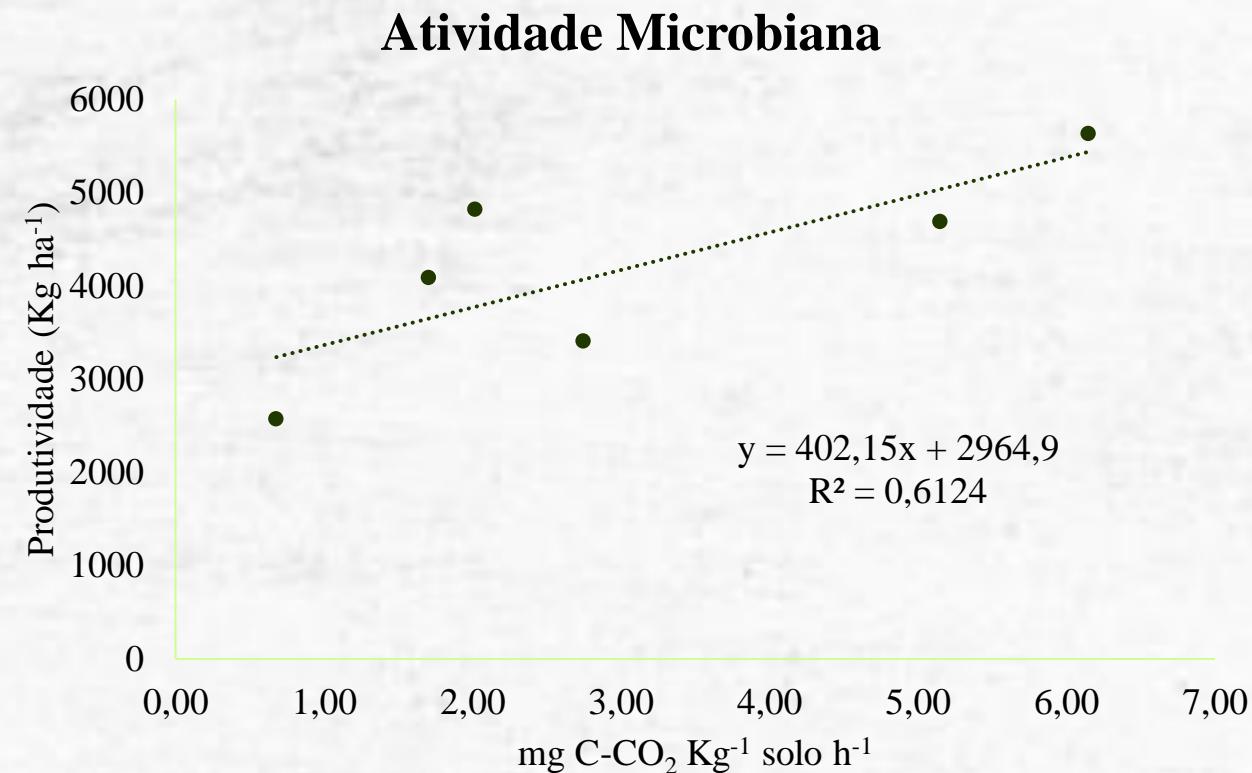




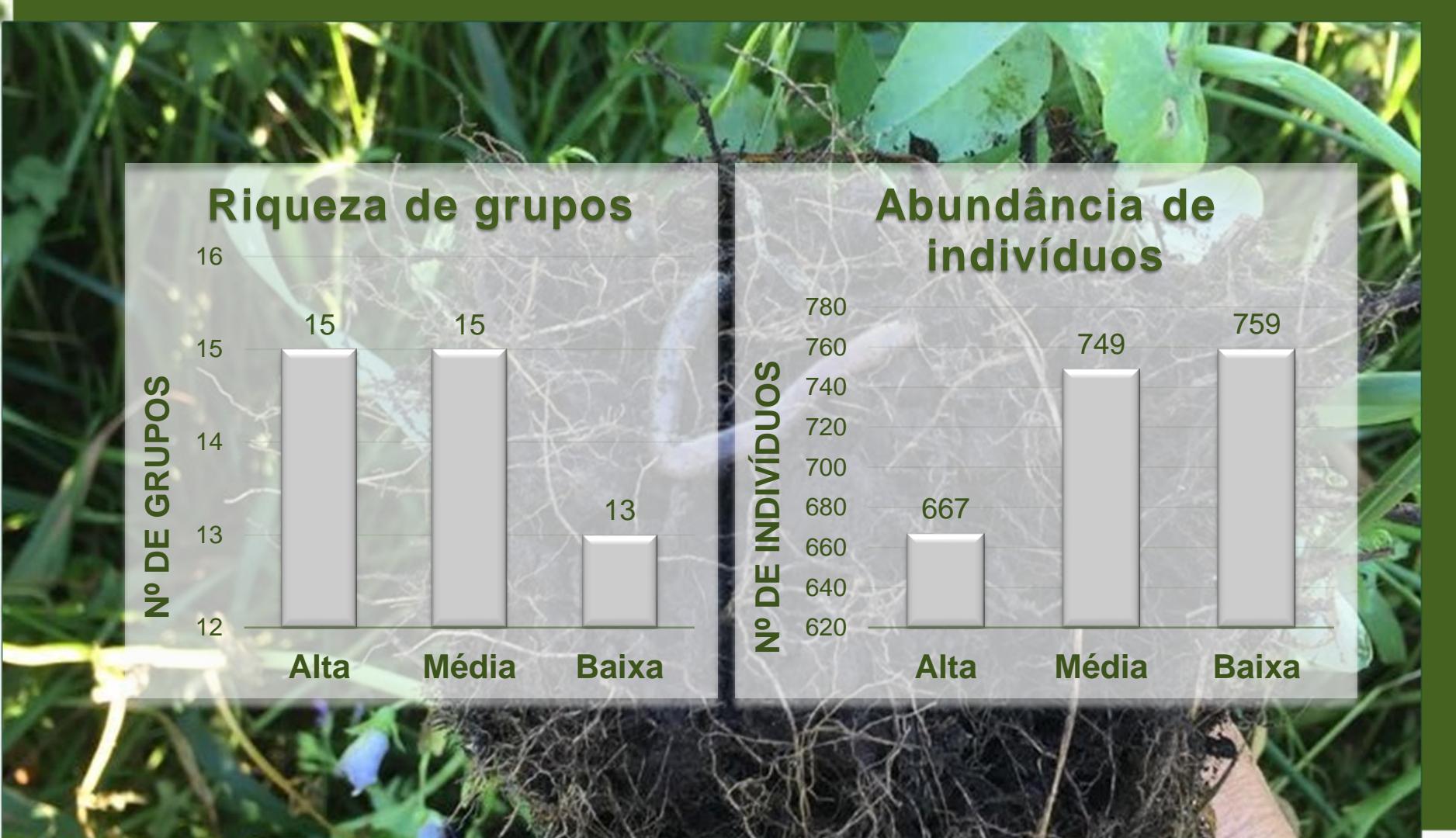




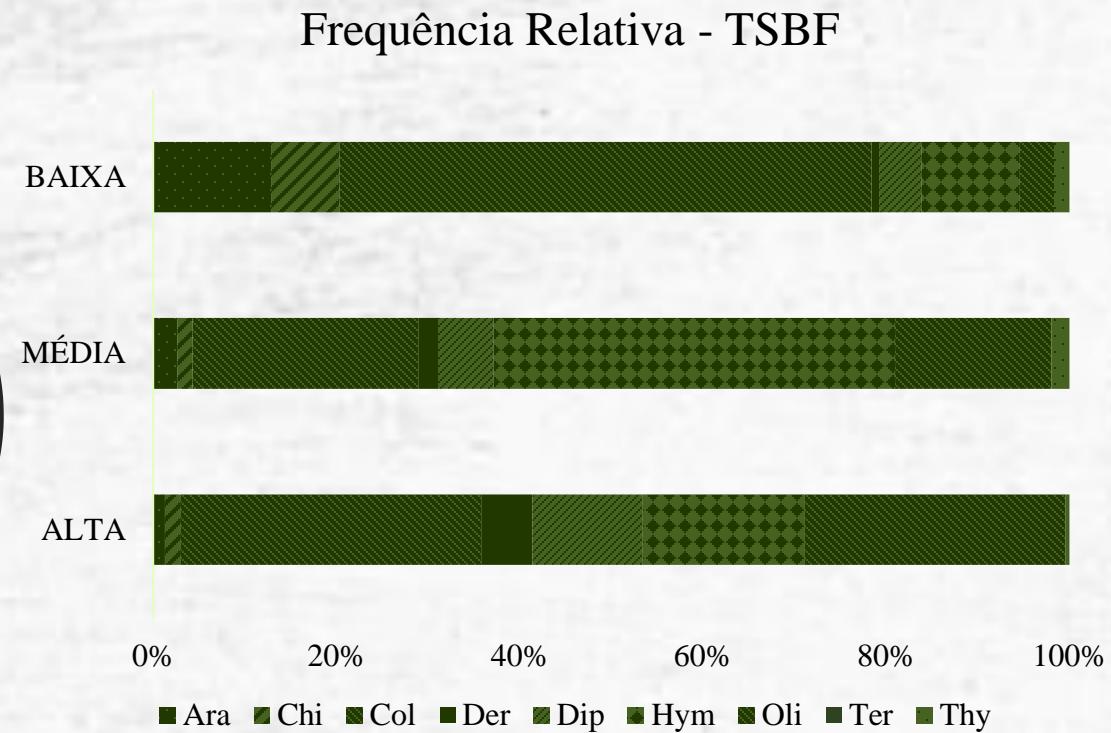
Indicadores Microbiológicos



Fonte: Udesc, 2019.



Fauna do solo – Capturadas por TSBF



Legenda

Ara: Aranha	Chi: Chilopoda	Col: Coleoptera	Dip:
Diplopoda			
Hym: Hymenoptera		Oli: Oligochaeta	Ter:
Termitidae			
Thy: Thysanoptera			

Fonte: Udesc, 2019.

Existência de Variabilidade no Sistema de Produção.

Baixo

Médio

Alto



Nº
grãos/espiga

Geração de Mapas de Colheita

Faz. Banhado Verde

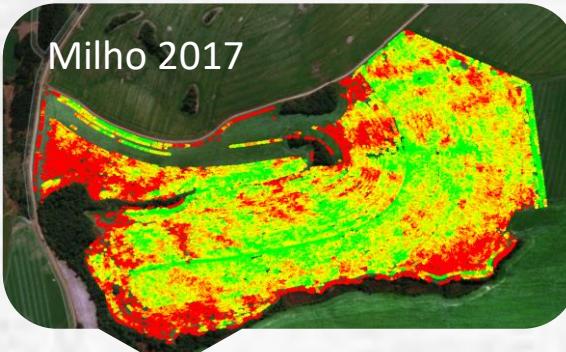
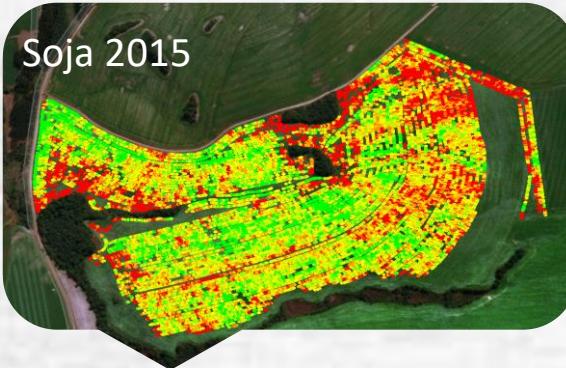
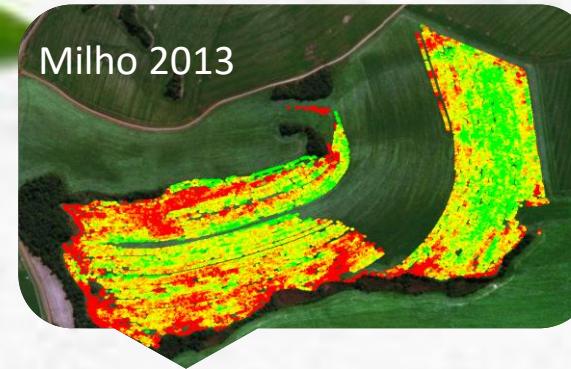
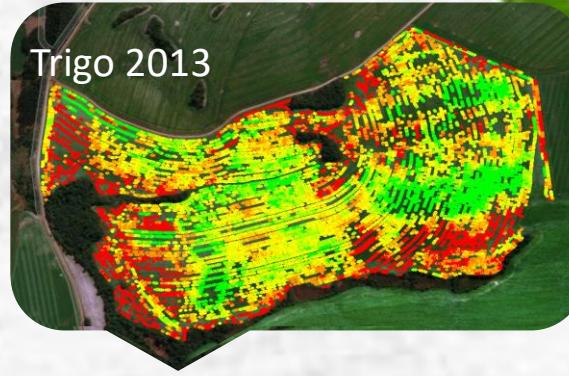
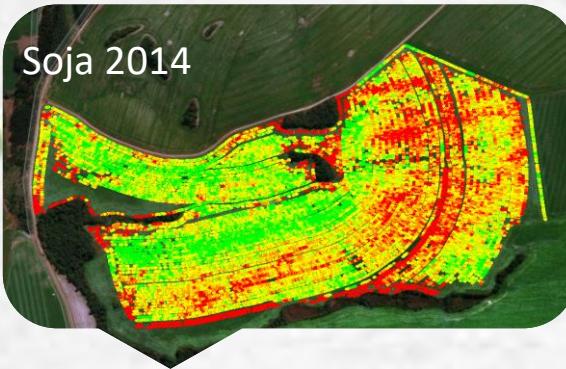


Zona de Baixo Rendimento

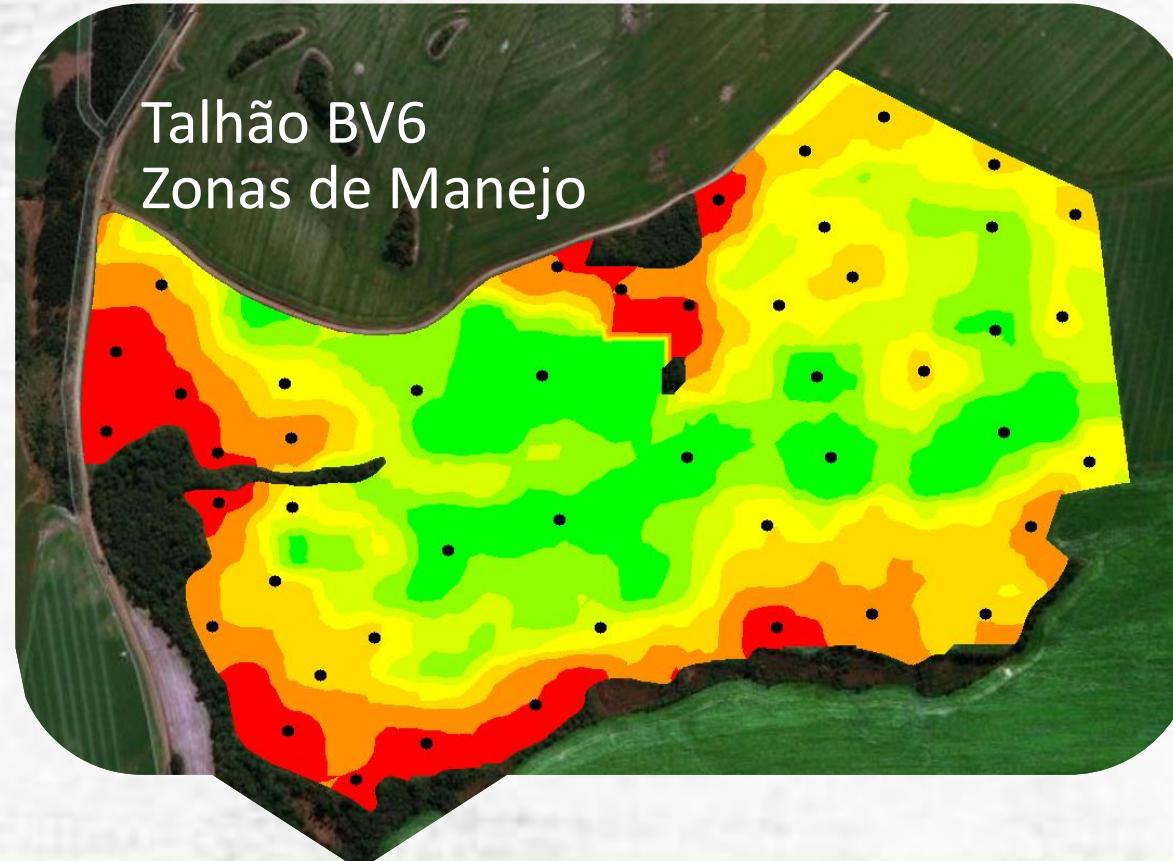


Zona de Baixo Rendimento





Mapas de Rendimento
(Dados Brutos)

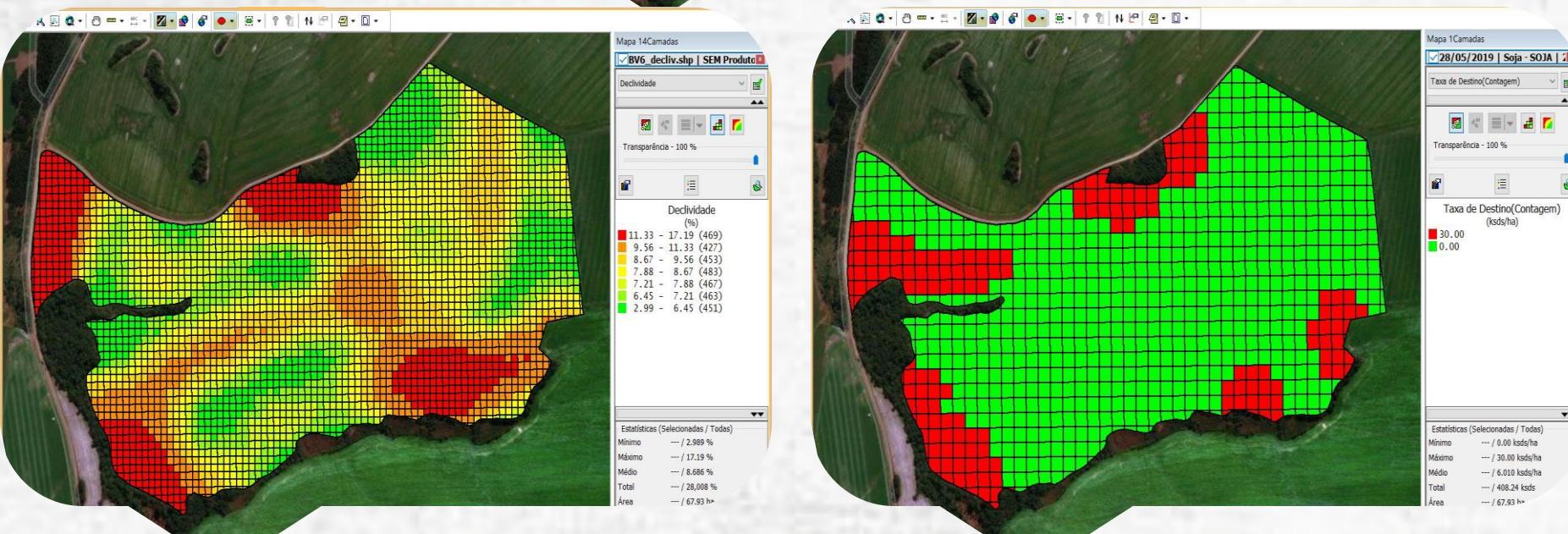
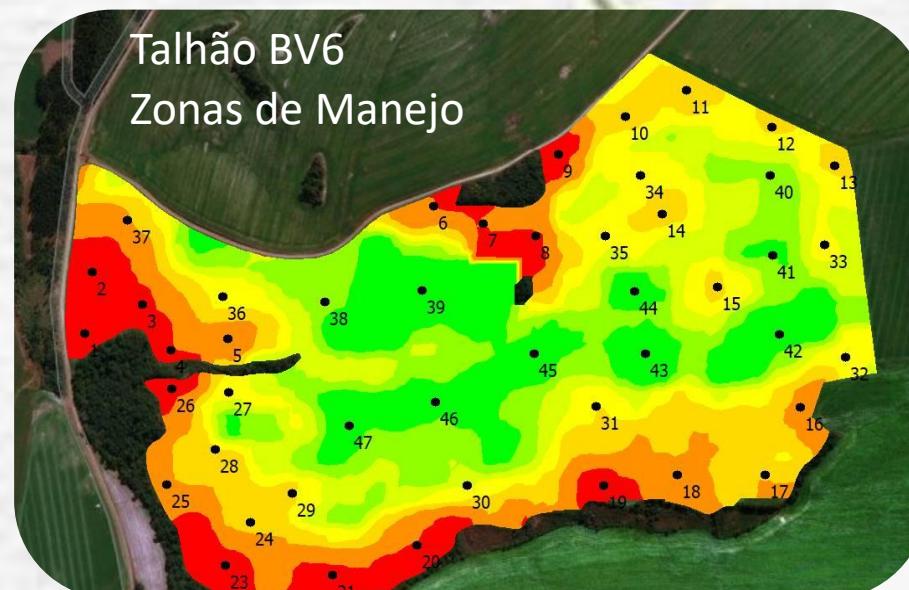


Mapas de Rendimento
(Dados Filtrados)

Investigação dirigida
Espacialização e Estabilidade da produção

Talhão BV6

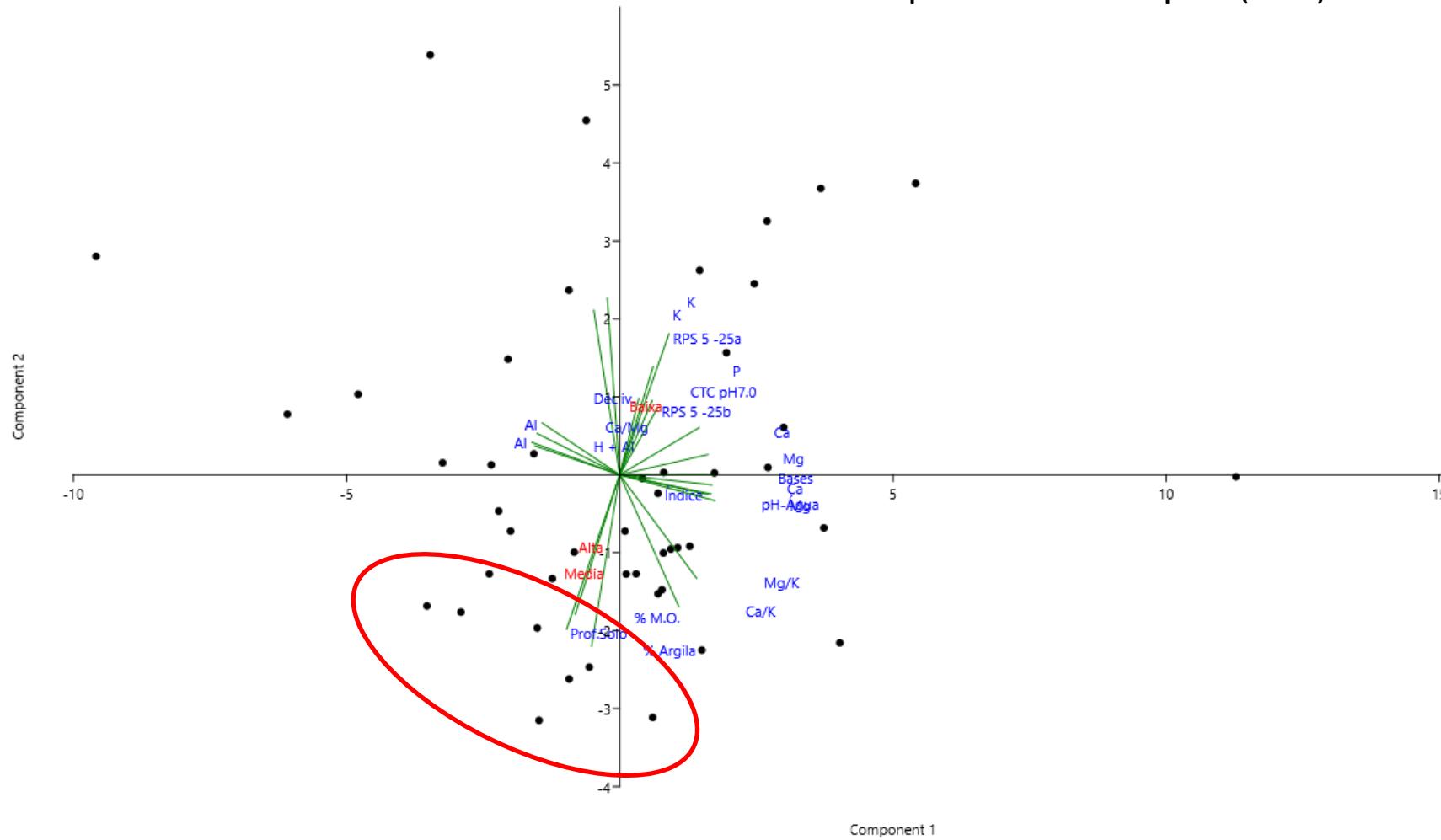
Zonas de Manejo

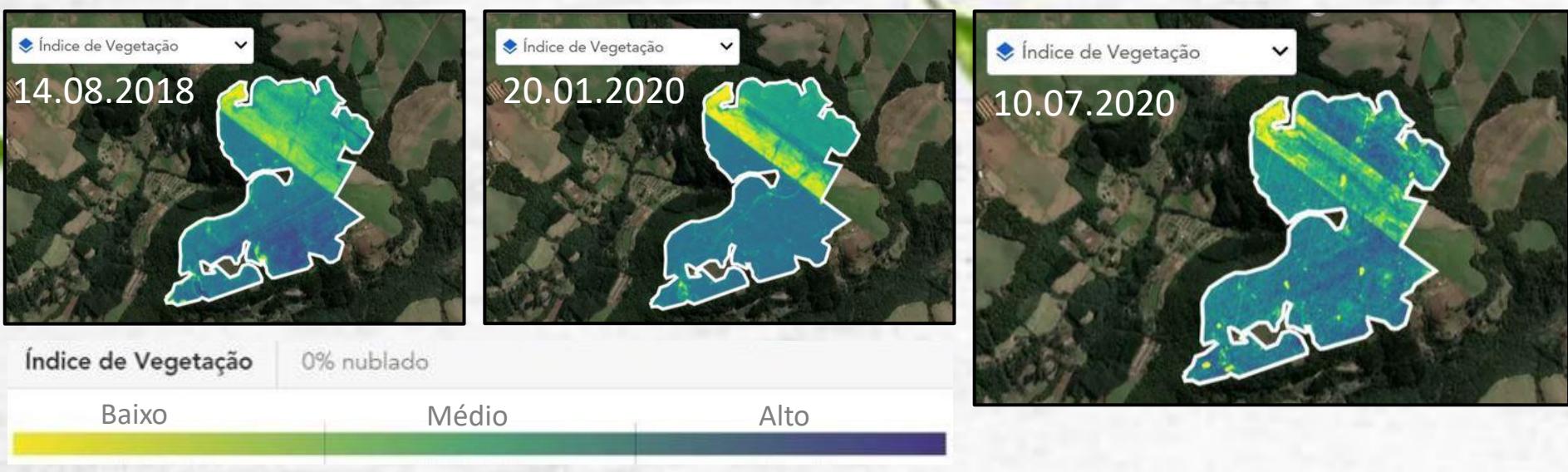


Declividade (%)

Profundidade de solo

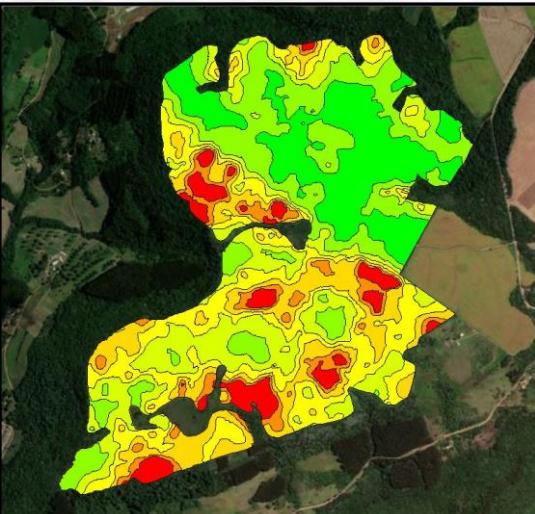
Talhão BV6: Análise Multivariada – Análise de Componentes Principais (PCA)



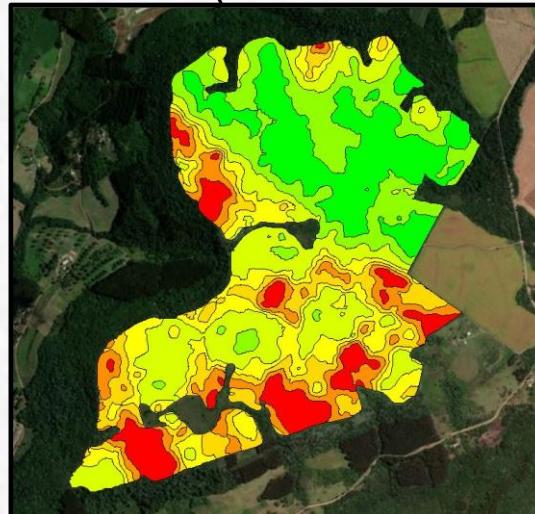


DESENVOLVIMENTO VEGETATIVO ATRIBUTOS QUÍMICOS DO SOLO

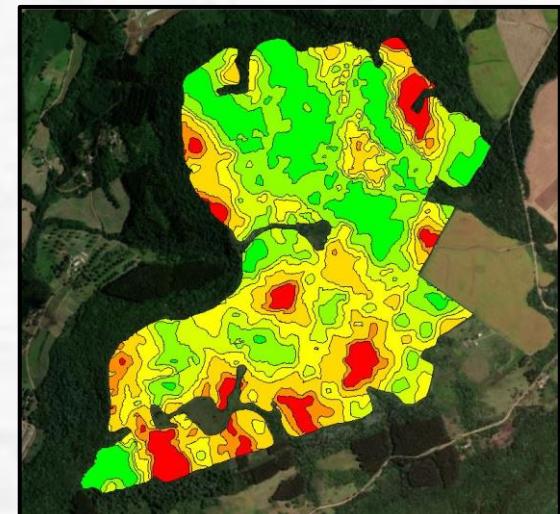
pH Água 1:1



VERSUS
Saturação de Cálcio



Saturação de Magnésio

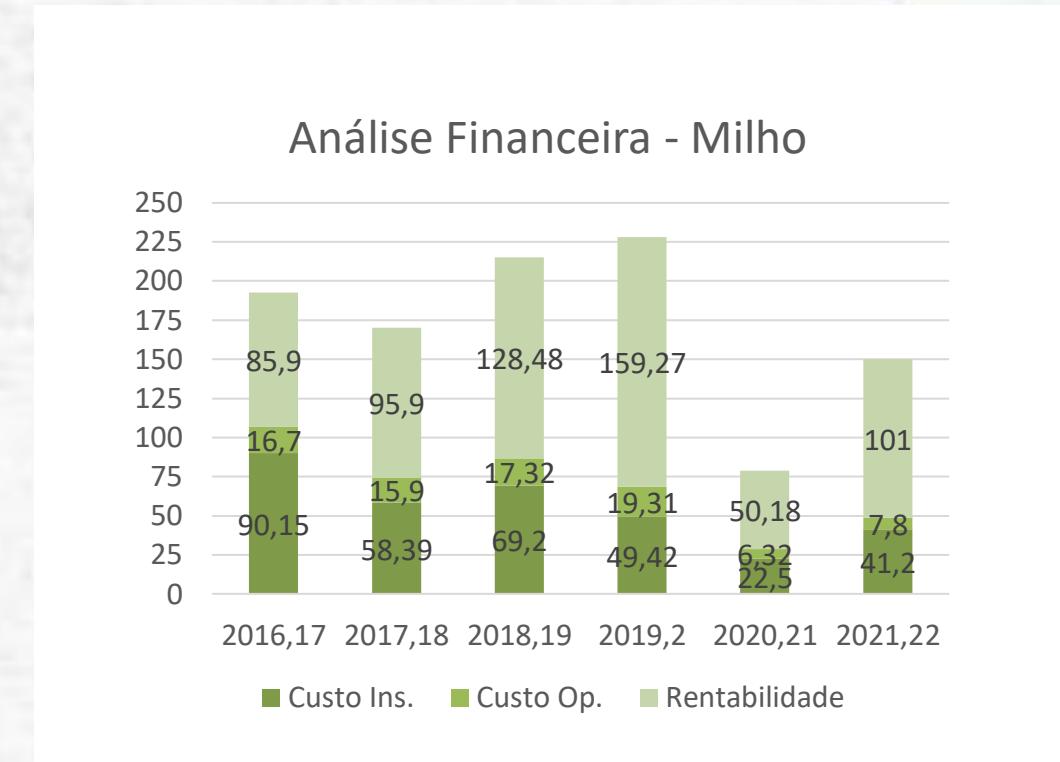
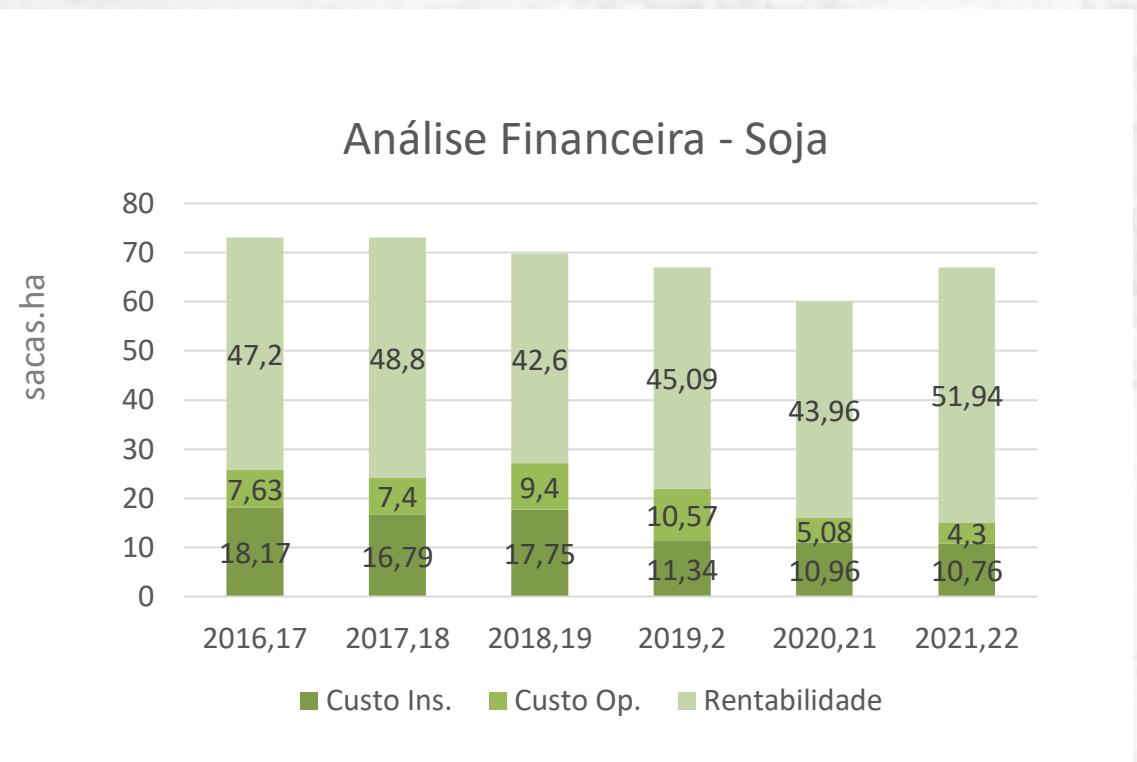






Construção do Ambiente de Produção







OS PROGRAMAS DESENVOLVIMENTO E SUSTENTABILIDADE AMBIENTAL E GRÃOS DA EPAGRI JUNTAMENTE COM O ESCRITÓRIO MUNICIPAL DE FAXINAL DOS GUEDES CONVIDAM:

DIA DE CAMPO

Família Alessio

04/08/21
13h às 17h
Fazenda Banhado Verde
Faxinal dos Guedes/SC

Venha conhecer a propriedade da família Alessio, pioneira no plantio direto no Oeste de Santa Catarina, referência na produção sustentável de grãos.

Programação

- Agricultura regenerativa e sustentável: é possível?
- Utilização de plantas para cultivo e cobertura do solo
- Trincheira: avaliação do perfil do solo (raízes de plantas, compacação, infiltração de água e matéria orgânica)
- Uso do rolo face para a semeadura das culturas
- Utilização dejetos animais na construção da fertilidade do solo

Vagas limitadas
Participe!



Inscrição no Escritório Municipal da Epagri de Faxinal dos Guedes - SC
Contato: (49) 3382 2178

Epagri
DEPARTAMENTO ESTADUAL DE
DESENVOLVIMENTO RURAL













**IMENSAMENTE GRATO
PELA OPORTUNIDADE DE
DIVIDIR ESTE MOMENTO
COM TODOS VOCÊS.
OBRIGADO!**