



Velvet Bean Cover Crop

for Sweetpotato Pest Management

Prepared and Presented by
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Historical Perspective of Velvet Bean



Created by Khulqi Rosyid
from Noun Project

Traditional medicine

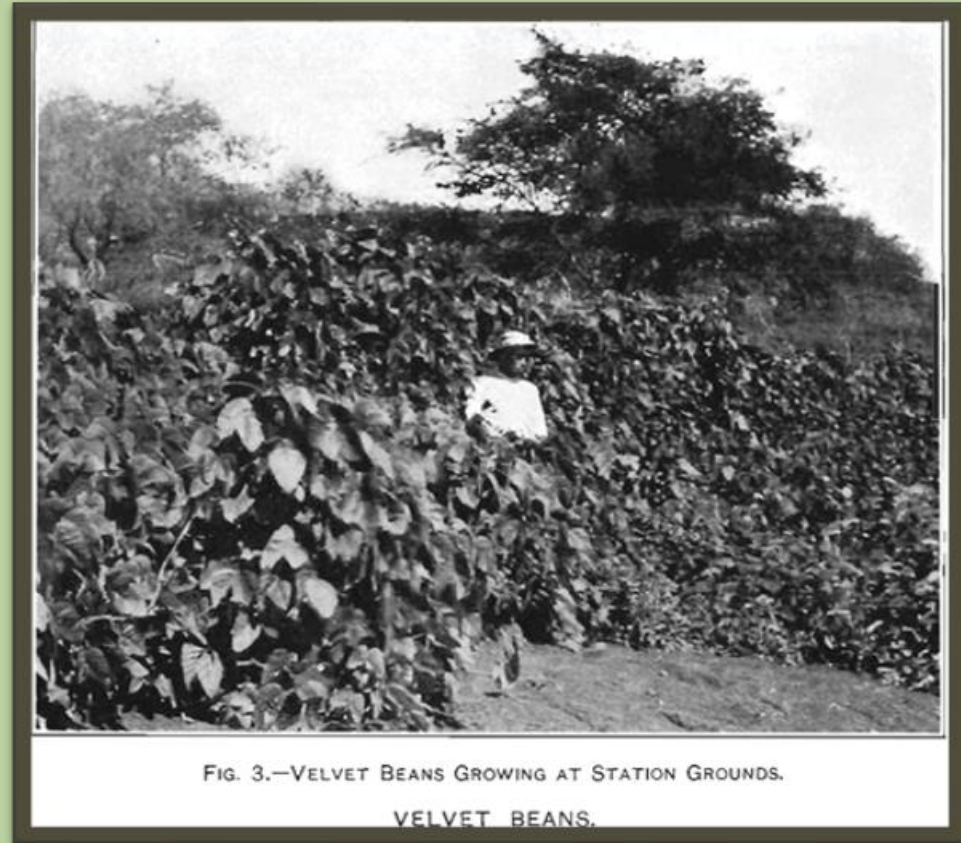


FIG. 3.—VELVET BEANS GROWING AT STATION GROUNDS.

VELVET BEANS.

1911 Hawaii Agriculture Experiment Station Bulletin.

Agricultural Properties of Velvet Bean



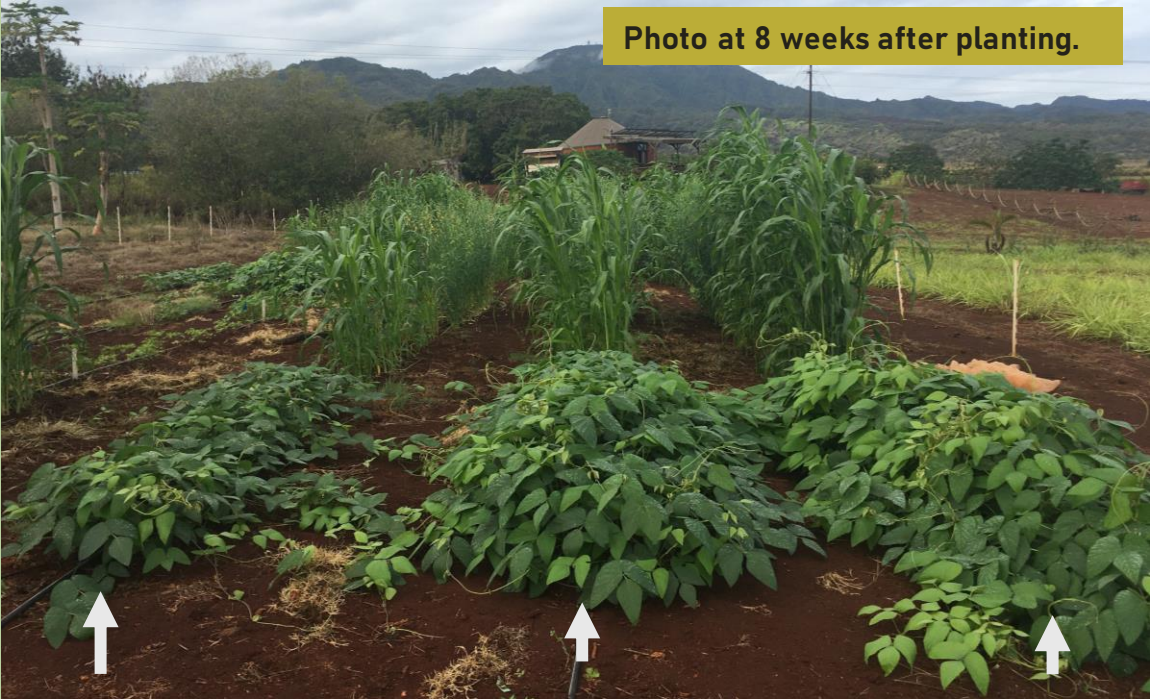
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N-fixer



Velvet bean is drought tolerant.



Irrigation:	2 weeks	4 weeks	8 weeks
13-week biomass:	10 ton/acre	21 ton/acre	32 ton/acre

Agricultural Properties of Velvet Bean



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Agricultural Properties of Velvet Bean



Created by emkamal kamaluddin
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Velvet bean produces a heavy canopy to outcompete weeds.



Photo taken 13 weeks after planting by Melanie Pitiki.

Agricultural Properties of Velvet Bean



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Velvet bean produces abundant biomass.

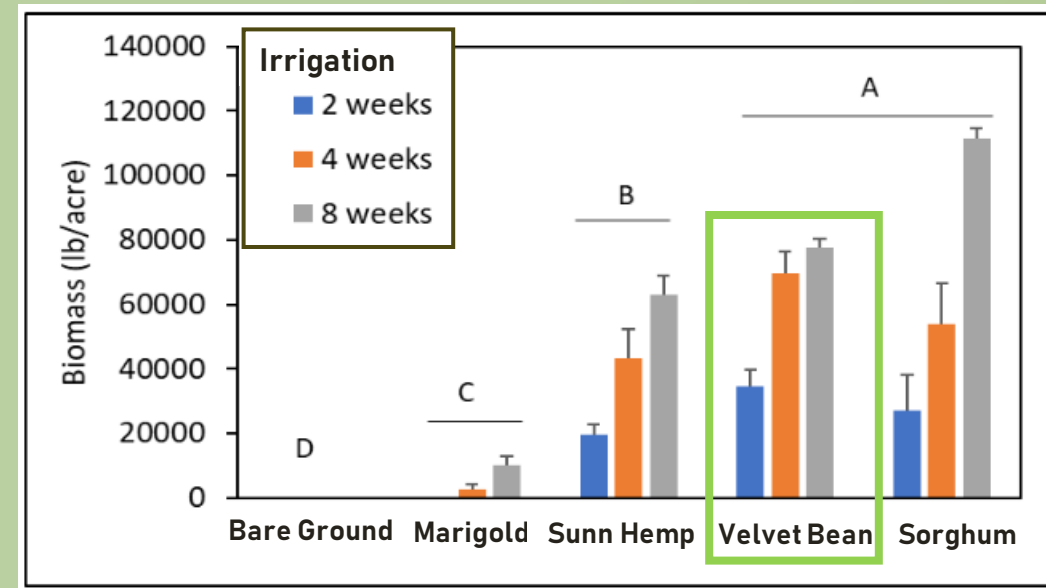


Figure created by Melanie Pitiki and Koon-Hui Wang and published in Hana'ai (<https://go.hawaii.edu/n4c>).

Agricultural Properties of Velvet Bean



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Agricultural Properties of Velvet Bean



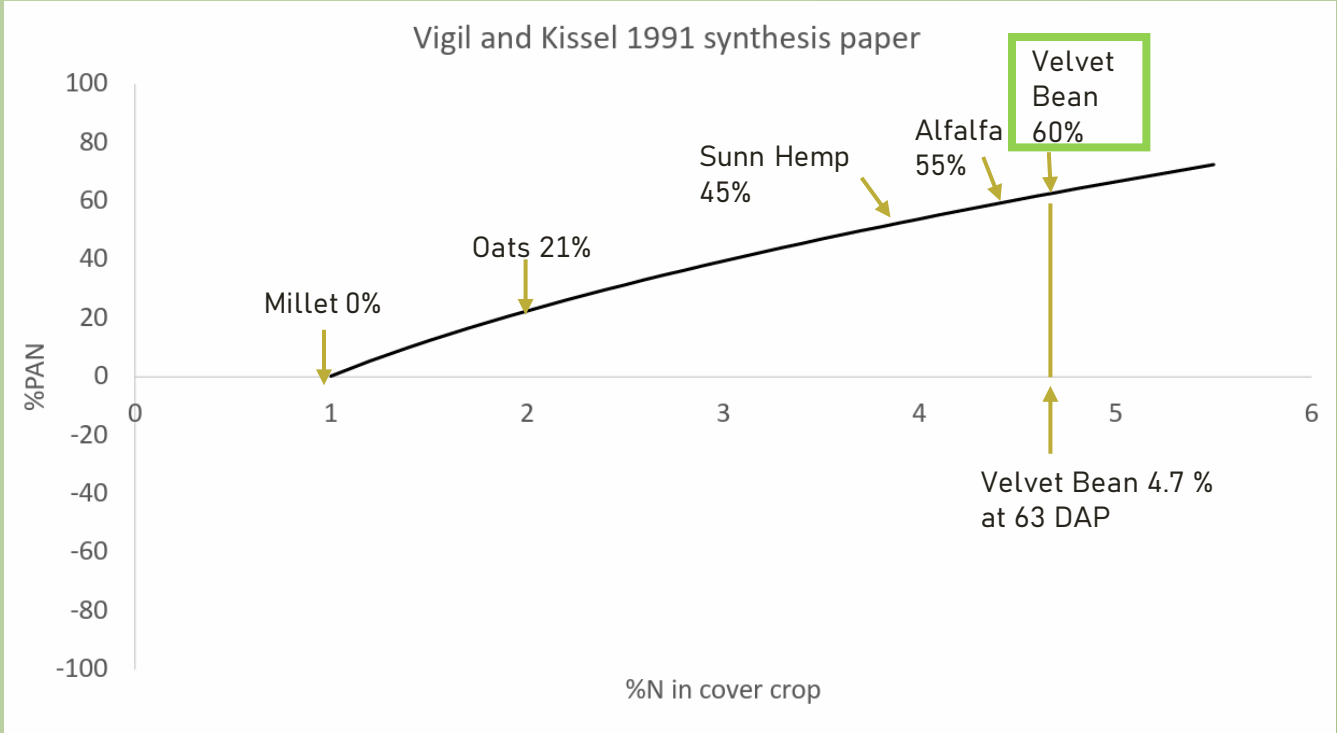
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Velvet bean fixes nitrogen.



Agricultural Properties of Velvet Bean



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Agricultural Properties of Velvet Bean



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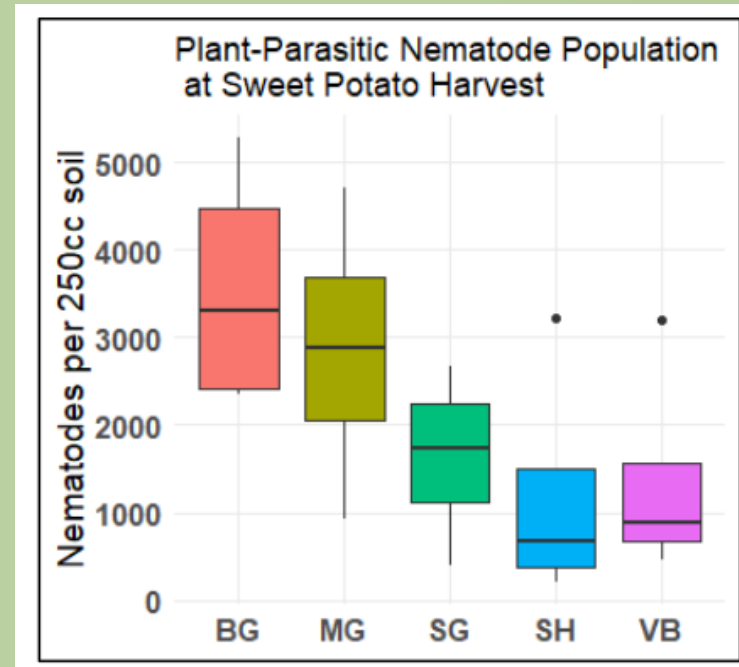
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Early results show that velvet bean suppresses reniform nematode and the effect endures until harvest.



Agricultural Properties of Velvet Bean



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Agricultural Properties of Velvet Bean



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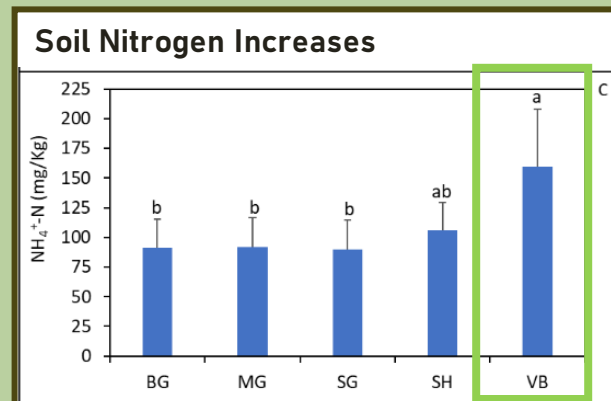
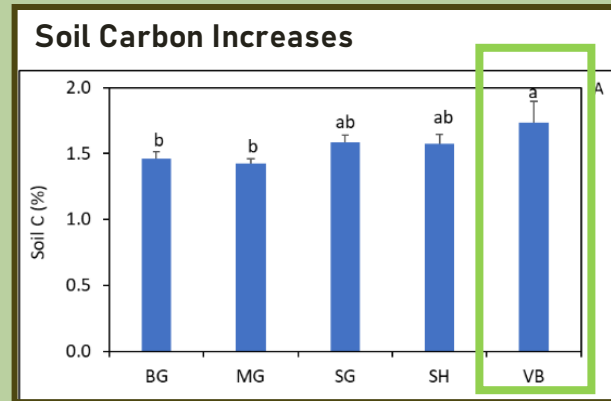
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Velvet bean promotes soil health.



Soil Microbial Community is More Diverse

Trt	Diversity	Fungi (ng/g)	AMF (ng/g)
BG	1.11 b	13.05 b	0.00 b
MG	1.14 b	51.80 ab	3.79 b
SG	1.16 b	27.96 b	4.86 b
SH	1.13 b	22.70 b	0.40 b
VB	1.30 a	105.96 a	33.06 a

Cultivation of Velvet Bean



Versatile pH: 5-8

Well drained soil.

Plant seeds 12 inches apart in rows 4-5 feet apart.

Bush type and runner type.



Weediness has been a problem in Florida.

Properly terminate crop.



The Sustainable Pest Management Laboratory has seeds available.

Contact Dr. Koon-Hui Wang at koonhui@hawaii.edu.

Velvet Bean Cover Crop Summary

- Drought resistant
- Weeds suppressant
- Quick and abundant biomass
- Nitrogen fixing
- Nematode suppressant
- Soil-health promoting
- SEEDS AVAILABLE

Questions?

