



Naterra Worldwide

Worldwide sourcing for natural, organic
& fair trade products

The experience of a honey cooperative in Northeast Brazil



Claudia Chaves

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Location of **BRAZIL** in World



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COMAPI is located in Simplicio Mendes, a small town in the state of Piaui, part of the ecoregion called CAATINGA





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The CAATINGA ecoregion covers an area of approximately 380,000 square miles, representing 10% of the Brazil's territory.





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CAATINGA is a type of vegetation, and a semi-desert ecoregion characterized by this vegetation in the northeastern part of Brazil. The name "Caatinga" is a Tupi word meaning "white forest" or "white vegetation" (*kaa* = forest, vegetation, *tínga* = white).





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The CAATINGA has only two distinguishable seasons: the summer when it is very hot and dry, and the winter when it is hot and rainy. During the dry summer periods there is no foliage or undergrowth.





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Despite its semi-desert climate, approximately 15 million people live in that region and are regarded as the poorest inhabitants of Brazil.





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There are little drinkable water sources and harvesting is difficult because of irregular rain fall patterns. The region has a low HDI (Human Development Index) 0.703, reflecting the high level of poverty, illiteracy and low economic vitality.





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Lush vegetation covers the CAATINGA during the rainy season. The great diversity and abundance of native floral sources inspired the Catholic Diocese of Oeiras-Floriano to create a beekeeping experiment in 1989 to test the potential of apiculture in the region.





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The CAATINGA offers many honey-producing native plants, such as “marmeleiro” (*Croton sonderianus*). *Marmeleiro* is responsible for a large crop of a nice mild, light colored honey.





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Angico de Bezerro (*Piptadenia moniliformis*)





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Cipo-Uva (*Serjania lethalis*)





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The experiment was successful and proved that the region had an excellent potential for apiculture. COMAPI - Cooperativa Mista dos Apicultores da Microregiao de Simplicio Mendes was created in 1994 by the Catholic Diocese of Oeiras-Floriano, State of Piaui.





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Today COMAPI benefits 1100 rural families, distributed in 32 communities in 10 counties of the state of Piauí. With 20,000 hives, they sustainably produce and export high-quality organic & fair-trade certified honey. The beekeepers directly benefit from the sales.





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COMAPI OFFERS:

Physical infrastructure:

- ❖ **32 honey extraction facilities – one in each community – with HACCP (Hazard Analysis and Critical Control Points)**
- ❖ **A well equipped central processing plant also with HACCP**
- ❖ **Two trucks – that service all 32 communities and the processing plant**

Services:

- ❖ **Institutional support from SEBRAE (Service of Support for Micro and Small Enterprises) who provides all the training of beekeepers, production and administrative staff on BMP (best manufacturing practices) and food safety.**
- ❖ **Institutional support from other government agencies, programs, banks, foundations and universities.**
- ❖ **Central processing and commercialization of the production**
- ❖ **Technical support to all the communities through professional and trained staff**



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Central processing plant





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Honey extraction facility – “CASA DO MEL” (= honey house)





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- **Before COMAPI, the beekeepers in the area sold their honey at very low prices to middlemen.**
- **The cooperative financed all the beekeeping equipment to the beekeepers in a form of product (honey) equivalence loans.**
- **All the raw honey produced by the participants is delivered to COMAPI for processing and commercialization.**
- **COMAPI retains an agreed quantity of honey from the beekeepers to pay back their loans. The money from the payments is used to finance more/new beekeepers.**



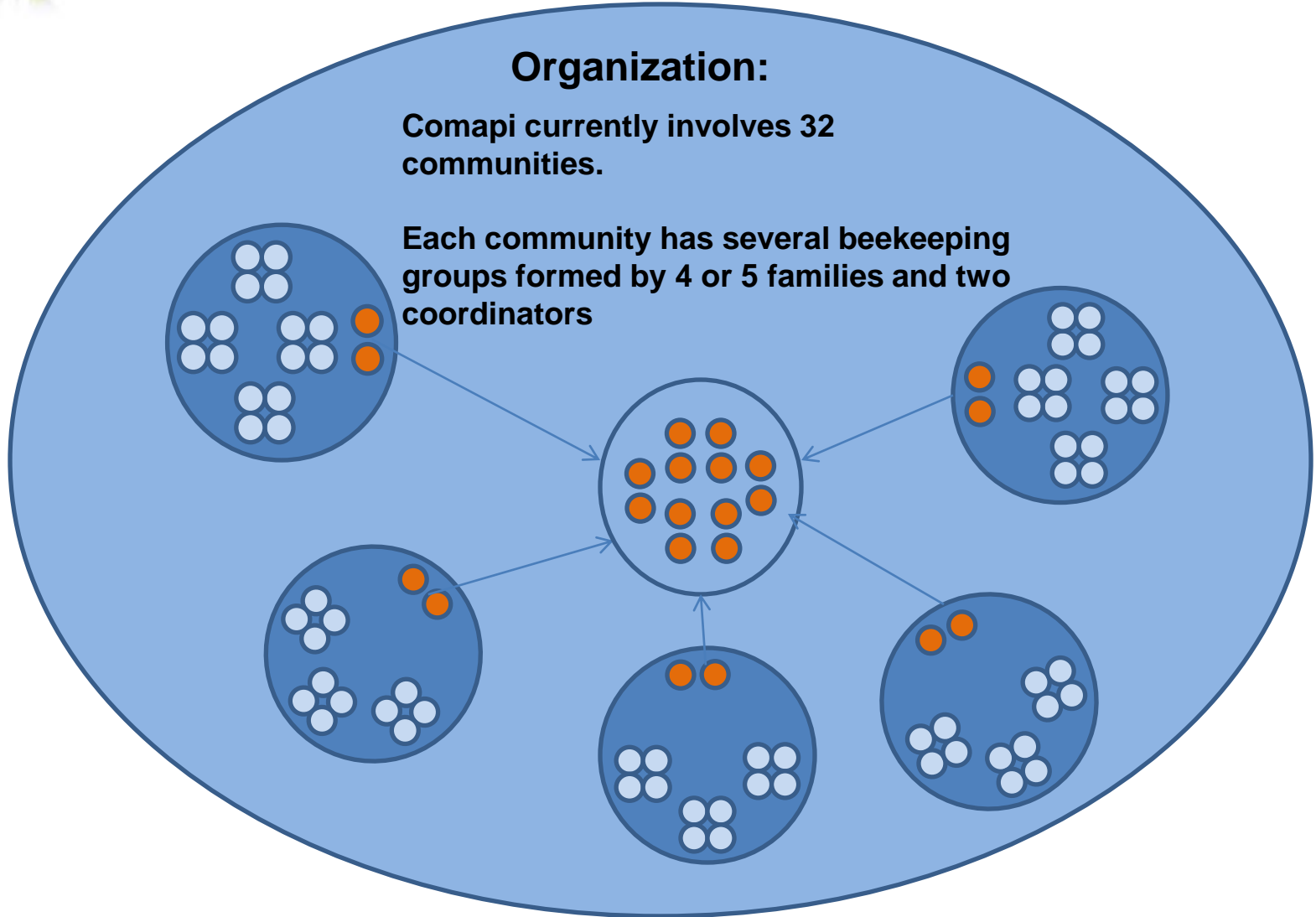
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Organization:

Comapi currently involves 32 communities.

Each community has several beekeeping groups formed by 4 or 5 families and two coordinators





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The two coordinators of each community oversee all the beekeeping work in the community and meet monthly with the members to discuss issues, bring suggestions, concerns and to make decisions.

Everyone in the community is welcome to participate – beekeepers, women, children, elders.





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The two coordinators of each community meet quarterly with the administrative staff of COMAPI to discuss issues and make deliberations. The coordinators bring back and discuss with the community the issues discussed at the general meetings





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- **The community works together to build the infrastructure – extraction facilities and processing plant.**
- **Materials and equipment are financed by the Dioceses, private donations and by the Brazilian government, through programs to combat poverty.**





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COMAPI is part of Project Apis - Sustainable and Integrated Apiculture – a national program led by Sebrae (Service of Support for Micro and Small Enterprise) and in partnership with several other national training institutions such as Senai, Senac, Sesc and Sesi, to promote and develop sustainable apiculture in poor rural areas of the country. The project currently supports 22 apiculture projects in 418 counties, directly benefiting close to 13,000 beekeepers that are organized in 283 associations and 42 cooperatives.



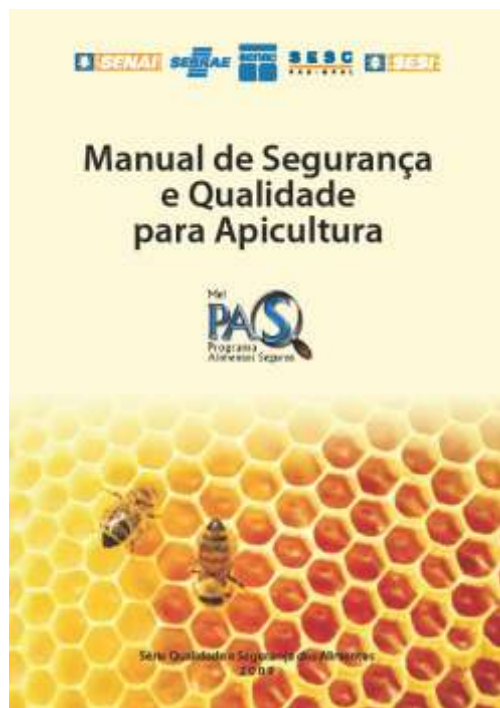
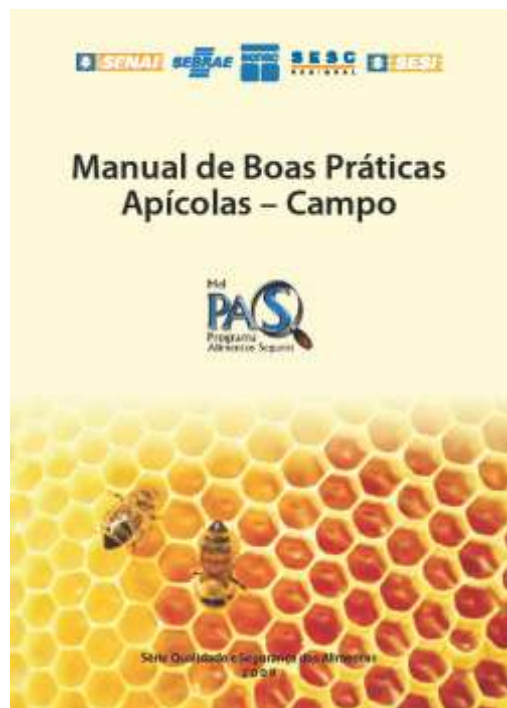


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The Project Apis is also standardizing nationally all the procedures for honey production – field, processing and testing, in compliance with the international food safety requirements and regulations, such as EEUU resolutions 852, 853 e 854.

PAS Mel is the national Program for Safe Food specific for honey. Program's objective is to implement HACCP and BMP throughout the entire production cycle.





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Beekeeping and BMP (best manufacturing practices) training provided by Sebrae





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Beekeeping:

All the beekeeping work is done collectively in groups of 4 to 5 families.





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Beekeepers always work together





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With the Africanized bees





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Extraction:

Honey frames are carefully transported from the hives to the extraction facility.

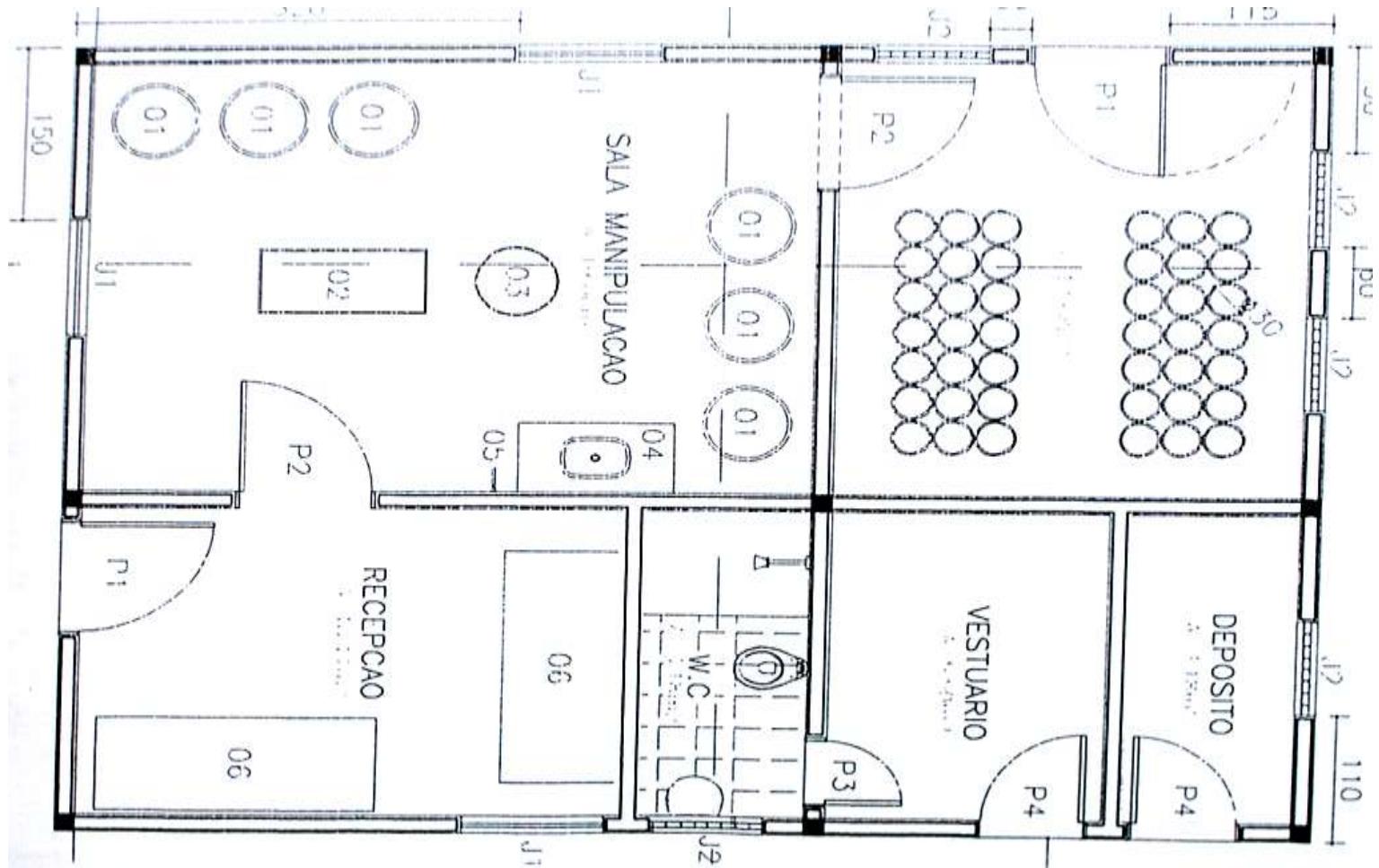




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Standard layout/plan of extraction facilities





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Decapping





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Centrifuging





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Centrifuged honey is placed in 1000 kg stainless steel tanks where rests for 24 – 48 hours.





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After settling, raw honey is poured in 60 lb plastic pails and transported to the central processing facility. Each pail is identified with a lot number and that links to the community and the beekeepers that produced the honey.





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Before released for production, each raw honey lot is tested for color, moisture, HMF (HydroxyMethylFurfuraldehyde) in in-house laboratory.





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**After released for production, raw honey is homogenized in lots of 10 MT (22,000 lbs), de-humidified and filtered.
All process is done at maximum temperature of 100F.**





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Before processed honey can be sold, each lot must be tested by the in-house laboratory and by the Department of Agriculture's accredited laboratories. A COA (Certificate of Analysis) is issued for each lot.

	Embrapa Melo-Norte Laboratório de Controle da Qualidade de Produtos Apícolas Av. Duque de Caxias, 5650, Buenos Aires. C. Postal 01 Fone: (85) 3225-1141 FAX (85) 3225-1142 Teresina - PI		
	RELATÓRIO DE ENSAIO ANALÍTICO		
Nº: 083/2008		Teresina, 02 de junho de 2008	
Requerente:	Associação dos Apicultores da Microrregião de Simplicio Mendes - AAPJ		
Endereço:	Rua João Paulo I S/N - Nova Cidade		
Identificação da Amostra			
Número:	083/2008		
Produto:	Mel		
Marca:	Nutrivo Mel		
Cidade:	Simplicio Mendes - PI		
Data de entrega no Laboratório:	21/06/2008	Lote: 03/08	
Data de Coleta:		Flórida	Bivésio
ENSAIOS FÍSICO-QUÍMICOS			
ENSAIOS	RESULTADOS	PARÂMETROS	REFERÊNCIA
Apóreas Redutores	89,77	Mínimo 65g/100g	CAC/Vol. II, Supl. 2, 1990, 7.1
Umidade	19,00	Máximo 20g/100g	A.O.A.C. 16 th Edition, Rev. 4 ^a , 1995-069.369
Sacarose aparente	1,82	Máximo 5g/100g	CAC/Vol. II, Supl. 2, 1990, 7.2
Sólidos ins. em água	0,08	Máximo 0,1g/100g	CAC/Vol. II, Supl. 2, 1990, 7.4
Minerais (cinzas)	0,07	Máximo 0,0g/100g	CAC/Vol. II, Supl. 2, 1990, 7.5
Acidez	32,50	Máximo 50mg/kg	A.O.A.C. 16 th Edition, Rev. 4 ^a , 1995-062.19
Atividade Diastásica	10,71	Mínimo 8 esc. Gothe	CAC/Vol. II, Supl. 2, 1990, 7.7
Hidroxiacetofuronal (HMF)	5,43	Máximo 50mg/kg	A.O.A.C. 16 th Edition, Rev. 4 ^a , 1995-080.23
Brix	79,55	-	A.O.A.C. 16 th Edition, Rev. 4 ^a , 1995-069.389
Cor	Extra Ambar claro	-	Brasil, Ministério da Agricultura 1291
HMP	<input checked="" type="checkbox"/> CARREZ	<input type="checkbox"/> CRIMATÓGRAFIA LÍQUIDA	
COR	<input checked="" type="checkbox"/> ESPECTROFOTOMÉTRICO	<input type="checkbox"/> COLORIMÉTRICO	
ENSAIOS MICROBIOLÓGICOS			
ENSAIOS	RESULTADOS ufc/ml	PARÂMETROS	REFERÊNCIA
Bactérias e Leveduras	-	100 ufc/ml	AP.H.A., 2nd. Ed. 1984
Coformes a 38°C	-	0 ufc/ml	AP.H.A., 2nd. Ed. 1984
Coliformes a 48°C	-	0 ufc/ml	AP.H.A., 2nd. Ed. 1984
Salmonella spp.	-	0 ufc/ml	AP.H.A., 2nd. Ed. 1984
OBSERVAÇÕES:			
1 - A coleta e o transporte da amostra é de responsabilidade do requerente			
2 - Estes resultados referem-se apenas a amostra analisada			
CONCLUSÃO:			
A amostra apresenta-se em ACORDO com o Regulamento Tec. de Identidade e Qualidade do Mel, Inst. Normativa nº 11, de 20/10/2000, Publicada no DOU de 23/10/2000, seção I p. 16-17.			
 Ana Lucia Horta Barros Analista A da Embrapa Melo Norte		 Ricardo Costa Rodrigues de Camargo Pesquisador da Embrapa Melo Norte	



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Processed honey is packaged in food grade 55 gallon steel drums for export





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Processed honey is also packaged in various retail containers for domestic market.





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Benefits of the project:

Honey revenue increased families income by an average of 65% - in some cases doubled their income.

Created the opportunity for the participants to work collectively and practice democratic principles.

Increased awareness about the environment

Stimulated local economy

Inspired and created other projects that benefit the communities .



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Other projects associated with honey production:

Construction of more than 1000 cisterns to supply safe water to the families during the dry season





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Restoration of native flora: Comapi distributes and plants 35,000 native trees per year. Most of them are honey-producing trees.





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▪
Goat raising for meat and dairy production.





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COMAPI's goals for 2010:

Finalize process and obtain fair trade certification with FLO (Fairtrade Labeling Organization) <http://www.fairtrade.net/>

Add 300 new families/beekeepers to cooperative

Add 3000 new hives

Certify 12 of the 32 honey extraction facilities to export to Europe



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Long term goals:

Improve productivity: from current average of 35 lbs/hive/year to 80 lbs/hive/year.

Promote domestic honey consumption:

- ❖ Brasil = 60 grams (2.3 oz) /per capita/year**
- ❖ USA = 910 (32 oz) grams/per capita/year**
- ❖ Germany = 960 (33.9 oz) grams/per capita/year**
- ❖ Swiss = 1,500 (53 oz) grams/per capita/year**



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Also part of SEBRAE's Apis Project is CASA APIS – a central cooperative formed by 9 beekeepers cooperatives from the states of Piaui and Ceara.





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And the recently inaugurated *CENTRAPI - Centro Tecnológico de Apicultura* (Apiculture Technology Center) located next to CASA APIS in Picos, Piauí. CENTRAPI is the first Brazilian research organization dedicated exclusively to apiculture studies.





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**THANK YOU!!!!
OBRIGADA!!!!**

Export agent:

Claudia Chaves

Naterra Worldwide

Claudia@naterraworld.com

Claudia_chaves@msn.com

Phone: +1 952 250-6681

www.naterraworld.com

