

## ETNOBOTANIC AND ETNOVET IN JACU SETTLEMENT IN MUNICIPALITY OF POMBAL-PARAIBA - BRAZIL

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**ABSTRACT** - The current ethnobotanical studies record the use of medicinal plants as giving large awareness through models and empirical use of phototherapy between communities and their people. This research aimed to an ethnobotanical and ethnovet survey in the Jacu settlement in the municipality of Pombal - PB. In the survey, it was through the residents, the rescue register the use of the medicinal species usually used as well as its therapeutic use. It was administered a questionnaire to residents of the settlement addressing the general issues around the use of medicinal species, the interviews were conducted with 30 of the 40 families residing in the settlement, aged between 25 and 70 years, the questions were about plants use proven in people and animals. Information was collected between the months of January and February 2011. 40 have been classified as medicinal plants taken, and confirmation of its uses and effectiveness of all. The families of plants that most appeared were: *Fabaceae*, *Verbenaceae*, *Capparaceae*, and *Asteraceae*. The species of medicinal use are used throughout the year, requiring more research so that, using the same can be increasingly widespread especially with the population of settlements.

**Keywords:** Popular Medicine, Phytotherapy, Healing substances.

## ETNOBOTÂNICA E ETNOVETERINÁRIA NO ASSENTAMENTO JACÚ MUNICÍPIO DE POMBAL – PARAÍBA - BRASIL

**RESUMO** – Os estudos etnobotânicos na atualidade registram o uso de plantas medicinais dando como grande dimensão a conscientização através de modelos e uso empírico da fitoterapia entre comunidades e seu povo. Esta pesquisa teve como objetivo fazer um levantamento etnobotânico e etnoveterinário no Assentamento Jacú no Município de Pombal - PB. Na pesquisa, procurou-se através dos moradores, registrarem o resgate do uso sobre as espécies medicinais costumeiramente utilizadas, assim como seu uso terapêutico. Foi aplicado um questionário com aos moradores do assentamento abordando temas gerais à cerca do uso das espécies medicinais, as entrevistas foram realizadas com 30 famílias das 40 que residem no assentamento, com idade entre 25 e 70 anos, as questões versavam sobre plantas de uso comprovado em pessoas e animais. As informações foram coletadas entre os meses de janeiro e fevereiro de 2011. Foram catalogadas 40 plantas tidas como medicinais, tendo a confirmação de seus usos e eficácia de todas. As famílias das plantas que mais se destacaram foram: *Fabaceae*, *Verbenaceae*, *Asteraceae* e *Capparaceae*. As espécies de uso medicinal são usadas durante todo ano, necessitando de mais pesquisas afim de que, o uso das mesmas possa ser cada vez mais difundido principalmente com as populações de assentamentos.

**Palavras-chave:** Medicina popular, Fitoterapia, Substâncias curativas

### INTRODUCTION

The Ethnobotanic Research has been growing in recent decades in many parts of the world, especially in Latin America, and particularly in countries like Mexico,

Colombia and Brazil (HAMILTON et al. 2003). According to the World Health Organization (WHO), approximately 80% of the population uses some type of grass to relieve ailments, however, less than 30% of it under medical supervision.

*Revista Verde (Mossoró – RN – Brasil) v.6, n.4, p.149 – 156 outubro/dezembro de 2011*

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Martinez - Alfaro (1994) highlights the interest in the subject has attracted the scientific community in Latin America, although 52% of publications in international journals have been developed in Latin America by North American, English and French. In this survey of South America had produced 41% of the study Latin America, and most of them have been developed by national of the following countries: Uruguay (100%), Argentina (90%), Chile (78%), Brazil (67%) and Paraguay (61%).

According to Marques (2000), Brazil stands out for being the world's most biodiversity country having about 22% of all biological species in the world. Given this large amount of biological resources, Brazil is also notable in another respect as regards the forest wealth, forests in Brazil have a large number of species that have medicinal and therapeutic purposes. Brazil has a large genetic potential to be explored and it is estimated that this plant worth about 16.5 billion represents genes (RAMOS, 2000).

The use of medicinal plants, which are often grown in the backyard, is a practice that is based on popular knowledge and, most often handed down from generation to generation. Every plant has one of its organs or whole plant compounds that can be used for therapeutic purposes and is widely used by alternative medicine (AMOROSO, 2002).

Numerous chemical compounds are synthesized by plants as nutrients, water and light they receive. When these compounds or groups of them; cause reaction in living organisms, they are called "active ingredients". Depending on the dosage used, these compounds may be toxic or not. Thus, "Medicinal Plant is one that contains one or more active ingredients; giving it a therapeutic activity" (MARTINS et al., 1995). In the state of Paraíba, use of herbs for therapeutic purposes is still very common especially in the rural and urban low-income (AGRA and SILVA, 1993).

With this awareness ethnobotanical studies in the interior of Paraíba, will contribute to the recovery of this practice, making more and more communities are using these means, thereby aiming at good quality of life for its people. The ethnobotanic is the study of human societies, past and present, and their ecological interactions, genetic, evolutionary, cultural and symbolic with the plants, (ALEXIADES and SHELDON 1996).

The ethnobotanic works in close complicity with other subjects related to the ethnopharmacology: "As a strategy in the investigation of medicinal plants, ethnopharmacological approach is to combine information acquired from users of medicinal plants (traditional communities and experts), with chemical and pharmacological studies" (ELIZABETSKY, 2003).

While Ethnovet is the science involving the views and knowledge of common practices used for the treatment or prevention of diseases that affect animals of economic interest (MATHIUS-MUNDY and MCCORKLE, 1989).

The Ethnovet to McCorkle (cited AVANCINI, 2002), is the pursuit of understanding of indigenous knowledge, traditional or pastoral about the beliefs and methods relating to the care of animals. The animal production is addressed in ecological aspects, socioeconomic, cultural and political, within an integrated vision. Medicinal plants, in this context, besides the use in human and animal health, have a great potential and its use in agro-ecology practices, especially in ecological farming.

According to Petkov (1979), an interesting feature of popular medicine is that almost all their information on herbal and other healing substances, on hygiene, the principles and practices designed to protect the health or cure disease is transmitted orally from generation to generation.

Many ethnovet practices are known in several Asian countries, especially India, Nepal, Sri Lanka, Pakistan, Bangladesh, Myanmar, Thailand, Indonesia, Malaysia, China, Cambodia, Laos and the Philippines. (ANJARIA 1997).

The Ethnovet practice, especially for ruminants such as cattle and other large animals, was introduced in Cameroon at the end of the last century by nomads of Nigeria and Chad which was looking for pastures new (NDI, 1990).

Jagun and Abdu (1997) stated that the advent of Europeans and the introduction of the modern practice of human and veterinary medicine began in the early twentieth century. This occurred because the convictions of local medical practices are declining. Until recently, medical practices were viewed with disdain as primitive or inferior to conventional medication. Consequently, many indigenous practices that have passed through oral communication by elders from generation to generation are being lost. New results are re-awakening awareness of the importance of indigenous practices and interest in traditional veterinary practice. This research aimed to do a collection of ethnobotanical and ethnovet in the Jacu settlement in the municipality of Pombal - PB.

## **MATERIALS AND METHODS**

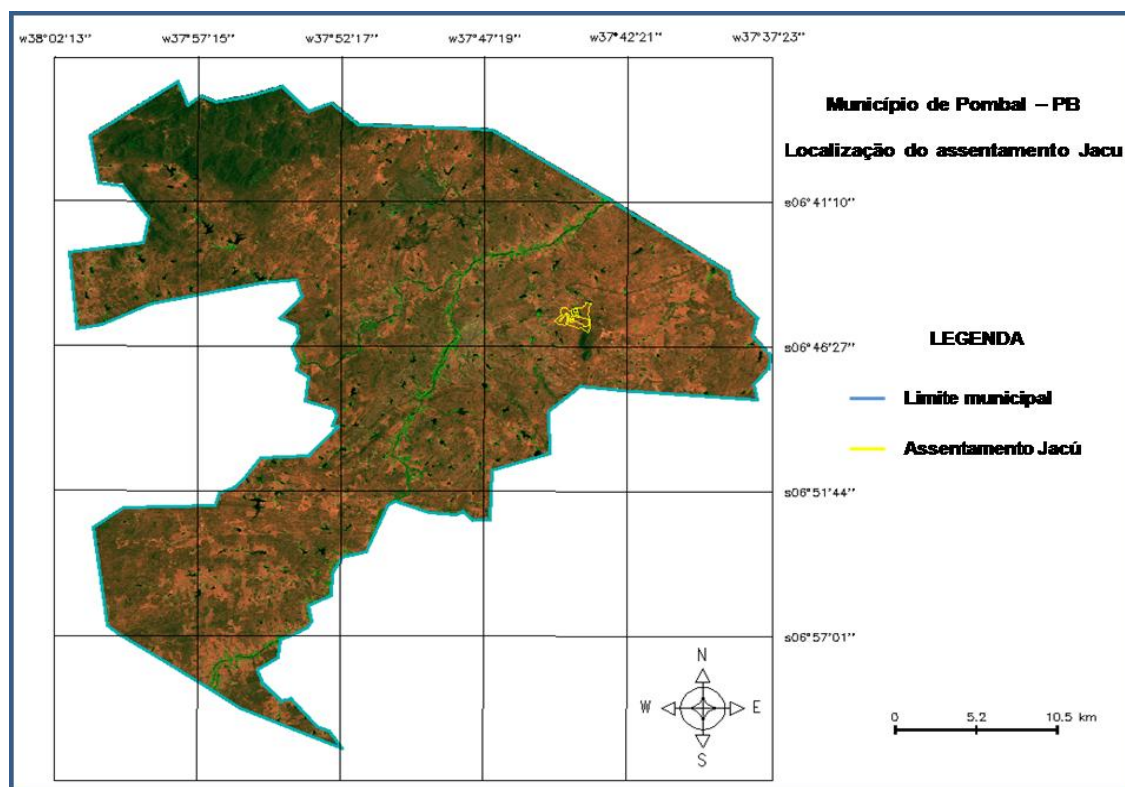
### **Characterization and location of study area**

The municipality of Pombal is located in Brazilian northeast with an altitude of 184 meters is one of the oldest cities in the state of Paraíba, is the second largest in the state of Paraíba in territorial issue having 889 km<sup>2</sup>, representing 1.58% of total area of the state. It has an annual growth rate of 1.86%, has the 15th highest HDI of Paraíba and the largest of the municipalities that compose the middle region that included the Paraíba interior, has an average life expectancy of 66.2 years. The local economy is based on subsistence agriculture, domestic trade and in some factories.

The Jacu settlement was implemented by INCRA (National Institute of Colonization and Agrarian Reform), under the decree No. 011 of June 16, 2003, occupies an area of 1,340 hectares, is located 7 km from the town of Pombal (PB) and is located right of the BR 427, sense-Pombal- Paulista. It is about 8 years of training and the settlers are represented by an association of 40 families, divided into lots with an area of 14.5 hectares per family.

animals and their cures. A third prepared with questions about backyard was directed, requesting information such as lot size, yard size, in which species exist in the backyard, which has kind of creation and planting.

These questionnaires were applied in 30 homes of which 15 women and 15 men among 40 families residing in the settlement. It has made observations with all residents about the use of medicinal plants.



It was applied three different questionnaires; the first was addressed with questions about the exclusive use of medicinal plants and their cures. The second; with reference to the use of medicinal herbs in the treatment of

Data from the surveys were analyzed using percentage calculations. The tables and graphs were developed and standardized in Microsoft Excel 2003.

## RESULTS AND DISCUSSION

It was interviewed 30 people, 15 men and 15 women each person belonging to a different family where we get the description of the species used as herbal. We

found 25 species belonging to 20 botanical families, families that stood out was *Fabaceae* with three quotes, followed by *Asteraceae*, *Verbenaceae* and *Capparaceae*, each with two quotes, they are described in the table below, common name, species and family, and the part used in the manner of use, as well as the indication.

Table 1 - Species native medicine (N) and cultivated (C) of proven use by popular from Jacu settlement - Pombal - PB, with their families, scientific names, common names, parts used, indications and usage.

Espécie	Família	Nome vulgar	Parte usada	Forma de uso	Indicação
<i>Myracrodruon urundeuva</i> Allemão (n)	<i>Anacardiaceae</i>	Aroeira	Entrecasca	Banho acento,	Antiinflamatório, Cervicite, Vaginite, Gastrite, Hemorroidas,
		15		Decocção,	

				Compressas.	Doenças respiratórias e Aparelho urinário
<i>Tabebuia impetiginosa</i> (Mart. ex DC.) (n)	<i>Bignoniaceae</i>	Ipê roxo 3	Casas e folhas.	Infusão, compressas, maceração, decocção, tintura.	Antiinflamatório uterino, antitumoral, sedativo, bursite, tendinite, gengivite, febres, distúrbios circulatórios e gripes...
<i>Capparis flexuosa</i> L. (n)	<i>Capparaceae</i>	Feijão bravo 3	Raízes, cascas, folhas.	Chá, infusão, mascar.	Dor de dente (mascar a casca), doenças venéreas, vermes.
<i>Amburana cearensis</i> (Allemão) A.C. Smith. (n)	<i>Fabaceae</i>	Cumaru 10	Raiz, sementes, entrecascas	Chá, banho, cozimento, lambedor, maceração, mascar.	Tosse, catarro, gripes, sinusite, coqueluche, problemas respiratórios, reumatismo, dores menstruais.
<i>Anadenanthera macrocarpa</i> (Benth) Brenan (n)	<i>Fabaceae</i>	Angico 15	Entrecasca, resina, cascas, flores.	Decocção, maceração, lambedor, gargarejos.	Coqueluche, cicatrizante, depurativo do sangue, antiinflamatório, gonorréia, tosse, bronquite, afecções do pulmão e das vias respiratórias.
<i>Bauhinia cheilantha</i> (Bong.) Steud. (n)	<i>Fabaceae</i>	Mororó 15	Folhas, sementes, cascas.	Decocção, chá, lambedor.	Hipoglicemiante, tosse, baixar o colesterol, antiinflamatório, afecções da garganta, distúrbios nervosos, diurético.
<i>Caesalpinia férrea</i> Mart. ex Tu. var. ferrea (n)	<i>leguminosae</i>	Paú ferro 2	Frutos, folhas, raízes, entrecascas, vargem.	Lambedor, pó da vargem, chá, garrafada.	Cicatrizante, catarro, diarreia, diabetes, febre, Tônico para o sangue, gripes.
<i>Ziziphus joazeiro</i> Mart. (n)	<i>Rhamnaceae</i>	Juazeiro 13	Folhas e entrecascas.	Maceração, chá e pó da entrecasca.	Mal estar, cicatrizante, problemas intestinais, dentrífcio, Tônico capilar.
<i>Vitex gardnerian</i> Schauer (n)	<i>Verbenaceae</i>	Jaramataia 10	Cascas, folhas, frutos	Chá, infusão.	Problemas renais, cicatrizante dos ossos, coluna, calmante, antiinflamatório, dores no estomago.
<i>Acmella oleracea</i> (L.) R. K. Jansen (c)	<i>Asteraceae</i>	Agrião 8	Sementes, flor.	Maceração, chá.	Antiinflamatório, depurativo, asma, estomáquico, vulnerário.
<i>Egletes viscosa</i> (L.) Less (n)	<i>Asteraceae</i>	Macela 13	Flores e sementes.	Mascar, chá.	Azia, problemas intestinais, mal estar, diarreia.
<i>Heliotropium elongatum</i>	<i>Boraginaceae</i>	Fedegoso 13	Raiz.	Chá e lambedor.	Gripe, expectorante, tosse,

(Lehm.) I. M. Johnst. (n)					antiinflamatório.
<i>Cleome spinosa</i> Jacq. (n)	<i>Capparaceae</i>	Mussambê	Raiz e flor.	Chá e lambedor.	Bronquite, expectorante, gripes, asma, tosse, antiinflamatório, flatulência vulnerário.
<i>Cymbopogon citratus</i> (DC) Stapf. (c)	<i>Poaceae</i>	Capim santo	Folhas.	Infusão.	Calmante, alimento, dor de barriga, diarreia, sedativo, febre, tosse, digestivo.
<i>Púnica granatum</i> L (c)	<i>Punicaceae</i>	Romã	Cascas.	Cozimento, mascar, maceração.	Afecções da garganta, resaca, rouquidão, estomáquico.
<i>Coutarea hexandra</i> (Jacq.) K. Schum (n)	<i>Rubiaceae</i>	Quina-quina	Folha, casca.	Inalação, gargarejo, chá, xarope.	Sinusite, afecções da garganta, tosse, gripe, febre.
<i>Camellia sinensis</i> (L.) Kuntze (c)	<i>Theaceae</i>	Chá preto	Folhas.	Infusão.	Digestivo, asma, emagrecimento, baixar colesterol, fortalecer o coração, gripe, regenerar a pele, função da tireóide.
<i>Lippia alba</i> (Mill.) N. E. Brown. (c)	<i>Verbenaceae</i>	Erva cidreira	Folhas.	Infusão.	Má digestão, calmante, dor de barriga, resfriado, aperiente, sedativo, diarreia.
<i>Zingiber officinale</i> Roscoe	<i>Zingiberaceae</i>	Gengibre	Rizomas	Decocção, xarope, rizomas fresco.	Rouquidão, inflamação da garganta, tosse, antiinflamatório.
<i>Pseudobombax marginatum</i> (A. St. – Hill. Juss. & Cambess.) A. Robyns (n)	<i>Bombacaceae</i>	Embiratanha	Cascas.	Decocção, maceração.	Inflamação das vias urinárias e coluna.

<i>Chenopodium ambrosioides</i> L. var. <i>anthelminitica</i> (L) A. Gray (c)	<i>Chenopodiaceae</i>	Mastruz 18	Folhas, ramos e flores.	Sucos, chá, maceração.	Antimicrobiana, anti-helmitica, anti-relmática, doenças do pulmão.
<i>Azadirachta indica</i> A. Juss. (c)	<i>Meliaceae</i>	Nim 3	Flores, folhas, frutos e cascas.	Infusão, maceração, chá.	Anti-séptico, antimicrobiano, vermífugo.
<i>Turnera ulmifolia</i> L. (n)	<i>Turneraceae</i>	Chanana 3	Folhas e raízes.	Chá, maceração, lambedor.	Expectorante, diabetes, amidalite, sistema nervoso.
<i>Ximenia americana</i> L. (n)	<i>Oleaceae</i>	Ameixeira 3	Cascas, entrecascas.	Decocção, cozimento do pó da casca.	Cicatrização de úlceras, inflamação, bronquite, lavagem de feridas, depurativo do sangue
<i>Luffa operculata</i> . (n)	<i>Cucurbitaceae</i>	Cabacinha 4	Bucha.	Infusão (inserir gostas nasais).	Sinusite.

According to data gleaned from the use of medicinal plants in the Jacu Settlement Pombal - PB is shown being used more by women. A total of 15 interviewed 05 of them between 56 and 60, were the most used herbs home.

Among men, 06 of 15 respondents are aged between 41 and 45, these being the most used medicinal plants. However, according to data collected older people are most likely to use medication home, having a higher profile for women.

The residence time of the settlement's residents are eight years, thus indicating a great time in residential location, providing a better understanding of the regional flora. According to Amaral and Ming-Junior (1995) and Amorozo (1996), the time spent on site influences the level of knowledge of a society on the environment.

As for education, results show that 34% of respondents are illiterate, literate 6%, 12% have completed high school, 10% have finished elementary school, and 38% elementary school, according to Amaral and Ming-Junior (1995), these percentages can help to consolidate the process of transfer of information in written form, increasing the scope and efficiency of information.

We cataloged 25 species of plants used as medicine home, belonging to 20 botanical families, with the Fabaceae, Verbenaceae, Asteraceae, Capparaceae and those that stood out. According to Sousa Soares et al (2011) in a survey conducted with students in 9th grade in a public school in the municipality of Pombal PB, family

Fabaceae also pointed out, one of the most cited home medication.

Among those interviewed, most said they had acquired the knowledge of use of medicinal plants with the ancestors thus demonstrating that even empirically that learning was passed down from generation to generation. According Guarim Neto et al. (2000), the use of plant resources is strongly present in popular culture that is transmitted from parents to children over the course of human existence. Amorozo had already (1996) commented that the knowledge to be transmitted requires certain situations, provided that the intergenerational transmission requires intense and prolonged contact of the older members with younger ones.

According to the respondents, 92% said they always used medicinal plants, and that the most frequent diseases in Jacu Settlement are flu, diarrhea and high blood pressure. The demand for herbal cure of these diseases is due to the existence of the culture of the people living in the countryside, as well as easy access to them (herbs). As stated Viertler (2002), ethnobotanical investigations in the case of the classification of plants only has meaning for the informants if it is built from various social practices such as cultivation of land, preparation of food, medicine, cosmetics or cure diseases .

Were cited various parts of the plant that are used as medication, especially bark, enterbark, leaves, roots, fruits, seeds and fruits. These results corroborate with those found by Coutinho et al (2002), where in

ethnobotanical study of medicinal plants used in the research population in the State of Maranhão the majority uses the bark, followed by leaves for herbal medicines.

During the survey respondents when asked what they use more as medication as 67% said they use natural products, since 33% of respondents that use chemicals. The respondents also revealed that use natural products by customs and also for the economy. These results differ from those found by Almeida et al (2009), a survey of medicinal plants in ethnobotanic in Viçosa MG, where according to those interviewed 44% of them make use of natural medication to the detriment of using synthetic and not to harm health. Respondents also revealed that when using natural products associated with not using chemicals, it shows that they have full confidence in healing when using natural products.

With regard to how to prepare the tea was the most cited, followed by licking, and bottle syrup for animals. These results were confirmed in part by Santos (2008), where he conducted a survey on medicinal plants marketed in Patos and surrounding towns where the teas, syrups and lickers were the most frequent forms of use. These data were also confirmed by Pasa et al. (2005) where a higher percentage of use of the leaf was also recorded, where the preparation methods used by the local population were more expressive tea, and syrup, and infusion bottles.

Most respondents also reported that the plants get their own plot and that the approach taken at the time of preparation of the medication is given by "raizeros" in the region. Regarding the most frequent diseases in the settlement are: diarrhea, headache, flu, back pain and the relief or cure of these diseases are used the following species: wild lavender, lemongrass, mauve, Cumaru, Jatoba, catinueiraflower imbiratanha, passion fruit and pau d'arc.

Studies by Medeiros et al. (2004) indicate a greater number of species mentioned in the treatment of influenza, and bronchitis in second place, followed by soothing, high blood pressure, worms, and these results were different from those found in our study.

## CONCLUSIONS

The people interviewed prepare their recipes at home, being the most widely used method of preparation in the form of herbal tea, syrup and licking.

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Recebido em 10/02/2011

Aceito 22/09/2011