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FEMINIST METHODS: WOMEN, TRADITIONAL HEALTH KNOWLEDGE AND ETHNOVETERINARY KNOWLEDGE

Cheryl Lans and Niels Röling

Working Paper No. 3

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FEMINIST METHODS, WOMEN'S TRADITIONAL HEALTH KNOWLEDGE AND ETHNOVETERINARY KNOWLEDGE

ABSTRACT

Feminist methodology and methods were used in documenting Trinidad and Tobago's ethnoveterinary medicine. The research revealed that six (6) of the plants used in Trinidad and Tobago ethnoveterinary medicine for reproductive purposes come directly from human folk medicine and women's knowledge. These plants and the cultural practices associated with them are described in this paper and links to similar cultural practices in Asia, Africa and Latin America are traced.

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INTRODUCTION: ETHNOVETERINARY KNOWLEDGE AND FEMINIST SCIENCE

Trinidad lies 18 km north east of Venezuela and has an area of 4769 km^2. Tobago lies 35 km north of Trinidad and has an area of 301 km^2. The human population is 1. 25 million. Trinidad and Tobago has an oil-based economy and the practice of agriculture carries little prestige. Livestock production is marginal and the financial resources needed to change this situation are limited (Lans, 1996). Evans (1992) studied typical small-scale ruminant farmers in Guyana, Barbados and Tobago and concluded that improved technologies were outside the financial scope of small-scale farmers or could not be justified under the socio-economic and cultural framework in which they operated.

There has been a focus on technical and modern solutions for the improvement of livestock production, however the use of ethnoveterinary knowledge, if found to be effective, may be able to democratize and universalize the provision of animal health care (Lans, 1996; McCorckle et al. , 1996). Ethnoveterinary knowledge, also called Veterinary Anthropology, is indigenous knowledge of animal health (McCorckle, 1989). Ethnoveterinary research, development and extension ER&D) seeks practical development options in livestock health provision (McCorckle et al. , 1996), that can be of use to farmers with limited resources.

In Trinidad and Tobago, ethnoveterinary practices are based on Caribbean folk medicine, which incorporates knowledge from Europe, India, Africa and South America (Lans, 1996). Knowledge of folk remedies is transmitted from generation to generation orally, often from grandparents to the grandchildren that live with them, or from elder female relatives to the young (Longuefosse et al. , 1996; Laguerre, 1987). Traditionally, farmers in Trinidad and Tobago used folk medicine for their livestock, but this practice is considered to be dying with the deaths of the 'older heads' who hold this knowledge and who have not transmitted their knowledge to the younger generation (Lans, 1996).

FEMINIST CONCERNS IN ANIMAL SCIENCE

This paper attempts to link feminist concerns with empirical research on the traditional ethnoveterinary knowledge that is linked to women. This link between feminism and animal health is based on the acceptance of the hypothesis that 'knowing' is a social process with humanly created, disciplinary specific, rules, norms, and standards (Hawkesworth, 1989). Epistemology provides a philosophical grounding for what kinds of knowledge are possible and how to decide whether they are adequate and legitimate (Maynard, 1994). Using the concept of preconditioned socialised epistemology, Webb (1995) postulated that since society provides the tools and environment for acquiring knowledge, a sexist society can incorporate biases into its epistemologies at their foundations (Webb, 1995: 97). If science is androcentric and racist, but still rigorously defended as objective and gender neutral, scientific theory choice reduces to a power game in which the might of preference determines the right of opinion (Gorgham, 1995: 101). Leigh Star (1991:47) suggests the outcome of this knowledge-power game when she claims that a set of uncertainties become certainties: old identities are discarded, and the world [becomes] narrowed into a set of facts'. Science is then 'made by a self perpetuating, self reflective group, by the chosen for the chosen, not for the poor and marginal' (Hubbard, 1988). The biases and power distributions that discriminate against women [and traditional knowledge] influence what concepts people and scientists have, and therefore the hypotheses that can be scientifically formulated (Webb, 1995: 97). By operating through the international communication and education networks, and making the 'modern' seem more attractive than the 'traditional' , Western orthodox science easily interferes with the continuity of indigenous knowledge and traditional medicines (Thrupp, 1989).

Foucault (1971; 1980) describes the process of displacement of traditional by modern knowledge, as one in which the 'experts' in possession of the scientific knowledge have the power and influence to decide what constitutes knowledge, what does not, and who is qualified to 'know'. Proponents of the Actor-Network theory consider that the agency and

power of 'normal' science lie in the interlocking interests that make up the networks of relationships that exist in science (Callon, 1987). Actors in these relationships are sometimes reluctant to embrace new and unproven ideas which require a loss of, or at least a re-negotiation of existing scientific networks and interests. In addition, some scientists prefer to ignore the existence of something real like indigenous knowledge, rather than make scientific errors that damage their scientific reputations (Paigen, 1982). By working through the actor-networks and the 'old-boy' networks, 'normal' science has given some knowledge the status of facts which are claimed to be 'self-evident', while other knowledges [including women's knowledge] are dismissed as tradition.

O'Brien and Butler Flora (1992), and Thrupp (1989), see scientific validation of indigenous knowledge as 'acts to reaffirm the order of development, and the asymmetrical North South research relationship. The stamp of approval or denial rests at the top of the development hierarchy'. Hubbard (1988) considers scientific objectivity as a 'translation' the dominant group uses to deny other people access to political or fact making power by which some knowledge has been left 'out' of science historically by professionals in Trinidad and Tobago is made apparent by looking at their own words below. The last professional 'discourse' , Statement D, is current:

Statement A: " The Creoles, in general, have only precarious medical attendance, because of their own unwillingness to remunerate a regular practitioner: in lieu of this, they prefer the assistance of a class of impostors, both male and female, who unite the practice of obeahism and quackery, exact little from their patients, but are commonly satisfied with the amount and mode of remuneration tendered for the nostrums they administer, and the incantations they perform "
(de Verteuil, 1884).

Statement B: " I have always been induced to discount the value of these 'bush' remedies, on account of the vague information their votaries seem to possess as to the dosage of them. Having been trained as a druggist and having had to pass many hours before my

examination, learning the doses of medicine, I can't understand the fast and loose way in which these Creole remedies are prescribed. The only quantity mentioned is 'some'. If no one is ever killed by these Creole remedies, it must be that their virtues are very mild indeed. Then the numbers of them which are taken together is a great stumbling block to my faith in them; although there are some doctors who do a lot of that kind of thing too, as high as a dozen different ingredients in one mixture, so that if the Creole doctress errs in that respect, she does so in good company, and I ought not to throw it in her teeth" (Inniss, 1910).

Statement C: " With reference to the advised usage of local medicinal plants to 'cure' a wide range of illnesses, I wish to warn: much research requires to be done (stet) on this subject before attributing properties to certain plants ..... The fact that a particular plant might have customarily been used for a particular illness is no proof whatsoever as to the medicinal efficacy of that plant [lists several doubtful uses, then says]..... The situation could be considered mildly amusing if only minor illnesses were involved in this herbarium brew. However, when one begins to discuss diabetes, cancer, hypertension, and leprosy, as being possible indications for the use of unproven herbal medicine we are letting ourselves in for a great deal of trouble and risking lives. This is dangerous tomfoolery, and the proposed practice should not be allowed to go unchallenged, especially when traditional medicine has so many proven means of management of these illnesses..... I fear the Greeks even when they bear gifts. Let this be a warning.... [mentions Seaforth's book].... The research goes on..... In the meantime, let us be careful and do not make fools of ourselves by dispassionately imbibing without forethought any form of witches brew, that might be inflicted on us by any charlatans, who might suddenly appear out of the blue" (Medical doctor, Trinidad Guardian Newspaper Article, 19 April, 1988. p. 9).

Statement D: " Pavy's book [Pavy, 1989] should never have been published. Her heart was in the right place, left alone she would not have written a book. She was a strong Roman Catholic, not a scientist at all. She felt she was given a gift from God and she got

her information as a healer from a divine source, from dreams, and then scribbled them in an exercise book. I am not a healer, I am interested in useful knowledge. From Pavy's writings there was no clear set of statements, she doesn't know how the human body works, that some parts are frailer than others. There are misleading and harmful things in the book. I read to get news, information, and knowledge on how to treat illnesses. The book fails on all three counts. Pavy's book should not get [so much] publicity. I was opposed to the publisher, he was on the University Council [University of the West Indies, St. Augustine], so I asked him about it. He said that he took a risk and wanted to challenge the readership with the book as it was, warts and all. The one good thing about Pavy's book is that it is of great interest to see how folklore is established and proliferated " (Scientist, interviewed by the first author, September 15, 1995).

These statements illustrate the point made by Laguerre (1987) that 'bush' exists in the political context of Western Science, where political power is the key to legitimacy, [therefore] the status of marginal folk knowledge relies more on the powerlessness of its adherents, than on standards of truth and effectiveness. Also affecting the status of traditional knowledge are the structures of dependency that link 'core' (Western) and 'peripheral' (Third World) scientists (Alatas, 1993), which skew the latter's scientific interests towards core generated knowledge.

Feminist analysis needs to focus on this politics of knowledge (Hawkesworth, 1989: 552; Rosser, 1988: 19), since it is not enough to rely on gender-awareness and critical dialogue with practicing scientists to change centuries of 'established' malestream thought (Hawkesworth, 1989: 552). A valid (feminist) science or epistemology recognizes the subjective or constructed nature of "reality" (Bleier, 1982: 726), and accepts the Social Constructivist perspective that the world is both an ongoing historical and cultural production, and empirically real (Ewick, 1994: 95). Since there is a mutually constituting relationship between Science and Society, this relationship that historically provided the entrance point for androcentric biases into Science, can now provide feminists with the locus for change and resistance. Feminist science can strive for a

purposive reformulation of Science that seeks to reclaim some of its 17th century liberatory and progressive aspirations (Ewick, 1994: 107).

This paper shows what a feminist science might look like when research methods and practice are practical and empirical (Hawkesworth, 1989). The paper explores links to women's health knowledge, cultural practices and ethnoveterinary medicine, rather than limiting itself to scientifically documenting medicinal plant knowledge for the pharmaceutical industries by picking out the 'tit-bits' of practical information (Thrupp, 1989). Not only does 'picking out the tit-bits' deny the social, cultural and engendered nature of folk medicinal knowledge, (Etkin, 1993), it is also counter-productive since some folk medicinal plants are used in culturally-bound practices that may not be universally applicable. Failure to record these cultural practices can lead to inappropriate and wasted analyses of plants that have more cultural than medical significance (Elisabetsky et al., 1990).

FEMINIST METHODS

Feminist methodology can be defined as the theory and analysis of how research should proceed, how research questions are addressed, and the criteria against which research findings are evaluated (Stanley and Wise, 1990). Feminist epistemological principles, i.e., the nature of knowledge, include examining the researcher - researched relationship, managing the different realities and understandings of the researcher and the researched, and acknowledging the power involved in research and writing (Stanley and Wise, 1990). Feminist unalienated knowledge implies that the social world is not measured against the pre-existent ideological or theoretical categories of male scientists. Instead, theory is seen as co-responsible, or recipes for practice (Heldke, 1988), applicable to the context and the person applying them, rather than grand edifices that are propped up against the weight of mounting conflicting evidence, held as sacrosanct, and enshrined in 'texts' to be endlessly pored over like chicken entrails (Stanley and Wise, 1990).

Foucault (1980) also downplays the need for 'a solid and homogenous theoretical terrain

to revitalize subjugated knowledges'. He says it is sufficient to expose the issue at stake, which is the 'insurrection of subjugated knowledges against the effects of the power of [Northern] scientific discourses and scientific institutions'. There are male scientists who recognize the linkages between science and the modern industrial complex (Wittrock, 1985). However feminist science goes further in identifying which elements of science reflect patriarchal values rather than 'universal truths', and also seeks to legitimate those elements of scientific culture that have been denied only because they are traditionally felt to be women's knowledge (Keller, 1982: 594).

Enriching research is collaborative research and involves asking questions about the relationship between research and its reception, who the research is done for, and what happens to the knowledge that is produced (Waters-Bayer, 1994; Stanley and Wise, 1990). Enriching research produces useful knowledge that has a positive impact on the researched area. The data collection, analysis and reporting are done by and for those researched to help solve their problems, and to understand the links between their own experiences and the broader context. Within the overall framework of feminist and enriching research, the data collection methods used in this research can be called challenging methods after Kelly et al. , (1994).

Challenging methods do not only document knowledge but also question and attempt to influence the attitudes and behaviors of those researched (Kelly et al. , 1994). Praxis then becomes a feminist commitment to a political position in which knowledge is not only knowledge *what,* but also knowledge *for* (Stanley, 1990). Challenging methods accept the reality of individuals including scientists, as socially located beings with 'truths' that are different, but also overlapping (Bijker et al. , 1987; Hubbard, 1988).

ETHNOVETERINARY METHODS

The 1995 research conducted in Trinidad and Tobago sought both to collect ethnoveterinary knowledge and to stimulate interest in its preservation in situ, verification and use. The participatory methods were chosen to maximize the amount of data that

could be collected in a short period, in addition to maintaining the data collection as a public, collaborative and participatory activity (Lans, 1996). Since ethnoveterinary knowledge is based on the oral knowledge known to the older generation, the emphasis was placed on collecting as much data as possible on the use of the plants while the respondents were still alive to tell their stories.

Ethnoveterinary research, extension and development (ER&D) emphasizes a hybrid methodology based on the disciplines of Anthropology, Rural Sociology, and Animal Health (McCorckle et al. , 1996). This hybridisation ensures that equal attention and respect is paid to both emic (insider) and etic (outsider, western-scientific) perspectives (McCorckle et al. , 1996).

The methods used in this research contained elements of the above - described hybridisation. The population of interest was individuals knowledgeable about ethnoveterinary medicines (key respondents). Each group (regional, religious, ethnic, families), holds specific folk knowledge, in addition to that held in common by the population (Etkin, 1993; McCorckle et al., 1996). Key respondents were identified with the use of a Rapid Rural Appraisal (RRA) tool called the school essay method (Sutton and Orr, 1991). RRA is used to gather and analyze data in collaboration with the communities being studied, and enables data to be analysed faster than conventional questionnaires and surveys. Participatory rural appraisal (PRA), unlike RRA is not rapid, shares data with the community rather than extracts data, but otherwise uses the tools of RRA.

Triangulation is important in PRA/RRA/ER&D and means looking at things from various perspectives. To achieve this means applying different methods, using different sources of information, collected by different people, and cross-checking to become more accurate through successive approximations (Waters-Bayer and Bayer, 1994). The combination of the school essay method, interviews and workshops described below is an example of triangulation.

Steps in the data collection

The data collection was conducted over a period of 5 months in 1995, with a second phase of interviews taking place over a 6 - month period during 1996 - 1997 and can be divided into five parts:

1. Using the school essay/questionnaire method to generate a purposive sample of ethnoveterinary key respondents. This first step of the data collection involved speaking to 242 students from 9 secondary schools geographically spread throughout Trinidad and Tobago. The sampling frame was the national telephone list of 95 secondary schools. Letters were written to an initial sample of 26 of the 95 school principals explaining the research into ethnoveterinary practices, outlining what was required of the students, why their participation would help the study, and asking permission for their students to participate. This sample was chosen to include the following variables; rural, urban, ethnicity, gender and geographical spread. From this first sub-sample, a final sample size of 9 schools was considered to be the maximum that the first author could deal with in the research period. The 9 schools were chosen to obtain the 12-15 age group who are free of national exams, and to include the variables of rural, ethnicity and geographical spread (Fig. 1.).

After selecting the schools the students were then visited in their classes. The basics of participatory research were explained to the students, and they were told why their contribution was needed. The students were then asked to interview parents, friends and neighbors about ethnoveterinary medicines and write what they found in essays/questionnaires. Eight (8) questions were written on the blackboard (Fig. 2.) and the students were asked to consider these 8 questions in their interviews, and in their essays. Classroom teachers reinforced what the first author wanted from the students after each presentation. Teachers in Tobago and one teacher in Trinidad considered that questionnaires were simpler for the students than essays. They requested and were supplied with questionnaires by the first author. The questionnaire form (Fig. 3.) used the same 8 questions that students were asked by the first author to consider in their essays. Each questionnaire form was double-sided with the result that each form had 4 blocks of

the 8 questions.

The school essay method of Sutton and Orr (1991), was modified in the following ways: the students did not have to write the essay in school; they were not required to use good English, have neat writing, work individually, or write any specific length of essay. Only the content of the essay was important. The school essay method is said to reduce the following biases:

a. modelling bias is the projection of the interviewer's views onto those studied,

b. strategic bias is the expectation of benefits by the subject,

c. familiar prior relationships between interviewer/interviewee, [children and parents/neighbors], reduces acquiescence and response set answers and outsider bias (Sutton and Orr, 1991)

d. 'key personae' bias (Etkin, 1993).

Including a representative cross-section of local residents into the research gains more information, ensures that synonymy is recorded and more accurately represents the circumstances of plant identification and use throughout the studied community (Etkin, 1993). In addition, illiterate people and those living in remote areas can be reached. Many interviewers should also give many points of view.

2. The second step in the research process involved interviews with the respondents identified from the essay/questionnaires. 28 respondents were selected by the first author for interviews. Selection was based on whether the essay/questionnaire indicated that a respondent had potentially useful information on farm animals. If these key respondents, or the later workshop discussions confirmed the information written in the essays/questionnaires, the information from the students was considered valid. Group and individual interviews were also held with officials from the Ministry of Agriculture, Lands and Marine Resources: 19 Agricultural Officers (AOs) and Agricultural Health Assistants (AHAs) (50% of all employed in this category) and 27 Extension officers (EOs) (33% of all employed in this category) from one East and two South Regional

offices in Trinidad. These officials discussed what they knew and indicated which veterinarians were likely to know ethnoveterinary practices, a stepwise or snowball sample. 30 veterinarians (50% of all practicing) were then contacted , and 19 discussed what they knew. 7 respondents were identified from this set of interviews and these 7 were also asked about ethnoveterinary practices.

The third step was the conduction of 5 focus group workshops with 55 of the respondents, AHAs/AAs and EOs interviewed, as a form of data validation and verification. An information seminar was also given at the veterinary school. The workshops followed the outlines established in the publication Ethnoveterinary medicine in Asia: an information kit on traditional animal health care practices (IIRR 1994). This research tool has been described by McCorckle et al., (1996) as (i) an expert panel assessment in order to identify 'best bets' for validation, and (ii) a Delphi - style tentative form of validation. Prior to the workshops, draft booklets on ethnoveterinary medicine for ruminants and poultry were produced by the first author based on the information gained from each set of the previously conducted interviews, meaning that a separate draft booklet was prepared for each workshop. Each booklet used either pictures or text from the IIRR (1994) publication which has no copyright for non - commercial use. Each participant in the workshops was given a copy of the draft booklet prepared from the previous relevant interviews. This draft was then reviewed, discussed and corrected in the workshop. A general overview of ethnoveterinary medicine was prepared for the seminar at the School of Veterinary Medicine by the first author.

The fourth step was the collection of secondary data from the University of the West Indies (UWI) library, and other sources.

Lastly, six older female 'heads' in Trinidad and Tobago were interviewed over a six month period in 1996 and 1997 for the purposes of this paper. This was necessary to obtain more details on the reproductive medicines that were obtained from the methods described above, since it was realised during the interviews that these ethnoveterinary

medicinal practices were derived from women's health knowledge. These plants used for reproductive health, and the cultural practices associated with them are the focus of this paper.

RESULTS

The school essay method and the interviews

Seventy-eight (78) students from eight (8) schools geographically spread throughout Trinidad and Tobago participated in the data collection. Some students did have their own animals, or were helping others with animals. 50 of the 78 participants were female students, these student may have responded more positively to the female first author or other socio-cultural phenomena may explain this outcome. Students gave details on thirty (30) diseases, twenty-five (25) plants and eight (8) non-plant ethnoveterinary remedies. Each student was given a prize and their names are recorded (in Lans 1996) as participants to the process. Thirty (30) veterinarians, twenty-seven (27) extension officers and nineteen (19) animal health officers were interviewed and their knowledge and their attitudes towards ethnoveterinary knowledge was recorded. The school essay method produced 28 key respondents versus 7 from the staff of the Ministry of Agriculture.

The school essay method was unsuccessful in the following circumstances:

1. When the first author did not speak to the students and allowed the teachers to assume responsibility for the method. 85 possible responses from 3 schools were thus not obtained
2. Only one of two classes spoken to in 3 schools turned in responses, 67 possible responses were thus removed. In Tobago, one school lost their responses and redid them too late for them to be used. Overall response in Tobago was poor, 83 students were spoken to, but only 8 responses were obtained.

Traditional reproductive medicine

In Trinidad and Tobago, most respondents claim that they 'boil' the plants, (a decoction).

When questioned further however, some respondents refined their explanation and said that some of the plants are administered as teas in which water is boiled and then thrown onto the fresh leaves of the plants, which are then 'drawn' or left to steep, sometimes overnight (an infusion) and then administered once, or over a period of days. The term 'leaves' is often loosely used to include leaves as well as stems and branch tips, and sometimes the entire plant minus the roots. Odd numbers are used for the number of leaves of a plant to be used or number of days for a medication to be taken. 9 was the most common number mentioned, although the reasons given for this varied according to the respondent. Some claimed that it was simply handed down from their elders without explanation. Others said that 9 was neither too short nor too long for a medicine to be taken. There were also claims that 9 days was linked to Hindu traditions.

Six (6) of the plants used in Trinidad and Tobago ethnoveterinary medicine for reproductive purposes come directly from human folk medicine and women's knowledge[2]. This was most clearly seen in the plants that were used for retained placenta, or to remove what the respondents called the 'clot blood' associated with birth (the blood clots and haematomas). One midwife-herbalist described this women's knowledge that has now become an ethnoveterinary remedy: 'after women make baby, use young hog plum (*Spondias mombin*) to bring out the clot blood. Take a few branches, boil it, put it in a tub, and sit down over it on a stool (Lans, 1996). One 'older head' in Trinidad described it similarly "the midwife boiled the hogplum, and I sat over it on the posy, it was steaming hot. I did it for 9 days until all the heavy stuff stopped coming out. I noticed that it helped bring down the clot blood and the whatever. I didn't drink any ".

The husband of one Tobago respondent had this to say: "wild coffee, cut it up big, mostly roots, use 3 roots, boil them for 15 minutes, and throw it in a 'tensil'. Sit down on the 'tensil', hot as you can bear. All the clot blood will clear up. I learnt this practice from my grandparents, they do it for you, so you know how to do it for yourself. The 'tensil' was described as a "night chair with a hole". "The 'tensil' is used to 'pass water' in the

night instead of going outside to the latrine." The Standard English equivalent is utensil; it is enamel bedroom utility ware that is shorter and wider than the ewer (pronounced yough, and used similarly) which has a long handle.

The term 'heated substance' was used by both Indo- and Creole Trinidadians to describe certain plants or folk medicines (Lans, 1996). For instance Hogplum (*Spondias mombin*) is used in Trinidad and Tobago's ethnoveterinary medicine for retained placenta, and was not considered to be as 'heated as rice paddy'. Rice paddy was called a heated substance which could help facilitate the removal of the retained placenta by speeding up the break-down of the uterine lining. It was not recommended for pregnant animals (Lans, 1996).

A link between women's knowledge and ethnoveterinary medicine is also seen in the use of Wild coffee (*Cassia occidentalis*) in an attempt to induce heat in Ruminants. Gullyroot (*Petiveria alliacea*) and minny root (*Ruellia tuberosa*) were observed in use by one respondent's mother to help his sister with menstrual troubles, and according to him, "my mother carried her no doctor, only tisane, she never see trouble again". In Trinidad and Tobago either warm Stout or Guinness is given to the human mother ' who is having trouble with the delivery', and to ruminants, for retained placenta.

Turmeric (*Curcuma domestica*), (called Saffran in Trinidad), rice, and bamboo, are plants that are used for milk production and retained placenta. Indo-Trinidadians boil the ground saffron with massala, ginger and salted butter, to 'bring down everything' after parturition. Turmeric is called 'tambric' in Tobago and is drawn with vervine to make a tea to 'clean out' the body. Vervine (*Stachytarpheta jamaicensis*) was mentioned by the key respondents as a plant used in an attempt to increase milk production in ruminants.

Women in Tobago and in Trinidad also described 'banding their belly' during the daytime for 40 days, or for longer periods of 3 to 4 months after childbirth. The belly was wrapped so that "wind did not get into the womb. " Domestic cloth, or brown cotton was used. The belly band used 2 yards of material, 8 inches wide, and this cloth was wrapped

around the stomach and then fastened with safety pins. The band helped flatten the stomach, 'put everything back in place so the size didn't stay out' and helped protect the back as well. Some respondents also wrapped the baby to support it's back and neck.

Women's reproductive health knowledge

This small study of plants and traditions used for reproductive purposes shows the links between some ethnoveterinary medicines and women's knowledge. The respondents did not (could not ?) explain the logic or origins of these practices. Before testing these plants in the lab, it is useful to have complete ethnopharmacological knowledge to assess their efficacy. Complete knowledge includes the socio-cultural practices.

There are parallels between Trinidad and Tobago's ethnomedicine and to similar practices used for reproductive health in Latin America, Asia and Africa. These practices are reviewed below.

'Heat' is one of the terms used in Caribbean folk medicine and this term comes from the Hippocratic classification of diseases into hot and cold. The Hippocractic tradition is an elite tradition of the 18th century Spanish priest and medical colonists. Heat comes from the sun, work, sleeping, burns and reproductive activities. In Mexico 'heat' also comes from overwork, physical illness, a beating, a fall, or emotional shock (Browner, 1985). Women are said to suffer more than men from heat because their menstrual bleeding and periodic childbirth leaves them with less blood to absorb the extra heat (Browner, 1985). Linked to the hot/cold dichotomy is a system of blood beliefs where an excess of cold or heat in the body through exposure or from the diet causes illness. This 'dirty' blood is then cleansed by 'cooling' teas (infusions) and purges, (Laguerre, 1987; Longuefosse et al., 1996).

The term 'heated substance' used in Trinidad may be similar to that used by Browner et al., (1988) who describe uteroactive plants used in Mexico in emic terms of 'warming' or irritating'. 'Warming' the body, blood and womb, causes the womb to 'open' to release

detained menstrual flow or expel a full - term fetus or unwanted conceptus (Browner et al. , 1988). 'Irritating' plants 'open' the uterus and stimulate contractions that will release blocked menstrual blood or push out a full - term fetus or unwanted conceptus (Browner et al. , 1988).

Morton (1981) claims that 9 was an important Mayan number used for leaves of a plant, drops of a medicine or days to take a medicine. This Mayan belief could have been incorporated into Trinidadian Creole traditions in the early Colonial period through the influence of the Amerindians on the lifestyles of rural Trinidadian 'peons' (Brereton, 1981). There are also references to the number 9 in the anthropological literature. Herskovits et al. , (1947) describe boiling milk bush roots to make a tea which is given to the expectant mother to drink for 5 or 9 successive days, to 'cool down the body'.[4]

Traditional health care for reproductive purposes focused equally on the pregnancy, parturition and the postpartum period (Obikeze, 1997). Sobo's (1996) Jamaican research shows that birth, defecation and menstruation are defined traditionally as cleansing processes. Sobo claims that ideas about the quick delivery of the placenta and waste matter left behind after delivery are part of the purgative model which is patterned gynocentrically after the menstrual cycle.

Morton (1980) documented the habitual and widespread use of emmenagogues and bush teas in Latin America. These folk medicines are used to 'clean out' and restore vitality after pregnancy. Emmenagogues, used to 'bring back' or 'bring down the menses' are common cross-culturally according to Sobo (1996). Plants were given to speed delivery after the onset of labour in home births. After births or miscarriages, mild purgatives were given to induce the quick delivery of the placenta and pregnancy-related waste matter, out through the vagina (Sobo, 1996). Postpartum remedies in Mexico are said to restore lost blood, heal the 'birth scar', 'close the skeleton and the rest of the body that was opened to expel the fetus', remove blood clots and impurities, calm the nerves, strengthen the back and womb, revive the blood, relieve pain and reduce swelling by forcing out of

the new mother's body the air that accumulated during parturition (Browner, 1985). Similar terms to those used by Browner (1985) are used in Caribbean folk medicine with the exception of the 'birth scar' and the 'closure of the skeleton'. The notion of 'clot blood' to be removed after parturition comes directly from human folk medicine as recorded by Herskovits et al., (1947)[5].

Squatting over a pot of hot water, as seen with the utensil in Tobago, ensures the ejection of all waste according to Sobo (1996). The steam enters the body and 'melts' all recalcitrant matter which then slides out. Obikeze (1997 found that the Nigerian grandmother gives both the new mother and the baby a daily sponge bath. The mother sits on a low kitchen stool before a bowl of hot water containing medicinal herbs. During the bath the new mother's abdomen and hips are given a vigorous massage with the bath towel, herbs and hot water. Obikeze (1997) also describes a Nigerian practice similar to that used traditionally in Trinidad and Tobago of wrapping bands of cloth around the abdomen after childbirth to help the abdominal muscles regain good tone. Zamora-Martinez et al. , (1992), report on a 'temazcal' bath used for the delivering woman after childbirth that involves the use of steam.

When judging the effectiveness of these particular herbs, which component(s) in the above rituals are effective? Saunders (1997) claims that the only clinical outcome associated with the birthing stool is an increase in postpartum blood loss. Hogplum and wild coffee (*Cassia occidentalis*) are used in Latin America, 'to draw organs back to normal' (Morton, 1981), while Robineau (1991) documents that hogplum acts as a uterine stimulant. In Curaçao, the hogplum leaves are boiled with *Cordia cylindrostachya, Mangifera indica and Anacardium occidental*.

Unlike in Trinidad and Tobago, women were given some of this decoction to drink four times a day for 9 days after confinement (Morton, 1981). In south-western Nigeria, young leaves of *Spondias mombin* and *Alchornia cordifolia* are shredded into cold water to extract the juice, and the obtained solution, which is believed to promote rapid healing,

is used to clean cuts, sores and burns (Ajao et al. , 1985). In central Nigeria, leaves of *Cassia occidentalis* together with *Sida cordifolia* and *Crassocephalum rubens* are ground in equal proportions in water, salt is added and the mixture is filtered and bottled. A tablespoon is taken 3 times a day to stop bleeding during pregnancy (Bhat et al. , 1990).

In Vanuatu, Bourdy and Walter (1992) describe the use of similar use of external massage to facilitate the expulsion of the placenta. After expulsion, the mother's thighs and belly are washed and she is given potions to drink which will 'cleanse' her insides, expel the lochia and all discharges and prevent hemorrhaging. Also in Vanuatu, the juice of a large handful of ground wild coffee leaves is given to induce birth and women are also given potions to drink to 'cleanse' the insides, prevent hemorrhaging, and expel the lochia (Bourdy et al. , 1992). In Trinidad, wild coffee root decoctions and infusions are used for womb inflammation, abortifacients, purgatives and postpartum depurants (Wong, 1976). Pre-columbian Aztecs used wild coffee as an astringent and purgative (Ortiz de Montellano, 1975), perhaps there are links to this ancient knowledge from the Amerinidian knowledge historically passed on to the rural Trinidadians.

According to Morton (1981), the root decoction of minny root is used as a diuretic for urinary troubles especially for gonorrhea and syphilis in Middle America and in Curaçao. The leaf decoction is drunk by pregnant women as a remedy for leucorrhea. The root decoction of *Petiveria alliacea* is used as an abortive in Brazil (Schmeda Hirschmann et al. , 1990), leafy stem decoctions of the plants are used similarly in Puerto Rico (with *Lignum vitae*, *Guaiacum officinale*) and the plant is also used as an abortive in Barbados and Cuba (Morton, 1981). In Central America, decoctions of the leafy stems and flower spikes are used as emmenagogues and abortifacients. Decoctions or infusions of the roots are used for menstrual difficulty, womb inflammation and as an abortifacient in Trinidad (Morton, 1980).

Do farmers in Trinidad use Stout to calm the animal, for the vitamins, or are there cultural explanations ? In Jamaica, Dragon-brand stout is boiled down with 'cobweb' (the black

soot that gathers on the cobwebs on kitchen ceilings) as an abortifacient (Sobo, 1996). Sobo (op. cit.) questions whether the Dragon Stout has replaced the Dragon plant (which might be *Zebrina pendula*) in the remedy for bleeding disorders. Sobo (1996) also claims that stout is often the base for brewing abortifacients and makes a reference to its 'menstrual-brown' colour.

There are cultural links between Vervine and milk production but they are not straightforward. Hodge and Taylor (1957) record the use of Vervine (*Stachytarpheta jamaicenesis*) as one component of a tea taken three (3) days after parturition by the Amerindians. It was also used in a special bath given 8 or 9 days after childbirth to the mother, and in another given to the newborn infant. Heinrich et al. , (1992) describe *Stachytarpheta jamaicenesis* as a 'bitter plant' used to treat gastrointestinal pain in Mexico and Haiti. Wong (1976) and Morton (1980; 1981) also describe the use of *Stachytarpheta jamaicenesis* plant decoction as a lactagogue, and emmenagogue in Middle America, it is used to clean the system and relieve painful menstruation in Jamaica. The root decoction is used as an abortifacient. Saffron (*Curcuma domestica*), rice and bamboo, are plants that are used in Asia for milk production and retained placenta (IIRR, 1994). *Curcuma domestica* is used with *Trianthema portulacastrum* for wounds and vaginal discharges in Rayalaseema, India (Nagaraju and Rao, 1990).

This study recorded only one instance of a respondent's husband becoming involved with his wife's health care. However Browner (1985) recorded the involvement of men in their wives postpartum health care in Oaxaca, Mexico, where the husband collects the plants for his wife's postpartum recovery under his mother's instructions.

Workshops

Workshop 1, with the Poultry Surveillance Unit (PSU) of the Ministry of Agriculture, came closest to the model described in IIRR (1994). The workshop served the purpose of discussing the remedies and clarifying the dosages outlined in the previous interviews held with the PSU, and two ethnoveterinary experts. The resulting booklet provided

almost complete coverage of the subject since it involved a previously established network of colleagues, who had a working knowledge of ethnoveterinary practices used in poultry production.

Workshop 2 was held with 12 literate adults of the Tobago Sheep Farmers Association. Only the remedies were discussed, their similarity to human folk medicine was noted, and the little known plants were described to the first author/moderator and the other participants by a knowledgeable participant.

Workshop 3 was a small group discussion of the remedies and dosages previously obtained from the interviews with the AHA based at the Penal Demonstration station (rural south Trinidad, Fig. 1.) and two semi-literate farmers from the area. The two farmers did not look at the draft booklet but relied on their memories. Some of the remedies were explained to the first author/moderator in terms of the Hindu religion and culture. Then a walk in the surrounding area provided samples of 3 of the plants discussed.

Workshop 4, involved 12 extension officers from the South Trinidad Regional office. Again, some of the cultural practices aligned to the ethnoveterinary practices were explained to the first author/moderator. The discussion of the remedies obtained previously from group interviews with some of these EOs and the AHAs (who did not stay for the workshop), generated new remedies. The idea that ethnomedicine was superstition or nonsense was implied in the interviews with this group, and again in this Workshop. Opinions expressed included the claim that the 'modern' technical education of these respondents precluded their interest in and knowledge of traditional practices (see also McCorckle et al. , 1996; 264). There was also the underlying suggestion McCorckle et al. , (1996) describe as the 'pseudo - scientific dogma that modern must always and everywhere replace traditional'.

Workshop/Seminar 5 was an information seminar given by the first author at the School

of Veterinary Medicine to 30 students, 6 Veterinarians, and 6 other scientists. In the discussion there was more open questioning of the validity of ethnoveterinary practices, but also some interest and curiosity.

Workshop 6 was held with the 12 extension officers servicing the districts of north - east Trinidad. The supportive head of staff led a lively discussion of the practices in the draft booklet. This booklet had been prepared from interviews with the knowledgeable veterinarian attached to that station, and from information from other areas, since the initial group interview with these extension officers had produced very little information on ethnoveterinary practices (Lans, 1996).

The varying successes of the workshops indicate how important the role played by dominant individuals is in influencing the structure and content of the group interaction (Agar and MacDonald, 1995). The workshops proved the point made by Agar and MacDonald (1995) that in focus groups not all of the participants will be able to draw on shared folk models. Agar and MacDonald do not recommend focus group workshops as a stand alone method, since previous empirical work is a necessary requirement in understanding the information generated from the workshop discussion.

ETHNOVETERINARY METHODS AS FEMINIST METHODS

Including children in the research proved useful in identifying and contacting knowledgeable individuals and families, as was also found by González-Tejero et al., (1995). The school essay method, in addition to being efficient and effective, was also collaboratory. It allowed students to share in the research process and to learn about folk knowledge which is not formally taught. One hopes that they strengthened their cultural heritage and became aware of other ways of learning and other sources of knowledge besides formal education. The participating students learnt through personal experience and social interactions.

The participatory methods used maximized the amount of information that could be

collected in a short period. The data collection methods fit the description of challenging methods (Kelly et al. , 1994), since they not only created/collected knowledge, but also influenced the attitudes and behaviours of those researched (Kelly et al. , 1994). The key respondents of the students learnt that folk knowledge was a researchable topic, and that their knowledge was valuable. For example one mother visited by the first author had kept her daughter's essay behind the medicine cabinet. Some of the animal health professionals also realized that folk knowledge was a valid researchable topic and some expressed regret at their lack of knowledge/training in traditional remedies. McCorckle et al. , (1996; 276), explain that participatory research can lead to empowerment in that it liberates local people from 'intellectual imperialism' by validating their own cultural know-how.

Workshops were included in this research both as a challenging and as a collaborative method. The workshops were an attempt to develop co-learning relationships, and the open dialogue that precedes socially-just knowledge construction (Hubbard, 1988). Having workshops in enriching research also reduces the hierarchical interviewee-interviewer relationship. It allows the respondents to 'talk back' to the investigator (Oakley, 1981). In addition, the group interaction of a workshop minimizes the 'objectification' of the subjects as only 'sources of data', who get no academic credit or public acknowledgment. The workshops also influenced the social processes that impact on folk knowledge since they constituted the first time that folk knowledge was discussed in public as a scientific endeavor. This last can be seen as a form of legitimization for what is currently and has been historically, marginalised knowledge (McCorckle et al. , 1996).

CONCLUSION

Appropriate methodology is important since it is not enough to assume that ' if the science is good', it will 'serve the people' (Hubbard, 1988) 'since no one is responsible for seeing that it does'. Methods in Feminist theory are as important as theory and need to be worked out in reference to theory (Stanley and Wise, 1990). The school essay and

workshop methods encouraged community participation, group learning and provided multiple perspectives. Since key respondents have multiple and conflicting versions of reality (Cornwall et al. , 1984), the methodology for the research into ethnoveterinary medicine offered the changing frames of reference, provided the different perspectives, and revealed the many partial stories and the multi-dimensional and interactive nature of knowing (Cornwall et al. , 1994).

Using enriching research methods (Waters-Bayer, 1994) to collect ethnoveterinary knowledge in Trinidad and Tobago involved public participation and validation, and led to committed understanding and 'feminist unalienated knowledge' (Stanley, 1990). Knowledge is more likely to remain as common property in the South rather than becoming solely the intellectual property of the North (Shiva, 1993). In enriching research, the original knowledge holders should participate in documenting and recording of their knowledge, rather than being recipients of knowledge encoded by hierachies of academic elites (Spender, 1988; Cook and Fonow, 1990).

Once the institutional conditions for an intersection of scientific interest around the issue of medicinal plants are created (Latour, 1993), then the project of validating this traditional knowledge, and assessing its current relevance, can be negotiated in an actor-network of scientists together with the original knowledge holder, the traditional herbalist or midwife of the Caribbean. The double hermeneutic (Giddens, 1984), is thus used in this research as a methodological research tool. This term implies that the knowledge produced in the social study of human actors, re-enters society, is interpreted, and affects future human action (Röling, 1994).

Feminist Epistemology (Cook and Fonow, 1996; Stanley and Wise, 1990), in this research implies 'consciousness raising and participatory techniques as 'ways of seeing' and methodological tools, challenging the notion that there are differences between subjectivity and objectivity, the belief in the social construction of knowledge, and the corresponding disclaimer that there is a value-free science.

This research into ethnoveterinary practices used in Trinidad and Tobago took as a reference point the view of some feminist researchers that Science is not value - free (Cixous, 1981; Stanley and Wise, 1990). But it also bears in mind the caution of Glucksman (1994) that 'the self -reflexivity of the researcher should recognize the limits of research as a locus for authentic political activity. ' However despite these limits, researchers from the North and South can still strive for research outcomes of greater awareness that lead to social change (Mies, 1983). Research can be designed to provide a vision of the future, as well as a structural picture of the present, to change the world rather than just to study it (Stanley and Wise, 1990; Cook and Fonow, 1990).

Notes

This paper is partly based on the field work done for an M.Sc. in Ecological Agriculture, Wageningen Agricultural University, the Netherlands. The financial and supervisory support provided is appreciated. Thanks are also due to the students and all the respondents who shared their knowledge.

1. Foucault (1980) claims that those who say 'I who conduct this discourse am conducting a scientific discourse and I am a scientist', diminish other subjects of experience and knowledge.

2. The unpublished M.Sc., Lans 1996, contains plants that have not yet been botanically identified. However the plants described in this paper are all common and are unlikely to be mistaken.

3. Wong, 1976, Sobo, 1996, and Longuefosse et al., 1996, contain detailed descriptions of popular folk medicinal concepts.

4. The authors continue that " the scissors used to cut the umbilical cord are put beneath the place the baby's head is to lie, and left there for 9 days when mother and child first emerge from the house. . . . the afterbirth is placed in a calabash, put on a bed of Buck-buck, or 'fig' leaves with salt and rum or bay rum, and is buried. Over it a fire is lighted, and kept burning for 9 days. . . [after parturition] a special diet is given for 9 days, then any meat can be eaten except pork. The new mother can assume full household duties

after 9 days. . . . when the baby and its mother emerge from the house 9 days after the birth, a ceremony is held to present the new member of the family to relatives and the family dead (Herskovits et al. , 1947).

5. "After the placenta has been removed, the midwife first pounds wild coffee, called 'malame' and boils it, giving it to the newly delivered woman to drink, 'as much as she want, a big glass full. That is to bring out all the bruised blood " (Herskovits et al. , 1947). The treatment continues as follows: " then I take plum bush, put it in a dish pan, boil it in water, let it half cool, then I lift the woman and sit her over it. The steam come up. I beat she belly (demonstrating vigorous massaging), beat, beat all over. Then all the mortification drop down. Don' take long, about five minutes. Then I give she a glass full of 'malame' water. I feed she on this water 3 days then she clean, clean" (Herskovits et al., 1947).

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Fig 1: Geographical Location of the chosen schools

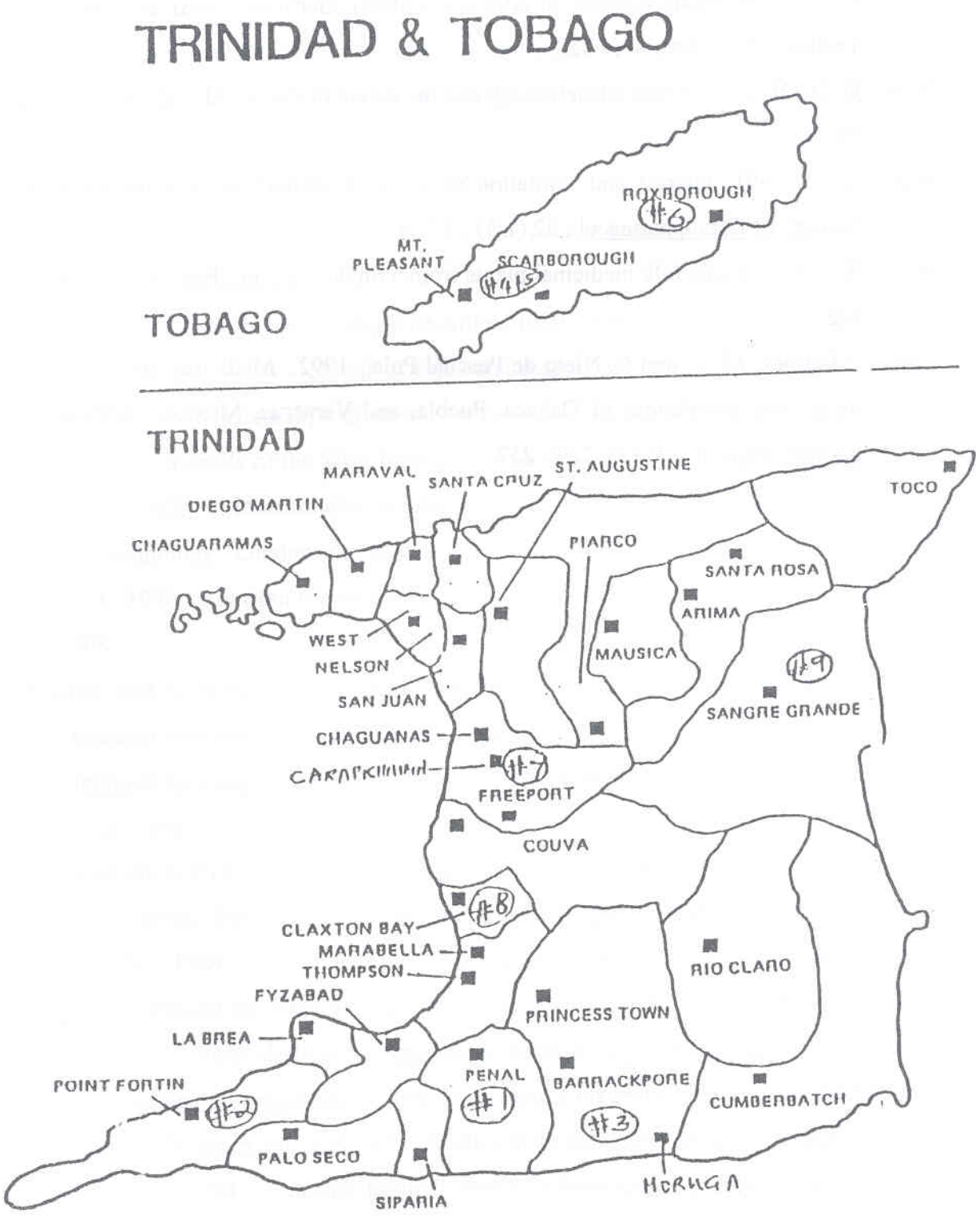

Fig 2. List of questions considered in the student essays.

1. Your name (name of child).

2. Name of person/farmer, address, phone number.

3. Type of animal.

4. How do they know it was sick ?

5. What kind of sickness did the animal have ?

6. Name of plant used.

7. How do they know about this plant ?

8. Do they use the moon to either pick the plant or treat the animal?

Fig 3: Student Project Questionnaire

Vakgroep Ecologische Landbouw Department of Ecological Agriculture

Wageningen Agricultural University

STUDENT PROJECT QUESTIONAIRE

NAME OF STUDENT (Filling in the form)	NAME OF FARMER/PERSON
Kind of Animal	Address:
What sickness did the animal have?	Phone No.
	How did they know the animal was sick?
Local Name of Plant Used	How Did They Know About This Plant?
Did They Use The Phases of The Moon to Determine When to Pick The Plant or to Treat The Animal/s?	Did the Animal Recover?

NAME OF STUDENT (Filling in the form)	NAME OF FARMER/PERSON
Kind of Animal	Address:
What sickness did the animal have?	Phone No.
	How did they know the animal was sick?
Local Name of Plant Used	How Did They Know About This Plant?
Did They Use The Phases of The Moon to Determine When to Pick The Plant or to Treat The Animal/s?	Did the Animal Recover?

Please Return To: Cheryl Lans, 37 Gleneagles Drive, Mt. Irvine, Tobago.
Or Cheryl Lans. 17 Cadiz Road, Belmont, Port of Spain, Trinidad.