

**SURVEY OF PLANTS USED IN BEAUTY CARE AMONG THE FULANIS IN  
WAMAKKO LOCAL GOVERNMENT AREA OF SOKOTO STATE**

**BY**

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## **CERTIFICATION**

**This research project titled “SURVEY OF PLANTS USED IN BEAUTY CARE AMONG THE FULANIS IN WAMAKKO LOCAL GOVERNMENT AREA OF SOKOTO STATE” by Nuratu Ibrahim Dodo (ADM NO: 11103021020) has been read and approved by the under signed as a meeting the requirement for the award of Bachelor of Science (Hons) Degree Biology in the department of Biological sciences, biology unit. Usmanu Danfodiyo University, Sokoto.**

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## **DEDICATION**

**I dedicate this project to my late dad Alhaji Ibrahim Ahmad Aliyu (Dodo of Wawa) and my beloved mother Haj Khadijat Ibrahim Dodo. Also to my lovely husband (Mal Musa Goni) and beloved son (Ahmad Musa Goni)**

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## ABSTRACT

**An ethnobotanical study of plants used in beauty care among the Fulani tribes in Wamakko Local Government Area of Sokoto State was conducted. The information was obtained through interview by the use of questionnaires distributed to the respondents identified by random sampling such as shepherd, farmers and civil servant, all of them from Fulani tribes. These plants were various plant parts of single and multiple plants, majority of the preparation was made using water as a medium, the mode of application are topical but in some cases administered orally. Out of the 100 questionnaires in each district administered, 90 respondents were recorded. The study revealed 27 plant species belonging to 22 families were encountered. The plant Neem tree (*Azadirachta indica* and *Ziziphus jujube*) has the highest percentage of occurrence in three (3) villages. Leaves and seeds were found to be the most used part of the plants.**

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## CHAPTER ONE

### 1.0 INTRODUCTION

The use of plant for beauty care solutions dates back to antiquity and various testimonials inform us on the use of plants in beauty care treatment during the ancient period. Women of the ancient world used the grounded leaves and seeds of plants on their hair, face and over-all body, drank herbal tonics and oil obtained from herbs for different body massages. These treatments were used during that time in countries like Rome, China and Latin America. Indian Ayurveda too has been promoting the use of herbs for skin and beauty care for over 5000 years (Anonymous, 2006).

Plants can be used for beauty in original or compound form. They act against the internal impurities and external toxins of our body, and add additional nutrients to it to make it glow and shine. Plant provides natural flawless treatment to our skin, nourish it leading to its internal development.

In addition, plants play an important role in the life of all mankind including the animals. It is from the plant we derive the food we eat, oxygen for respiration, shelter, cloth and medicine which are the basic requirements for one to survive. The use of plants for traditional medicine has a wide range of accessibility. Different tradition and culture

in a particular area used plants around them to cure different ailments. According to World Health Organization (WHO, 1976), traditional medicine is an integral part of the culture of people who practice it. Moreover, it reflected not only the culture but social, moral, beliefs and religious background of the people that were present in a given community. Many diseases are cured by the use of the plants such as skin diseases, diabetes, diarrhea, hypertension, ulcer and asthma etc. It was reported by Farnsworth & Soejarto (1991) and WHO (2002) that about 70-80% of people all over the world rely on traditional herbal medicine to meet their primary health care needs and this shows how important these medicinal plants are to the world. Therefore, medicinal plants have been used for millennia in virtually all cultures and serve both as a source of income and a source of affordable healthcare (World Bank, 1997). Hamilton (2004) documented that about 53,000 plant species are used for medicinal purposes worldwide. Also, the world market for traditional medicine in 2008 was calculated to be worth US \$83 billion (WHO, 2011). Traditional and folkloric medicines bequeathed through generations are rich in domestic recipes and communal practice and the use of traditional medicines and medicinal plants has been widely observed in most developing countries (Shinwari, 2010). Hamilton (2004) estimated up to 15-39% of total income from the sale of medicinal plants for people living in developing countries.

Historically, plants do not only provide human with food but also with means of healing and this has made the use of plants as medicine, as was practiced by our ancestors, to be the major sources of medicine and plant secondary metabolites and have been attributed to most plants' therapeutic activities. However, concerns are being raised about the loss of native knowledge and the possible extinction of medicinal plant resources due to disruptions in traditional ways of life induced by colonial forces (Borins 1995, Buenz 2005, Uprety et al., 2011). Hence proper documentation of traditional knowledge regarding plant use, along with conservation and sustainable management of key habitats could contribute to safeguarding this heritage (Bannister, 2006). Medical plants have been used in virtually all cultures as a source of medicine. The wide spread use of herbal remedies and the health care preparations, as described in ancient texts such as the Vedas and the Bible, has been traced to the occurrence of natural products with medicinal properties(Horeau and Dasilva,1999). The use of traditional medicine and medicinal plants in most developing countries as a normative basis for the maintenance of good health has been widely observed (UNESCO,1996). Furthermore, an increasing reliance on the use of medicinal plants in industrialized societies has been traced to the extraction and development of several drugs and chemotherapeutics from these plants as well as traditionally used rural herbal remedies (UNESCO, 1998). Moreover in these societies, herbal remedies have become more popular in the treatment of minor ailments, and also

on account of the increasing cost of personal health maintenance. Indeed, the market and public demand has been so great that many medicinal plants today face either extinction or loss of genetic diversity. Plants are an integral component of ethnoveterinary medicine. Farmers have been using medicinal plants in maintenance and conservation of health of their livestock (Horeau and DaSilva, 1999). These are some common plants used in beauty care: eg Henna, Neem tree, Cashew, Paw-paw tree, *Parkia biglobosa* and Baobab.

## **1.2 STATEMENT OF RESERCH PROBLEM**

In recent years, there is an extensive cutting down, burning and deteriorating of plants and due to other effects of human activities such as roads construction, building purposes, mining activities, and many other effects that may lead to genetic erosion of plants and also finally result to the extinction of plants. These custodians are decreasing in number due to death and other unforeseen circumstances and hence there is a need to document the plants used in beauty care in different societies. A number of reports on plants have been documented around the world (Saikia et.al., 2006). This type of information could be useful to the scientific community on the conservation of these biological resources.

## **1.3 JUSTIFICATION**



The role of plants in beauty care in our modern society cannot be overemphasized. It is known that most of the beneficiaries and users of those plants are from rural areas that cannot afford the purchase of the modern ones due to higher cost; but now, scientists use the extract from these medicinal plants for the production of many modern ones that are used presently. The research work is carried out to document the plants that are used in beauty care among the Fulani's in Wamakko Local Government Area of Sokoto state.

#### **1.4 OBJECTIVE OF THE STUDY**

The objective of this work is to identify and document plants that are used in beauty care among the Fulani tribe in Wamakko Local Government Area, Sokoto State. The influence of culture and fashion as beauty perceived in modern societies is also studied.

## CHAPTER TWO

### 2.1 LITERATURE REVIEW

The ethnobotany studies the complex relationship between the uses of plant and culture the focus of ethnobotany is on how plants have been or are used, managed and perceived in human societies and includes plants used for food, medicine, divination, cosmetics, dyeing, textiles, for building, clothing, rituals and music. In a survey of medicinal plants in Sokoto and its environs using ethnobotanical approach (Aliero et.,al, 2004). Revealed forty-eight (48) species predominantly utilized by the populace belonging to thirty (30) families, the family *Conbretaceae* had the largest species followed by *Rhamnaceae*, *Leguminaceae*, *Mimosaceae*, Composites, *Sterculiaceae*, *Labiatae*, *Maraca* and *Malvaceae*. Accordingly Gorman, (1992) drew attention to the power of Chinese folk medicinal portion in treating maladies from eczema to malaria and respiratory disorders. A survey on the use of spices and their medicinal properties around

the world concluded that spices serve the adaptive purpose of reducing food-borne diseases (McGee, 1998). All over the world good smells are believed to attract the benevolence of helpful deities while bad smells are always associated with gods of the underworld, harmful demons, or the devils, thus people soon adapted the many wonderful fragrances of herbs and flowers to serve their own purpose (Anonymous, 2006a). Flower garlands, head wreaths and armbands were not only meant to look pretty but also send fragrant messages to the spirit world, likewise make up and body paint was not only used to enhance physical beauty but also to protect against the much feared evil eye and other harmful influence. The same thinking motivates indigenous tribal people who use face and body paints to ward off evil spirits. Cosmetics, perfumes and skin care products constitute multimillion dollar industries presenting a strategizing array of choices to confuse the customers looking for shampoo, lotion, make-up or perfume. The variety is over-whelming, much of it is full of synthetic chemicals, mineral oils, preservatives, artificial fragrances and other junk food for the skin. Latest arrival on the high-end of this dazzling range of products are the 'natural skin care products' although on closer inspection one will actually find relatively few ingredients that resemble anything that you or I would feel is natural. This is due to the fact that mass produce cosmetics need to be relatively sterile in order to extend their otherwise short-lived shelf-life which can only be achieved by using certain preservatives or mineral oils. The best

natural cosmetics are homemade, using high quality vegetable oils and butters, such as coconut, neem etc. in combination with organic flowers water (hydrosols) and essential oils which should always be produced in small batches to make cosmetics tailored exactly to your own needs. It is fun and not all that difficult.

Furthermore in the case of lotion and crèmes, the idea is to combine a proportion of oil with a proportion of liquid, with the help of an emulsifying agent (Morgenstern, 2007). In the olden days this emulsifier was derived from whales, to suffer for our vanity. Jojoba oil has excellent emulsifying properties and other plant-based emulsifiers can be produced in the laboratory, just which oil, waxes and other ingredients are chosen to create a specific crème or lotion, will determine its nutritional properties for the skin. Some oils are drying while others are moisturizing these with humectants such as vegetables glycerin or *Aloe vera* gel products varying consistencies and benefits for the skin the trick, when blending crèmes is to have all ingredients at a similar temperature so as to avoid curdling, and to combine them slowly. If you have made mayonnaise from scratch you know what it takes to make lotion or crème. Apart from the emulsifying wax, which blends the watering and oily components together, you will also need a stabilizer, such as stearic acid which is added in very small quantities, to give your products a stable consistency. However, use it sparingly or else your crème will become chalky instead of smooth (Morgenstern, 2007).

Traditional medicine remains the main resources for a large majority of the people in the country for treating health problems. It also provides traditional medicine with medical consultancy including the consumption of the medicinal plants which has a much lower cost than modern medical attention (Getachew *et al.*, 2001). Since ancient time, medicinal plants have attracted considerable attention of man including professionals. The use of crude drug in medicine dated back to antiquity. Even with the dawn and the subsequent march of civilization, men have not been able to dissociate themselves from plants, rather the use of the plants have been wide, food, clothing, decoration or drug is unimaginable without taking plants in account. Even pharmacopeia of advanced nations like USSR, Great Britain and USA has approximately 25 to 40% of their medicines from plant origin (Singh *et al.*, 2010 and Singh and Abubakar 2011). Local medicinal plants provide a source of new possible antimicrobial drugs (Burkill, 1985; Singh and Abubakar, 2013).

## **2.2 NEEM OILS**

Neem oils offer 100% of the pure vegetable oil, the nutrients of neem are present in the oil and in their original condition. These can be used for skin freshness curing several chronic ailments, and at the same time solving hair problems (Anonymous, 2008).

## **2.3 MANGO TREE**

Fresh consumption is the most important use for mango, but the fruit can be frozen, dried or canned, mango can be used in jams, jellies, preserves, pies chutney and ice cream. Green mangoes are sometimes eaten raw. The leaves can be used for yellow dye, weakness, wounds and skin diseases (Juliet, 2006).

#### **2.4 PAW-PAW TREE**

This is a small tree, 4-6m high, with distinctive habit, the leave habit, the leave forming a crown at the top. Trunk is grayish, straight sometime branched, often winder at base, bearing, leaf scars, fibrous and more or less soft. The inner part of the trunk is hollow or contains a white pith the white flowers are used for soap (Michael, 2004).

#### **2.5 AFRICAN PEACH (*Tuwon Biri*)**

It can be eaten fresh or dried, the flower is used for powder making and also for soap (Michael, 2004).

#### **2.6 *Aloe vera* SKIN CARE**

*Aloe vera* is cactus plant that belongs to *Cactaceae* family. It grows in dry climates such as those found in part of Africa and India, and has been used medicinally for centuries. Aloe leaves secretes a clear gel that when broken off from the rest of plant can be applied topically on wounds to sooths skin. (Rocchino, 2013).

## **2.7 BATH SALTS**

The cheapest and easier method is to use coarse salts such as Epsom sea salt, crush to a grainy size (dissolve easier) and add a few drop of a gentle essential oil such as rose, lavender or jasmine, stir and blend well, fill in a jar and allow macerating for a few days before use. Some people like to add food colouring to make it look more like the stuff you can buy at the store. The salt is used extensively as hair tonic and in hair styling (Kanyan, 2006).

## **2.8 HENNA**

Though predominantly used in hair nourishment henna is also applied on the skin in various forms (Anonymous, 2006). For hair care, henna paste (mehendi) is made from the powdery extract of henna plant, it is then mixed with egg white and thoroughly applied for thick, shiny hair. In combination with coffee powder, amla powder and onion peels henna makes a perfect hair conditioner, henna is also used to colour the body, primarily hands and feet for making temporary tattoos on the skin.

## **2.9 BANANA (*Musa spp.*)**

The banana is widely used in many hair care product. The banana is predominantly used in conditioners and hair moisturizing properties that help to soften

the hair making it manageable (Nobert, 2008). Banana oil (isoamy acetate) is used in many beauty products such as training oils, lotion and various hair care products. Unfortunately, banana has no effect on the hair, what it does in most hair care products is to perfume them, Banana oil can be used on the scalp as a part of a scalp care regimen.

### **2.10 BAOBAB (*Adansonia digitata*)**

Tree with a highly characteristic habit, having an enormous trunk, up to 7m in diameter, often hollow, with robust, twisted and usually spreading branches (Michael, 2004). Commonly used for tooth decay, red dye, and also seeds for oil producing.

### **2.11 TEETH CARE**

Lemon for teeth whitening; rubbing half of a lemon with table salt and a pinch of baking soda on the teeth not only to make them white, shiny and bright but also cure bad breath (Anonymous, 2006 b). The roots from the coconut tree have been used to make tooth paste and are some times fried to make a natural tooth "Brush" (Kayan, 2006).

### **2.12 BATH OIL**



Soaking in water for any length of time dehydrates the skin, (Morgenstern, 2007). Normally, the skins natural oil secretions keep it from drying out, but frequent bathing and showering washes our natural protection layer off, you can replenish the lost oils by applying skin oils or lotions after each bath or showering, or you can use bath dispersion of the oil in your bath water.

## **2.13 Dry Skin Treatment**

### **Coconut oil**

Coconut oil comes from the fruit or seed of the coconut palm tree *Cocos nucifera*, family *Arecaceae*. The melting point of coconut oil is 24 to 25 °C (75-76 °F) and thus it can be used easily in both liquid or solid forms and is often used in cooking and baking. Coconut oil is excellent as a skin moisturizer and softener. A study shows that extra virgin coconut oil is effective and safe when used as a moisturizer, with absence of adverse reactions. A study found that coconut oil helped prevent protein loss from the wet combing of hair when used for fourteen hours.(Gediya *et al.*,2011 )

## **CHAPTER THREE**

### **3.0 MATERIAL AND METHODS**

#### **3.1 STUDY AREA**

Wamakko is a Local Government Area in Sokoto State, Nigeria. Its headquarters are in the town of Wamakko along Sokoto River.

It has an area of 697 km<sup>2</sup> and a population of 179,619 at the 2006 census. The concentration of wealth, prestige, political power and religious learning centers in Wamakko attracted large numbers of rural-urban migrants, both from the neighboring states and from distant regions. Presently the on-going projects in

Wamakko are Sokoto State University, National Youth Service Corps camp (NYSC), Amusement Park. As of 2010 research conducted by National Bureau of Statistics, shows that the estimated rural –urban migrants in the area is about 4,536 and it's increasing at the rate of 10% annually.

Demographics: Wamakko Local Government is mainly populated by Hausa people. It comprises four villages: Kammata, Gwamatse, Kauran Kimaba and Kokani Cidawa. The inhabitants are mostly farmers and animal rearers but the initial inhabitants were Sulubawa but now the area is dominated by Hausa.

This study was carried out in three villages of Wamakko Local Government Area of Sokoto State. The villages include: Wamakko, Kasarawa and UDUS.

**Wamako LGA and town**



**Figure: A map of Nigeria showing sokoto state and the location of Wamakko Local Govt, the study area.(source: Google Earth, 2016).**

### **3.2 METHODOLOGY**

In gathering information on plants used in beauty care among the Fulani, in Wamakko Local Government, a total of 100 respondents were interviewed, all of them were females, the interview started from May – July 2016. The respondents were identified by random sampling and were found in three different sites, all in Wamakko Local Government. Random sampling was used because there was no other means of identifying respondents. The objective of the sampling method was to identify, knowledgeable respondents and no priority was given to extrapolating prevalence of use.

After collection, Plants were identified in the herbarium of Botany unit of the Department of Biological Sciences, Usmanu Danfodiyo University Sokoto. Through the interviews, local names of plants, mode of application and plant parts used were recorded.

Nine (9) respondents were interviewed once and the remaining ninety (90) were interviewed three times. During the interview there was an informal discussion with some of the respondents such as shepherd, farmers and civil servants all of them from the Fulani tribe. Interview scheduled question were used with conversational technique.

## CHAPTER FOUR

### 4.1 RESULTS

The result of ethnobotanical survey of plants used in beauty care among the Fulani in three villages of Wamakko Local Government Area of Sokoto State revealed that 27 plants species belonging to 22 families (Table1) have been identified. In this study, the family *Anacardiaceae* is represented by five (5) species, *Leguminosae* have two (2) species, *Bombacaceae*, *Meliaceae*, *Cucurbitaceae*, *Rutaceae*, *Zygophyllaceae*, *Sapotaceae*, *Papayaceae*, *Lythraceae*, *Palmeae*, *Musaceae*, *Convolvulaceae*, *Fabaceae*, *Olacaceae*, *Myrtaceae*, *Combretaceae*, *Rhamnaceae*, *Moraceae*, *Dioscoreaceae*, *Pedaliaceae* and *Mimosaceae* have one specie each. The leaves and seeds were found to be the most used parts of the plants, followed by fruit and bark. The commonest method for preparing this plant is the powdered form and concoction, the mode of application was topical, but in some cases it is administered orally. A total of one hundred (100) questionnaires were distributed to the respective respondents in each district and (90) were completed. The questionnaires were analyzed and presented in Table 1 and 2.

Table 1: List of plants used for beauty care in Wamakko Local Government Area.

No.	Scientific Name	Common Name	Local name	Application/uses
1.	<i>Anacardium occidentale</i> ( <i>Anacardiaceae</i> )	Cashew	Yazawa	Skin care diseases (fruit)
2.	<i>Magnifera indica</i> ( <i>Anacardiaceae</i> )	Mango	Mangwaro	Skin diseases (Bark)
3.	<i>Anona senegalensis</i> ( <i>Anacardiaceae</i> )	Wild custard apple	Gwandar Daji	For perfume and soap (leaves)
4.	<i>Azardirachta indica</i> <i>Meliaceae</i>	Neem	Dogonyaro	For hair dressing and Cream oil (seed)
5.	<i>Annona squamosa</i> ( <i>Papayaceae</i> )	Custard apple	Gwandar masar	Skin disease and powder (leaves)
6.	<i>Acacia nilotica</i> <i>Mimosaceae</i>	Acacia	Bagaruwa	Tooth ache
7.	<i>Adansonia digitata</i> ( <i>Bombacaceae</i> )	Baobab	Kuka	For teeth decay (seed)
8.	<i>Balanites aegyptica</i>	Desert date	Aduwa	Treat stomach



	<i>(Zygophyllaceae)</i>			ache(leaves)
9.	<i>Borassus spp.</i> <i>(Palmeae)</i>	Palmy palm	Giginya	Perfume and dye (seeds)
10.	<i>Cerathotheca</i> <i>sesamoides</i> <i>(Pedaliaceae)</i>	Sesame	Yodo	For washing hair(leaves)
11.	<i>Citrus aurentifolia</i> <i>(Rutaceae)</i>	Lime	Lemun tsami	Treat malaria (bark)
12.	<i>Dioscorea bulbifera L.</i> <i>(Dioscoreaceae)</i>	Aerial yam	Kamomowa	Treatment for dysentery and diarrhea
13.	<i>Ficus sycomorus</i> <i>(Moraceae)</i>	Bambara	Baure	Cream oil (seeds)
14	<i>Guiera senegalensis</i> <i>(Combretaceae)</i>	Moshi medicine	Sabara	For milk flow and abdominal pain (leaves, bark and stem)
15	<i>Lannea acida</i> <i>(Anacardiaceae)</i>	Atinabateri	Faru	Cream oil (seeds)

16	<i>Lawsonia inermis</i> ( <i>Lythraceae</i> )	Henna	Lalle	For hair, skin decoration and care (leaves)
17	<i>Merremia tridentate</i> ( <i>Convolvulaceae</i> )	Heenmadhu	Yambururu	For hair growth (leaves)
18	<i>Mormodica balsamina</i> ( <i>Cucurbitaceae</i> )	Balsam apple	Garahuni	Mix with oil to make body smooth (leaves)
19	<i>Musa sapientum</i> ( <i>Musaceae</i> )	Banana	Ayaba	For hair growth (dried banana peel)
20	<i>Psidium guajava</i> ( <i>Myrtaceae</i> )	Guava	Gwaba	Treat malaria (leaves)
21	<i>Parkia biglobosa</i> ( <i>Leguminosae</i> )	Africa locust beans	Dorawa	Tooth decay (leaves)
22	<i>Sclerocarya birrea</i> ( <i>Anacardiaceae</i> )	Marula	Loda	Appertite stimulant and sore throat (leaves and bark)
23	<i>Senna occidentalis</i> ( <i>Leguminosae</i> )	Coffee senna	Tafasa	Treat Thyphoid (leaves)
24	<i>Tamarindus indica</i> ( <i>Fabaceae</i> )	Tamarind	Tsamiya	Wound care (seeds)
25	<i>Vitellaria paradoxa</i> ( <i>Sapotaceae</i> )	Shea butter	Kade	Cream oil (seeds)
26	<i>Ximenia americana</i> ( <i>Olacaceae</i> )	Spiny plum	Tsada	Treat dysentery (leaves)

27	<i>Ziziphus jujube</i> ( <i>Rhamnaceae</i> )	Jujube	Magarya	Wound care and ulcer (leaves)
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Table 2: Numbers of plants and respondent by location.

No.	Scientific Name	Common Name	Wamakko	Kasarawa	Udus
1.	<i>Anacardium occidentale</i> ( <i>Anacardiaceae</i> )	Cashew	10	6	10
2.	<i>Magnifera indica</i> ( <i>Anacardiaceae</i> )	Mango	15	10	9
3.	<i>Anona senegaliensis</i> ( <i>Anacardiaceae</i> )	Wild custard apple	3	4	3
4.	<i>Acacia nilotica</i> ( <i>Mimosaceae</i> )	Acacia	15	10	20
5.	<i>Annona squamosa</i> ( <i>Papayaceae</i> )	Custard apple	-	15	10
6.	<i>Borassus spp</i>	Palmy palm	5	8	-

	<i>(Palmeae)</i>				
7.	<i>Adansonia digitata</i> <i>(Bombacaceae)</i>	Baobab	10	9	5
8.	<i>Lannea acida</i> <i>(Anacardiaceae)</i>	Atina bateri	5	6	9
9.	<i>Musa sapientum</i> <i>(Musaceae)</i>	Banana	2	2	-
10.	<i>Lawsonia inermis</i> <i>(Lythraceae)</i>	Henna	16	14	4
11.	<i>Citrus aurentifolia</i> <i>(Rutaceae)</i>	Lime	5	4	5
12.	<i>Parkia biglobosa</i> <i>(leguminoseae)</i>	Africa locust bean	12	10	5
13.	<i>Azadirachta indica</i> <i>(Maliaceae)</i>	Neem tree	20	16	20
14.	<i>Merremia tridentate</i> <i>(Convolvulaceae)</i>	Heen madhu	-	5	-
15.	<i>Mormodica</i>	Balsam apple	5	10	5

	<i>balsamina</i> ( <i>Cucurbitaceae</i> )				
16.	<i>Balanites aegyptica</i> ( <i>Zygophyllaceae</i> )	Desert date	5	7	2
17.	<i>Tamarindus indica</i> ( <i>Fabaceae</i> )	Tamarind	10	14	8
18.	<i>Vitellaria paradoxa</i> ( <i>Sapotaceae</i> )	Shea butter	15	12	10
19.	<i>Guiera senegalensis</i> ( <i>Combretaceae</i> )	Moshi medicine	12	10	5
20.	<i>Psidium guajava</i> ( <i>Myrtaceae</i> )	Guava	20	16	20
21.	<i>Ximenia Americana</i> ( <i>Olacaceae</i> )	Spiny plum	6	8	-
22.	<i>Senna occidentalis</i> ( <i>Leguminoseae</i> )	Coffee senna	5	10	5
23.	<i>Cerathotheca</i> <i>sesamoides</i>	Sesame	20	15	10

	<i>(Pedaliaceae)</i>				
24.	<i>Dioscorea bulbifera</i> <i>L.(Dioscoreaceae)</i>	Aerial yam	6	14	-
25.	<i>Sclerocarya birrea</i> <i>(Anacardiaceae)</i>	Marula	10	12	6
26.	<i>Ficus sycomorus</i> <i>(Moraceae)</i>	Bambara	12	14	10
27	<i>Ziziphus jujube</i> <i>(Rhamnaceae)</i>	Jujube	20	20	25
	TOTAL		248	281	199

## CHAPTER FIVE

### 5.1 DISCUSSION

The significance of plants used for beauty care in our modern society cannot be overemphasized. It is known that most of the beneficiaries and users of those plants were people from rural areas that cannot afford to purchase modern ones, scientists use the extracts from this traditional plant for the production of many modern ones presently in use. Currently, natural scientist developed interest to investigate some of the natural beauty care. In Table 2, neem tree (*Azadirachta indica*) and *Ziziphus jujube* are the most widely used plants in all three areas. Wamako and Kasarawa used *Lawsonia inermis* (Henna) in large quantity for their decoration, *Merrimia tridentata* is used for beauty care

in Kasarawa area only, the least mentioned species is *Annona senegalensis* with 2% occurrence. Mango (*Magnifera indica*) species is mostly used in Wamakko with 15% occurrence. It is revealed that custard apple (*Annona sequamosa*), palmy palm (*Borassus spp*), *Musa sapientum*, *Ximenia americana* and *Dioscoreae bulbifera* are used for beauty care in two of the areas while others were all used for beauty care in all three areas. It shown that 90% of plants used in beauty care are found in Wamakko Local Government Area of Sokoto State.

## **5.2 CONCLUSION**

In conclusion, the results of the present survey of plants used for beauty care and traditional medicine reveal the rich wealth of indigenous knowledge associated with the Fulanis of Wamakko Local Government Area of Sokoto State. The use of plants for beauty care is of great importance for providing cover to the crops within the Local Government Area, right from the seeds up to the trees. This partially help in maintaining good hygienic food and at the same time, the provision of good health care (beauty care), it also helps the Fulani's and other people living in the Local Government Area to have a partial insight of tree crops management.



Finally, it can be seen that most of the Fulani's prefer local method of beauty care, and this is because most of them are farmers and nomadic shepherds.

## **5.2 RECOMMENDATION**

This project has been compiled by way of research on plants used for beauty care among the Fulani's. It involves three hierarchies or levels based on real happenings in the local government in question. All in all, the Fulani's are recommended for their way of storing the flowers of some plants that cannot be reached at any time, unless seasonal. Again, government should intervene in finding other means of helping the Fulani to have access to modern plants purposely for beauty care.

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## **APPENDIX**

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SAMPLE QUESTIONNAIRE: SURVEY OF PLANTS USED IN BEAUTY CARE  
AMONG THE FULANIS IN WAMAKKO LOCAL GOVERNMENT AREA.

SECTION A: BACKGROUND

1. Gender.....
2. Age (a) 15-20 ( ) (b) 21-30 ( ) (c) 31-40 ( )
3. Religion (a) Islam ( ) (b) Christian ( ) (c) Traditional ( )
4. Occupation (a) civil servant ( ) (b) farmer ( ) (c) shepherd ( )
5. Marital status (a) single ( ) (b) married ( ) (c) widow ( )
6. Educational background (a) Qur'anic education ( ) (b) western education ( )

SECTION B: PLANTS USED FOR BEAUTY CARE

1. In which season are herbs for beauty care very common? (a) dry season ( ) (b) raining season ( )
2. Is there any ways of utilizing the plants apart from beauty care? (a) Yes ( ) (b) No ( )
3. If yes state.....
4. What are the plants used for beauty care in your area? (a) Ornamental ( ) (b) shrubs ( )
5. Are plants for beauty care planted or grown naturally? (a) Artificial ( ) (b) natural ( )

6. If artificial,  
state.....
7. Can these herbs be used in original or compound form? (a) yes ( ) (b) No ( )
8. If yes, state the form.....
9. Is there any alternative with regards to beauty care apart from those plants (a) yes  
( ) (b) No ( )
- 10.If yes  
indicate.....