



A field study of *Anupa* and *Jangala Desha* w. s. r. concept of *Desha*

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ABSTRACT

Ayurveda is the only science which believes in curing the disease completely from its root. So there are concepts that treat the man as whole and give the drug as a whole. And this makes us to think that as like man, the drug also should be studied from all the aspects right from its origin to processing. Our Acharyas have given sufficient information regarding production of drug and also about ideal soil for herb.

The geographical variation and climate of the place of origin of the drug may be the major factor in influencing the potency of drug. Hence for current study soil samples collected from Anupa(Ratnagiri) and Jangala(Jamnagar) regions; on the basis of classical features, Map of India showing Panchmahabautika classification of land and vegetation, modern soil and rain fall concept etc.

For present study Analytical and laboratory study of soil sample is done. Sample-A is Anupa Soil sample and Sample-B is Jangala Soil sample; are collected along with following all scientific agricultural procedures.

KEY WORDS:

ANUPA-JANGALA DESHA, SOIL SAMPLE, SOIL ANALYSIS, ENVIRONMENTAL FACTOR

INTRODUCTION:

The development of man in this era of globalization is one of the subjects of discussion. The developed communication, media etc. has made distant places closer than before. Misuse of all these has been made by man for himself. He has adopted food habits, life style etc. which may not be suitable to his place of origin. This all leads to psychosomatic unhealthy and in this condition he rushes towards modern therapy due to unreliable results of Ayurvedic drugs. Since long the subject of standardization of Ayurvedic drugs is still hot; but there has been no fruitful outcome. This has happened because we have forgotten our concepts and the useful Sutras which are given by our learned Acharyas. In this era of globalization we must remember the quotation given by Acharya Charaka in Vimansthan that

Desha Punha Dwiwidha
BhumiraAaturashchCh.Vi.8/94

If the Vaidya can give proper attention to patient in all the aspects then why can't he do the same for the drug which he will administer to the patient? Today it has become a must to give attention towards all the factors which affect the potency of the drug. After lot of observation it was found that the geographical variation and climate of the place of origin of the drug may be the major factor in influencing the potency of drug.

The references to desha are present since the Vedic kala in the form of Aarya-Aanarya Desha, later on in Samhita kala this concept was described in the form of Trivida Desha according to geographical features and its effect on animals and plants. The applied aspect of this concept has remained untouched. So here an attempt has been made to establish and prove the concept of desha with the help of experimental study.

AIMS AND OBJECTIVES

- (1) To assess the authenticity of Trivida Desha concept
- (2) To collect the soil sample from Anupa and Jangala Desha.
- (3) To analyse both soil sample classical as well as laboratory method.

MATERIALS AND METHODS

Standardization is the main lacuna in Ayurvedic drugs. The cause behind it is also genuine because our drugs are used as a whole. There may be effect of environmental factors on the quality and quantity of drug. In classics lot of references are found regarding the drugs which should be called the best of one which genesis in particular place.

Anupdeshe Yajatam Mustakam Tat PrashasyateBh.Pr.

So, here an attempt has been made to explore the reality behind the effect of different regions (Desha) and environmental factors by experimental and analytical study.

The word Desha indicates the area as well as the body of a patient. Etymologically Desha means a part of the geographical area. All the Aacharyas (Su.Su.36/42, Ch.K.1/8, Bhavprakash Nighantu, Raj Nighantu.) have mentioned three types of Desha (Anup,Jangal,Sadharan)

COMPARATIVE CHART/TABLE-1 SELECTED AREAS FOR STUDY

1. SELECTION OF ANUPA DESHA

For present study the area selected as an Anupa Desha is RATNAGIRI. Selection of place was decided on the basis of above discussed criterias.

- 1.] The classical features of anupa desha were mostly applicable to this region and maximum similarity was found geographically
- 2.] On the basis of Map of India showing Panchmahabautika classification of land and vegetation, this land comes under Aapya Bhumi.
- 3.] On the basis of overall geographical information collected from authentic sources.

Place of soil sample collection-
RATNAGIRI

Country- India State- Maharashtra
Dist- Ratnagiri

1.] Latitude-16.9833 Lat
(DMS)-16°58'60N

2.] Longitude-73.3000 Long
(DMS)-73°17'60E

- 3.] Altitude-36ft
Altitude -10meters
- 4.] Time zone (est)-UTC+5:30
- 5.] Soil type- Laterites
- 6.] Rainfall- 2000-3000mm/annum
- 7.] Bhumi- Tamravarna Bhumi (Ref-
Raj Nighantu)
- 8.] Temp-26-28 C

2. SELECTION OF JANGALA DESHA

For present study the area selected as Jangala Desha was JAMNAGAR. Selection of place was decided on the basis of above discussed criterias.

- 1.] The classical features of Jangala Desha were mostly applicable to this region and maximum similarity was found geographically
- 2.] On the basis of Map of India showing Panchmahabautika classification of land and vegetation, this land comes under Vayavya Bhumi.
- 3.] On the basis of overall geographical information collected from authentic sources.

Place of soil sample collection-
JAMNAGAR

Country- India State- Gujarat Dist-
Jamnagar

- 1.] Latitude-22.4667 Lat
(DMS)-22°28'0N
- 2.] Longitude-70.0667 Long
(DMS)-70°4'0E
- 3.] Altitude-65ft
Altitude-19meters
- 4.] Time zone (est)-UTC+5:30
- 5.] Soil type- Medium Black
- 6.] Rainfall- less than 500mm/annum
- 7.] Bhumi- Dhusharvarna Bhumi (Ref-
Raj Nighantu)
- 8.] Temp-27-29°C

SOIL SAMPLE COLLECTION-

The area of soil sample collection was decided and the purpose is some positive findings; like pH, minerals, and microelements, of that particular soil. In the present study the scholar has collected the soil samples along with following all scientific agricultural procedures.

For soil sample collection, the field was divided in different plots according to surface condition of field. Then one imaginary path or line was decided in zigzag manner for collection of soil sample and approximate 2ft distant was left from the borders of field to avoid adulterate soil sample and incorrect readings. Then using proper tools like spade and pick-axe, the field was dragged up in triangular manner at several spots on imaginary zigzag path and upper 15cm soil was removed from dig up area and soil samples were collected. These soil samples were mixed thoroughly and spread on a clean sheet of paper and divided into four equal parts. Two opposite quarters are rejected and samples from the other two are mixed and the procedure was repeated till the desired size of the sample was obtained (1/2 kg) which was collected in a plastic-bag. The bag was well labeled and sent to the soil-testing laboratory. Soil tests and their interpretations are based on the samples collected and analyzed.

OBSERVATION AND RESULTS

ANALYSIS OF SOIL SAMPLES

TABLE-2

MINIRALS

TABLE-3

MICROELEMENT

TABLE-4

*A.A.S. (Atomic Absorption Spectrophotometer)

Sample-A=Anupa Deshastha Soil sample

Sample-B=Jangala Deshastha Soil sample

DISCUSSION

01) Trivida desha is explain in detail by Brhatryi and later on addition was done by Nighantu Granthas. Here the desha is classified in to Anupa, Jangala and Sadharana. In present study only Anupa and Jangala area were selected and Sadharana Desha was excluded to avoid vastness of study and due to time limitation. The comparable factors of Anupa and Jangala desha like Bhumi, Jala, Plants, Animals etc. are described above.

02) The selection of area {Anupa and Jangala} for Soil collection was very difficult task. This work was carried out on the basis of following criteria.

a.] On the basis of Map of India showing Panchmahabutik classification of land and vegetation

b.] On the basis of Classical features given by Charaka Sushruta Bhavprakash and specially by Raj Nighantu

c.] On the basis of Annual Rainfall recorded.

d.] On the basis of Soil nature.

03) For present study the area selected as an Anupa Desha is RATNAGIRI Bhumi-Aapya Bhumi (Ref-Raj Nighantu Tamravarna) , Soil type-Laterites, Rainfall-2000-3000mm/annum. And as a Jangala Desha is JAMNAGAR. Bhumi- Vayavya Bhumi(Ref-Raj Nighantu Dhusravarna), Soil type-Medium Black, Rainfall-less than 500mm/annum

04) Analysis of studied soil samples. The pH of soil sample-A is slightly Acidic i.e.6.58 and soil sample-B is slightly Alkaline i.e.7.20 There is much variation in Electro conductivity of both soil samples; in sample-A it is 0.133 mmhos/cm and in Sample-B it is 0.507mmhos/cm and the percentage of Organic Carbon is 0.39 % in Sample -A and in Sample -B it is 0.63 % .The water holding capacity of soil does not show much variation. In Sample -A it is 53.83 %and in Sample -B it is 40.58 %

CONCLUSION

01) Trivida desha is explained in detail by Brihtrayi and later on additions were done by Nighantu Granthas.

02) The modern tools like soil types, rainfall, temperature etc. of the Region helps to decide the desha according to Ayurveda.

03) The soil type, rainfall and pH of soil are having major role in the qualitative and quantitative development and growth of drug.

04) The Anupa soil sample is having slight Acidic pH and Jangala soil sample is slight Alkaline.

05) The Acidic pH of Anupa soil increases the absorption of microelements in drug on other hand due to heavy rainfall organic carbon and Nitrogen percentage of soil is less.

06) The Alkaline pH of Jangala soil inhibits the absorption of microelements in drug and on other hand organic carbon and Nitrogen percentage of soil is more.

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COMPARATIVE CHART/TABLE-1

Sr. no.	VISHESHA	ANUPA DESHA	JANGALA DESHA
1.	BHUMI	Tamra Bhumi	Dhusara Bhumi, Sharkara Tanu, Khara, Parusha, Sikta
2.	JALA	Bahudaka, Nadee, Varshayukta	Swalp-Paniya, Alpa Varsha Prasrvanodak
3.	VAYU	Shishir Pavanabahula, Mridu Shita	Sthira-Shushkapavana, Ushna-Darunavata
4.	VANASPATI	Hintala, Tamal, Narikela, Kadali, Vanjula, Vanira, Utpala	Kadar, Khadir, Aasana, Dhava, Aswakarna, Tinish, Sallaki, Sal, Somvalka, Badari, Shmi, Tinduka, Ashwattha, Karir, Kakubha, Bilwa, Pilu, Arka.
5.	PASHU	Shash, Varaha, Mahisha.	Harina, Unstra
6.	PAKSHI	Hamsa, Cakravaka, Balaka, Kokila	Lava, Tittira, Cakora
7.	DHANYA	Shali	Mudga, Vrihi, Yava
8.	MANUSHY	Mrudu-Sukumar-Upachit	Stira-Kathina-Krusha
9.	DOSHA	Kapha-Vata	Vata-Pitta
MODERN CONCEPT			
10	Soil Type	Red/Laterite Soil	Black/Grey/Desert Soil
11	Rain Fall	2000-3000mm	Less than 500mm

ANALYSIS OF SOIL SAMPLES TABLE-2

Sr.	Parameters	Method Used	Sample-A	Sample-B
1	pH	pH Meter	6.58	7.20
2	E. Conductivity	EC Meter	0.133 mmhos/cm	0.507 mmhos/cm
3	Organic Carbon	Titrimetric method	0.39 %	0.63 %
4	W.H.C.	Gravimetric Method	53.83 %	40.58 %

MINIRALS TABLE-3

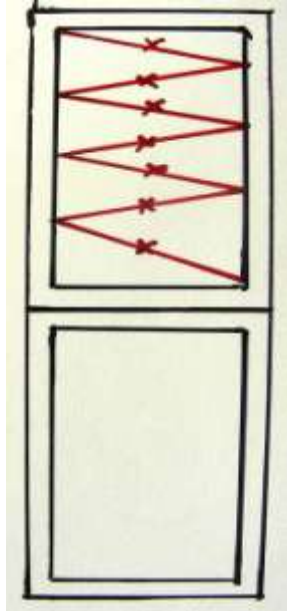
Sr.	Parameters	Method Used	Sample-A	Sample-B
1	Nitrogen	Kjeldhal Method	39.41Kg/ha	75.54Kg/ha
2	Phosphorous-	Olesen blue method	16.42Kg/ha	19.48Kg/ha
3	Potassium-	Flame photometer	107.52Kg/ha	91.84Kg/ha
4	Sodium	Flame photometer	1.40 %	1.12 %
5	Calcium	EDTA titration (Titrimetric method)	0.41 %	0.56 %
6	Magnesium	EDTA titration (Titrimetric method)	0.043 %	0.068 %
7	Free Lime	Titrimetric method	4.52 %	5.20 %

MICROELEMENT TABLE-4

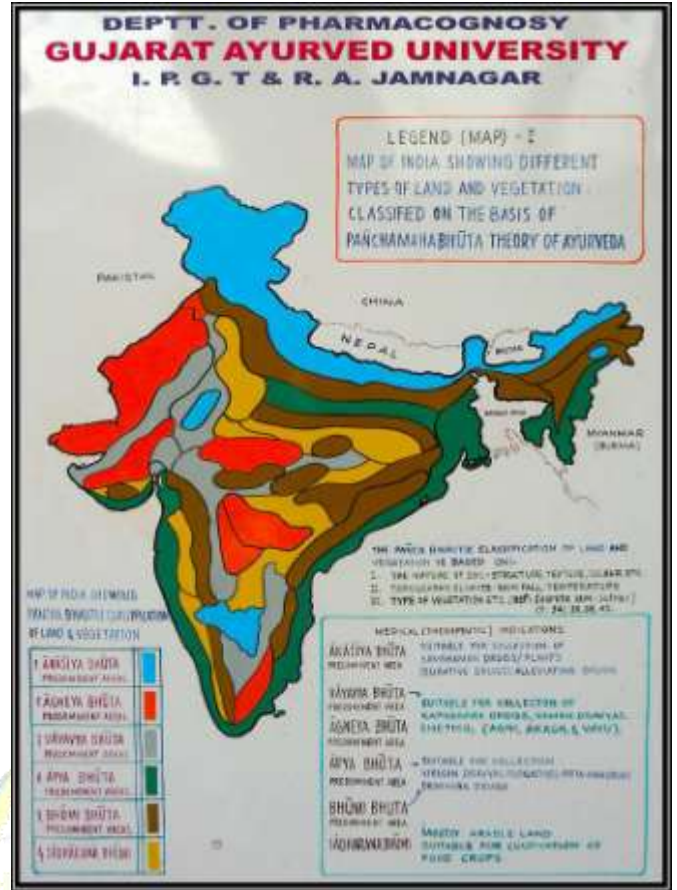
Sr.	Parameters	Method Used	Sample-A	Sample-B
01	Iron	A.A.S.	3.62ppm	3.86ppm
02	Manganese	A.A.S.	1.07ppm	0.93ppm
03	Zinc	A.A.S.	0.63ppm	0.88ppm
04	Copper	A.A.S.	0.48ppm	0.59ppm

*A.A.S. (Atomic Absorption Spectrophotometer)

Sample-A=Anupa Deshastha Soil sample
 Sample-B=Jangala Deshastha Soil sample
 SOIL SAMPLE COLLECTION ZIGZAG METHOD-



PANCHABHOUTIK BHOOMI-



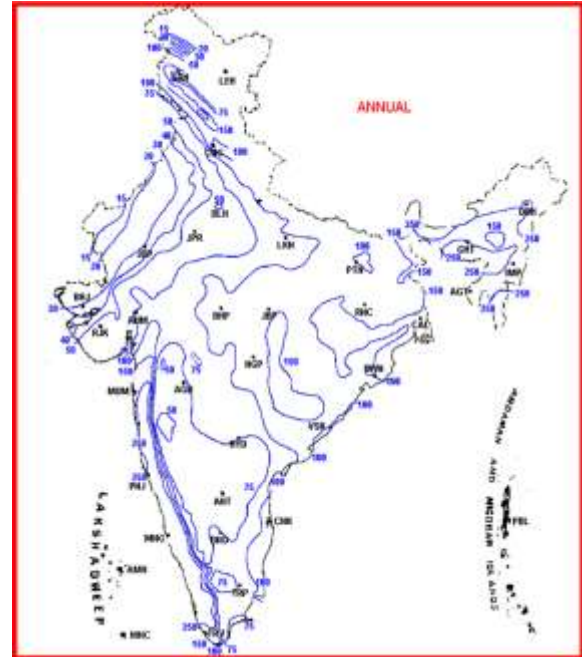
JANGAL SOIL SAMPLE-



ANUP SOIL SAMPLE-



ANNUAL RAIN FALL-



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