

becomes apparent. Members of a race are not genetically 'pure' in the sense of sharing a uniform genetic identity nor does genetic uniformity apply even to members of the same family.

Lewontin (1972) pointed out that more than 94 percent of genetic variability among humans arise from differences between individuals and groups of the same race and only 6 percent from differences between races. The force producing racial differences are often adaptive; that is, at least some gene-frequency changes are the response of a population to the selective forces operating within a particular environment.

8. S U M M A R Y

1. Average monthly maximum-minimum temperature and rainfall ranged from 31.9°C - 14.5°C and 120mm-2.0mm respectively during the three year study period. January was the coldest and June the warmest month while maximum rainfall was recorded during May-September and minimum in March-May. The relative humidity in January the coldest month ranged from 53.5% to 68.0% and from 73% to 91% in June the warmest month.

Soil was in general acidic, loamy with higher percent clay in the cultivated land. Moisture content in the wet season varied from 22.14% to 24.34%. Soil conductivity ranged from 0.11 to 0.20 m.mhos/cm. Percent organic carbon and calcium ranged from 0.49 to 1.13 and 0.097 to 0.554 respectively. Available phosphorus and potassium ranged from 5.20 to 34.2 kg/ha and 130.0 to 187.3 kg/ha

respectively. Traditional manuring practices increased organic-carbon in the cultivated plots.

2. The dominant grass species in three major grasslands zones from upper to lower slope were Axonopus compressus, Cynodon dactylon, A. compressus, Imperata cylindrica and Saccharum spontaneum. ANP of grass was highest in the intermediate zone and least in the lower zone. Cereal crop output was 2161.7 and 5336.9 k.cal/m²/yr for grains and its byproducts respectively. Gross energetic efficiency of Totopara cattle was only 1.79%. The sole purpose of rearing goats was ready cash. Substantial increase in energetic efficiency of cattle and goat is possible.

3. Major portion of protein requirement was met from fish and other small animals rather than big games. A total of 63.0% of the Toto subsistence was derived from gathering, hunting and fishing of which meat or animal matter contributed only 2.61% and 60.4% was of plant origin.

4. Seven hundred twenty Totos and 815 non-Totos lived in the Totopara village, an area of about 2000 acres. The population density was 195 persons/km². The physiological density i.e. land/man ratio at Totopara was 0.383 acres/person. The dependency ratio (DR) and economic load factor (ELF) among the Totos were high probably due to the presence of a large proportion in the below 9 age group.

Sex ratio was in favour of males. Elementary familial units comprised more than half of the total familial units. This family

category increased remarkably in recent times (1965-81) at the cost of the traditional patrilineal joint familial units.

The fertility indices such as C/W ratio, CBR, GFR, TFR, and NRR were close to the higher range of world fertility record. Females of 30-39 year group showed peak fertility. Reproductive maturity appeared rather late among the Totos. The practice of early marriage apparently failed to counter the physiological attribute of late maturity in most cases as the age of the male partner was lower than the female. Conceptions seemed to be related with environmental factors. The social attitude in favour of large family was a matter of convenience to live their traditional way of life. However, the idea of family planning is fast gaining ground in them.

Crude mortality rate (CDR) was rather high mainly due to high infant mortality (IMR). Toto life expectancy at birth was low. Epidemics of gastroenteritis, measles and respiratory infections appeared to be most important agents of death. Mortality was high during seasonal transition.

The average rate of natural increase over the last 80 years i.e. from 1901 to 1980 for the Toto males and females were 0.019 and 0.015 respectively. The rate of growth during eighty years prior to 1980 ranged from -0.32 to +3.81 percent per annum indicating wide fluctuation of 'r' which was probably influenced by various social and environmental factors including diseases. Actual growth

for Toto male and female were 24.7 and 20.5 cc/cm while for BSA it was 2.34 lit/sq.m. for male and 1.98 lit/sq.m for female. Body surface area of Totos appeared to be related with VC. In both sexes, age and vital capacity showed positive correlation but in case of male it was insignificant.

Hypertension was absent but many showed low level of BP. A significant positive correlation between BP and age was observed. Correlation of weight and Quetelet index (build) with blood pressure were observed only in case of male. A positive correlation was recorded between female DBP and pulse rate in sitting posture at rest.

Mean Hb% was higher in males than females. It was lower in 55+ group than 15-54 year group. Percent Hb, however, varied considerably in different age groups and among the sexes. Low Hb% in the younger age group 5-14 was probably due to higher parasitic infestation load and malnutrition.

Average ESR of 17.1 and 20.19 mm/hr for males and females were higher than the normal range for tropical countries. However, 43.6% males and 35.5% of females were within the range for tropical countries. ESR value varied in the age groups and between sexes.

On the basis of frequency distribution of blood group B the Totos appeared to occupy an unique position in that: high frequency of B group (57%) put them close to the north and mixed Indian population in comparison to others but again the frequency of B group was much higher than the said populations so as to register a statistical difference.

PLATE 56.

Collection of blood sample for examination
from a Toto female by the author.

*mark- the author.

