D U N G

IS

GOLD MINE

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PREFACE

One of the few nectars of this world is water, another is milk and the third one is cattle dung. With onset of what we call 'modern civilisation', we have been despising a few things and one of these is cattle dung. This is so because we have forgotten that the basis of our progress as a race depends on the optimal use of our resources, an important resource base being bovine dung. If a choice before mankind was put in crystal clear terms as to whether it chooses cattle dung or desertification of the mother earth, it would have definitely shed its despise for cattle dung and chosen it between the two.

Shri Venishankar M. Vasu has brought out in simple language but with hard facts and figures and proofs the consequences of Government policy of slaughtering animals which are either not yielding milk or are useless as draught animals. The Government has forgotten the third most important service rendered by animals i.e. providing dung which has been at the root of well laid out social and economic systems adopted by the Aryan population of this great nation since times immemorial.

The policies of state patronised, encouraged and rewarded violence have engulfed all living beings. This has happened due to the destruction of the concept of dung utility and despise for cattle dung. The purpose of this essay is to highlight the unique and essential role of bovines and bovine dung in our economy and lifestyles and to stop the slaughter of our precious animals.

— Publishers

CONCLUSION

From what has been explained above, the readers will now realise that cutting short the source of dung has engulfed the entire nation economically, intellectually, and physically irrespective of any distinction as to the caste, creed, religion or region. Dung is such an invaluable commodity that not a single individual of the country can remain immune from the effects of its scarcity, whether such a person is very affluent or poor, whether he is Hindu, Muslim, Parsi or Christian. The scarcity of dung is eating away universally everyone without any distinction.

Dung economy was a most scientific economic system evolved by the great Aryan race. Unless we accept this, our future will become more and more gory. We urgently need our dung culture and its restoration to the predominant place where it belongs. This is not possible unless a total ban on animal slaughter is imposed.

But unfortunately, the government of our country is bent on converting the cultured and civilised population of this great nation into herds of wild human beings. The religious heads on whom lies the responsibility of preserving the culture and civilisation of the population must rise from their deep sleep.

THE ONLY SOLUTION TO PROBLEMS OF SHORTAGE OF FOODGRAINS, WATER, FUEL SHELTER, GOOD HEALTH, NUTRITION, ERADICATION OF POVERTY, AND UNEMPLOYMENT

DUNG, DUNG AND ONLY DUNG ! !

What is despised today by giving it the name of 'dung-economy', is in fact the nucleus of prosperity of the Indian people. And that is why our ancient economists have described dung as the abode of wealth and prosperity and thereby impress upon the unique utility of dung in relation to the Indian Economy.

If we accept this concept that dung is the nucleus of our prosperity and is not substitutable, the following will follow:

- Fertiliser will be cheaply available to us.
- Foodgrains can be produced and made available at reasonable rates.
- Our soil will retain its fertility.
- Cheap fuel will be available to masses.
- Cheap housing can be provided in the rural areas.
- Our ancient system of medicine i.e. Ayurved cannot subsist in the absence of dung and the absence of dung has put in peril the health in particular of our women folk.

I bow in reverence to such obliging ruminants on behalf of the mankind!

With growing age, an animal may become useless for milk production, field work or for breeding. However, its age is never a detriment to its service of providing dung.

By unfrittered slaughter of cattle, our government has snatched away the availability of precious dung from the people and pushed the entire population in the dungeon of starvation, drought, poverty and chaos in all the spheres of life.

And hence, Oh ! my fellow countrymen, awake, rise and call for a halt to the Government machinery and order them to reverse the policy which they have set in to snatch away the precious wealth of dung from our life.

As a result of disruption in the availability of dung, we have suffered on many fronts, like;

1) Foodgrains have become costly and without the required nutritional value.
2) Loss of soil fertility.

3) Diminished opportunity to practise several different vocations for both Hindu and Muslim population.

4) The health of crores of women in the country at peril.

5) Our religious rights have been snatched away.

6) Ayurved, our ancient system of medicine has suffered a severe blow.

7) Fuel has become scarce and costlier.

8) Ash of dung very valuable to us is not available now.

9) The flow of passing on lessons of rich experience from one generation to the other has stopped.

10) Our forests are being gradually destroyed.

11) Many social evils and addiction to liquor have become widespread.

12) An acute scarcity of residential houses.

GROWING NUTRITIOUS AND CHEAP FOODGRAINS :

No other fertiliser in the whole world is as cheap and as harmless as the dung fertiliser. The Indian farmer is able to grow the best and cheapest foodgrains in the world with the help of dung manure. This alone is capable of providing stability to the Indian economy.

However, due to the Western influence the government in India has resorted to unfrittered slaughter of animals resulting in disruption of availability of cattle dung, forcing farmers to use costly and harmful chemical fertilisers, thereby pushing up the prices of foodgrains ultimately affecting the entire economy by throwing it in the dungeon of inflationary pressures. By cutting down availability of bullocks and forcing the use of tractors, another dimension has been added to the entire murky affair.

As a result, the once independent Indian farmer has now become dependent on others for availability of chemical fertilisers and tractors. He has become dependent on fertiliser plants, railways and money lenders or banks. The farmers have been pressurised into using chemical fertilisers by resorting to false propaganda about the advantages of chemical fertilisers. Besides, he is left with no other option because the natural dung manure is not available to him. The use of chemical fertilisers might have marginally increased the agricultural production. However, the cost of production has increased manifold and in addition the taste as well as the nutritional value from the foodgrains have been lost.

Rice is one of the main crops in our agricultural system. A major part of our land is under cultivation of rice and quantumwise also, the maximum production is of rice and hence these figures relate to rice only. The table (1.1) indicates rising cost and the production of rice per hectare in a few States with use of chemical fertilisers in India.

Table 1 Increase in rice production costs per hectare with use of chemical fertilisers as compared to yield.

State	Year	Total Production Cost of rice per hectare Rs.	Production per hectare (2.5 acres) (in quintals)	Production expenses/ quintal Rs.
Andhra Pradesh	1971-72	1476.33	25.22	51.53
	1980-81	3873.76	33.77	104.94
Assam	1971-72	841.57	16.23	49.90
	1980-81	1695.52	21.34	76.24
Bihar	1972-73	1188.65	17.03	50.03
	1979-80	2082.70	16.88	109.82
Karnataka	1973-74	2092.85	33.17	51.13
	1975-76	2600.82	32.36	69.36
Orissa	1971-72	837.96	16.84	40.13
	1979-80	1663.91	15.61	83.25
Tamil Nadu	1971-72	1616.18	26.16	53.47
	1979-80	3596.56	33.88	92.24
Uttar Pradesh	1975-76	1753.12	21.35	73.06
	1980-81	2563.88	22.63	94.01
West Bengal	1971-72	1255-89	18.39	54.15
	1978-79	1573.88	22.33	96.36

Source: "Indian Agriculture in Brief" Published by Agriculture Ministry of Central Government 19th Edition Page No. 274-279

The above table indicates that the increase in production cost per hectare was on an average 100% while production has remained almost static.

Jowar and Bajra is the staple food of the vast majority of poor people in India. What happened to their cost of production in relation to the production in absence of the dung manure is clear from **table 2**

State	Year	Production Cost per hectare (in Rs.)	Production per hectare (in quintals)	Production expense per quintal (in Rs.)
		J O W A R		
Karnataka	1971-72	394.62	6.18	45.06
	1975-76	638.60	6.44	80.62
Maharashtra	1971-72	471.27	5.73	57.03
	1978-79	716.32	7.12	71.70
Andhra Pradesh	1973-74	477.27	4.29	82.71
	1975-76	628.06	4.01	117.64

State	Production Year	Production Cost per hectare (in Rs.)	Production per hectare (in quintals)	Production expense per quintal (in Rs.)
		B A J R A		
Gujarat	1971-72	649.58	8.72	49.67
	1978-79	1582.51	16.40	74.79
Haryana	1972-73	814.31	5.31	111.41
	1975-76	844.36	7.51	64.54
Rajasthan	1970-71	309-74	6.41	36.82
	1975-76	329.46	2.39	108.38

Source: "Indian Agriculture in brief." 19th Edition.

Jowar and Bajra which are the staple diets for the poor and the stalk of the plants which is the main food for the cattle, have registered a growth in production expenses by 47% whereas its production has increased only 5½%.

If agriculture was based on the services of bullocks alone and instead of chemical fertilisers only and had dung or natural manure been used, the farmer would have been spared of the investment in tractors and the interest cost of such investments or the rent of hiring tractors. He would have been spared of the heavy cost of chemical fertilisers and interest, the cost of pesticides, the investment cost in motor pumps and its interest cost and the cost incurred for diesel or electricity for running such motor pumps. Thus he would have been spared of a lot of heavy and at the same time unnecessary expenses which now get added to his cost of production.

By burdening the farmer with unnecessary expenses, the cost of production for farmers has increased beyond their capacity. The foodgrains have become very costly which have given rise to various agitations, riots, strikes by farmers demanding rise in prices of agriculture and the resultant chaos all over the country.

Surprisingly even after allowing the price increase to farmers because of violence and agitation, the farmers have not benefitted. The farmer has become a pawn in the hands of powerful exploiters who are exploiting the entire population through their evil designs. The price increase secured by farmers has been shared between the oil and diesel producing countries and manufacturers of chemical fertilisers, tractors, pesticides and the government agencies, leaving the farmer where he was !

And hence, if anybody is responsible for the agitation, riots, strikes, etc. aimed at securing increase in agricultural produces, it is the Government under the malicious guidance of Western Institutions. The Government has endangered the interest of the masses by stopping the flow of cattle dung and thus they have committed an inexcusable crime. Why should the people of this Nation not put them on trial for this crime?

LAND HAS LOST IT'S FERTILITY :

If the nutritional elements from the soil which are consumed by crops are not replenished after each crop season, the soil loses its fertility gradually.

The foodgrains grown on such soil become nutritionally poorer and eventually the land becomes barren and gets transformed into a waste-land. Table 1.3 shows the quantum of nutritional elements absorbed by crops from the soil, indicated as per acre consumption.

Table 3 - The quantities of plant nutrients removed from soil by different crops (kg/ha)

Crop	Yield (grain) kg/ha	Nitrogen (N)	Phosphoric acid (P_2O_5)	Potassium (K_2O)
Rice	2,240	34	22	67
Wheat	1,568	56	24	67
Jowar	1,792	56	15	146
Bajra	1,120	36	22	66
Maize	2,016	36	20	39
Barley	1,120	41	20	35
Sugar cane	67,200	90	17	202
Groundnut	1,904	78	22	45

"Hand Book of Agriculture" 91987) pp. 213 Indian Council of Agricultural Research (ICAR)

To replenish such nutrients consumed by crops from the soil, cattle dung or organic manure is the best, cheapest, harmless and most easily available manure. Now, let us have a look at nutrients contained in dung and urine of different animals which help in restoring fertility to the soil. The following table indicates the contents of some of the basic nutrients of dung manure.

Table 4 - The average nutrient contents of manures:

Type of Manure	Nitrogen (N)	Phosphoric acid (P_2O_5) (Percentage content)	Potash (K_2O)
Dung of cow/buffalo	0.3 - 0.4	0.1 - 0.2	0.1 - 0.3
Horse Dung	0.4 - 0.5	0.3 - 0.4	0.3 - 0.4
Dung of sheep and goat	0.5 - 0.7	0.4 - 0.6	0.3 - 1.0
Cow/buffalo urine	0.9 - 1.2	NIL	0.5 - 1.0
Horse urine	1.2 - 1.5	NIL	1.3 - 1.5
Sheep/goat urine	1.5 - 1.7	NIL	1.8 - 2.0
Dry compost manure	0.7 - 2.0	0.9 - 3.0	1.0 - 2.0
Waste from stable of cows/ buffaloes or horses	0.4 - 1.5	0.3 - 0.9	0.6 - 1.9

"Handbook of Agriculture" (1987) pp.215. Indian Council of Agricultural Research (ICAR)

Thus, if soil has to be prevented from becoming barren, it is necessary to apply 10 bullock-cart loads or 5 tonnes of dung manure for each acre of land. The remaining shortfall in maintaining fertility of soil is made up by dung and urine of sheep and goats which wander on farms everywhere.

The Indian Council of Agricultural Research has found by experiments that if the farms are properly ploughed and if 5 tonnes of dung manure is used for each acre, then our agricultural land is capable of giving the following yields of crops per acre :

Table 5 - Yields of different food crops in soil enriched by optimal levels of bovine dung

Foodgrain	Yield (lbs)	(kg.)
Rice	2,000	900
Wheat	1,400	630
Jowar	1,600	720
Bajra	1,000	450
Maize	1,800	850
Barley	1,000	450
Sugar Cane	60,000	27,000
Groundnut	1,700	765

Hand book of Agriculture (1969) (ICAR) pp.103

However, when sufficient natural manure is not available, the productivity of crops per acre get reduced as indicated by following table.

Table 6 - Yields of different food crops grown on soil with suboptimal levels of cow dung inputs.

Foodgrain	Yield (lbs)	(kg.)
Rice	2962	433
Wheat	1,277	575
Jowar	611	275
Bajra	380	152
Maize	862	338
Barley	833	375
Sugar Cane	45,000	20,000
Groundnut	709	319

“India - (1981) pp.201

Let us also have a look at two other proof which indicate the importance of natural manure. In a book titled “Cow in India” by Dr. Satischandra Dasgupta, on page 43 and 562 the following indication about utility of natural manure can be found.

In three farms of equal sizes, the first farm was covered with 2½” thick layer of natural manure and was cultivated. In the second farm the layer was on ½” thick and in the third farm no natural manure was used.

The results were as under:

Table 7

Yield	Rice (lbs)	Grass (bundles)
First farm	422	138
Second farm	236	106
Third farm	60	40

The above results make it clear that the yield in the first farm was 6 and 3½ times greater for rice and grass compared to the third farm which was without any natural manure.

In another example in the government dairy on Telan Kheri when cow and bullock dung was used as manure in the farm, the annual yield of crop increased significantly with this practice. (refer table 1.8)

Table 8 - Cumulative increase in yields of crop and grass grown on soil enriched by bovine dung

Year	Yield	
	Grass (Mounds)	Crop (Mounds)
1932-33	12,595	219
1933-34	12,694	506
1934-35	18,028	350
1935-36	15,148	529
1936-37	18,272	634
1937-38	19,473	610

Report of Industrial Survey Committee, Volume II

Is not the use of natural manure astonishing? In 6 years foodgrain production went up by 178.5% and that of grass by 54.5% ! Can chemical fertilisers do this without adversely affecting the capability and fertility of land? Why then are people burdened with huge capital expenses in setting up chemical fertiliser plants?

Indian agriculture is burdened by more than Rs. 1,500 crores as additional costs every year. The subsidy provided by government of this additional burden is Rs. 400 crores, which the government collected from people by way of taxes. The remaining Rs. 1100 crores is recovered by the farmers by increasing the price of foodgrains. Thus, the poor population which consumes the foodgrains produced with use of chemical fertilisers is crushed between the farmer on one hand and the government on the other. The high prices of foodgrains are the root cause of ever increasing inflation in our economy.

(Note: The above figures of subsidy quoted by the author, though looked worrisome in the eighties, are peanuts compared to the subsidy burden in the nineties as indicated by following figures)

Table 9 - Subsidies provided in the Central Budget from 1990-91 to 1997-98

(Rs. in crores)

Particulars	90-91	91-92	92-93	93-94	94-95	95-96	96-97	97-98
i) Food & Fertiliser Subsidies:								
Food	2450	2850	2800	5537	5100	5377	6066	7500
Indigenous (Urea) Fertiliser	3730	3500	4800	3800	4075	4300	4743	5240
Imported (Urea) Fertiliser	659	1300	996	762	1166	1935	1350	1950
Fertiliser subsidy to small and marginal farmers	—	385	—	—	—	—	—	—
Export promotion and market development	2742	1758	818	665	658	16	400	440
Sale of decontrolled fertiliser with concession to farmers	—	—	—	—	528	500	1674	2000
Total	**9581**	**9793**	**9414**	**10764**	**11527**	**12128**	**14233**	**17130**
ii) Debt Relief to Farmers	**1502**	**1425**	**1500**	**500**	**341**	**—**	**—**	**—**
Particulars	90-91	91-92	92-93	93-94	94-95	95-96	96-97	97-98
iii) Other Subsidies :								
Railways	283	312	353	412	420	418	466	537
Mill made cloth	10	15	15	16	—	1	—	—
Handloom cloth	185	187	161	174	148	143	98	84
Import/Export of Sugar, Edible oils etc.	—	—	—	—	—	100	50	50
Interest subsidies	379	316	113	113	76	34	1257	34
Assistance for fertiliser promotion	—	—	340	517	—	—	—	—
Other subsidies	218	205	99	186	420	481	590	416
TOTAL SUBSIDIES	**12158**	**12253**	**11995**	**12682**	**12932**	**13305**	**16694**	**18251**
Percentage of Food and Fertiliser subsidy to total subsidy	79%	80%	78%	85%	89%	91%	85%	94%

Source: Rajya Sabha Unstarred Question # 2270

In view of this situation only, sometime ago our (late) Prime Minister Mrs. Indira Gandhi during her broadcast, had advised our farmers to use compost fertilisers which is made by mixture of dung and urine of animals, their left over food in the form of roots of grass, the dead leaves of trees etc.

People must assert their rights to ask as to under whose direction and under whose pressure the Government machinery and its bureaucrats are burdening the people with such unbearable and expensive cost of fertilisers.

MILLIONS OF HINDU AND MUSLIM FAMILIES PUSHED INTO UNEMPLOYMENT

As a result of large scale slaughter of animals resulting in non-availability of dung, millions of Hindus and Muslims have lost their age old profession.

1) The dung cake as well as the meat of a bullock are both commercial commodities. If one bullock is slaughtered, its meat (slaughtering activity) can sustain the butcher's trade only for a day. For the next day's trade another bullock has to be slaughtered. But if the bullock is not slaughtered, about 5 to 6 thousand dung cakes can be made out of its dung per year and by the sale of such dung cake one person can be sustained for a full year. If a bullock survives even for 5 years after becoming otherwise useless, it can provide employment to a person for 5 years. Whereas a butchered bullock can provide employment only for a day or two.

2) As confessed by the butchers in Gujarat, they slaughter 70 bullocks everyday, which means approximately 25,000 bullocks in a year. Thus 25,000 poor women whether Hindus or Muslims surviving on sale of dung cakes which would have been produced by these 25,000 bullocks are deprived of their source of livelihood which can sustain them for years.

3) The entire Harijan community has become jobless as a result of the policy of animal slaughter and export of leather. This is so because the free availability of corpses of naturally deceased animals to them is now stopped. Now the living animals are slaughtered in the slaughter houses and the better quality of skin or leather is purchased by Corporate giants for manufacture of leather-wares or for export whereas inferior quality of leather has to be purchased by the Harijan cobbler after paying a price for it.

4) A builder in Bombay cannot build houses with mortar, i.e. mixture of cattle dung, clay and horse dung. Our masons in the city also cannot build such a house. Only the potters in villages can build such a house.

The potters used to build houses in villages using such mixture and they also used to make roof tiles out of clay for such houses. In the present times when houses are not made of dung and clay there is no use for the roof tiles also and thus the potter has lost his profession. With growing scarcity of dung, houses are no longer made of mixture of dung and clay and as a result, the vocation of making roof tiles connected with this system of housing has also started vanishing.

As per Government estimates, the shortfall of houses in the country is to the tune of 3,10,00,000 (according to "India : 1993"). The animal dung is the basic material to build houses in villages. If only potter families are engaged in construction of houses in villages, it will need 55 lakh potter families to build 3 crore houses. A similar number of potter families will be needed to make roof tiles required in billions for covering

such houses. Thus dung is the basis to providing an independent profession to about 3 crore potters in our country. However, with the disruption in availability of animal dung, lakhs of Hindu and Muslim potter families had to migrate to cities and are now dumped as human scrap on the footpaths of large cities and towns. The potters have fundamental rights to pursue their own business or profession. As a result of lack of knowledge about their fundamental rights, they are unable to demand them in courts of law.

The above situations are just a few examples of how the Indian economy and its vast population has been adversely affected as a result of abandoning what is sarcastically described as “Dung Economy”. In reality, the government machinery controlled by bureaucrats educated by western perspectives working under the diktat of their foreign masters have deprived the people of this country of their age-old ancient profession by resorting to indiscriminate animal slaughter and thus have pushed crores of Hindus and Muslims in the dungeon of unemployment and poverty.

The government itself is to blame for the growing unemployment in our country. However, to avoid being blamed for this situation and to divert the attention of people from this criminal conspiracy, a cosmetic effort is made to provide employment to a few thousands out of crores rendered unemployed, under various government sponsored schemes.

None else but people themselves will have to rise to expose the government and draw public attention to the real situation so that the independent profession of crores of Hindu and Muslim brothers are restored.

HEALTH OF 12 CRORES WOMEN IN PERIL !

The female population in our villages in the reproductive age group is 15 crores. They need utmost care at the time of giving birth to a child and immediately thereafter.

For centuries, experienced midwives used to supervise and provide necessary care as per the principles of Ayurved to women in villages at the time of child birth. Two basic aids for such system of care were a massage of oil and fomentation on fire lit by dung cakes. The midwives used to massage the women and the new born child for 40 days after delivery with the help of oil and provide slow fomentation with the help of heated dung cakes.

However, now the dung cakes have become almost unavailable. Oil also is very costly and hence the poor women are unable to buy it. Thus, if the necessary aids for providing care during child birth are not available, what is the use of the persons providing such care? And thus lakhs of Hindu and Muslim midwives have lost their centuries old, ancestral and at the same time, very useful profession.

Thus on one hand, the conventional and cheap medical care available to crores of poor women at the time of their child birth is snatched away, and on the other, the modern and costly medical care is either not available or beyond the reach of the needy. As a result of this situation, in the absence of proper and timely medical care, crores of women get afflicted by various diseases associated with child birth and live a painful life thereafter till death.

It is surprising that various organisations or social workers who claim to be working for the welfare of women, or a scholar in the field of Ayurved or any women's organisation have not uttered a single word against this criminal carelessness towards child and mother health or have never drawn attention to these problems! The Western thinking and philosophy have limited the meaning of liberation of women only to procuring liberties for women to indulge in shameless behaviour, permissiveness and abortion.

RELIGIOUS RIGHTS ALSO SNATCHED AWAY :

In Hindu culture, there are 16 religious rituals (*Sanskar*) starting from birth (in fact there is one *sanskar* even before birth !) to death and none of these rituals can be performed without dung. It is essential to attain or provide purity to the mind, to the environment or surroundings, to the mental status and to the ingredients which are utilised at the time of performing any religious ritual.

The place where the religious ritual is to be performed is cleaned and made pure by coating it with a layer of cow dung. A fire is often lit with dung cake, sandal wood, *gugal* etc. to provide fragrance and cleanse the surrounding environment. It is not possible to do this on fire lit with kerosene or gas or electric stove. For purification of mind and heart while performing any religious ritual, one has to consume what is known as *Panch Gavya* i.e. a mixture of cow milk, curd, ghee, dung and urine in defined ratios. The consumption of this mixture is believed to keep mind and heart pure and peaceful. As an automobile cannot be driven when its engine is very hot, similarly when mind is not at peace, the religious ritual performed in such a state of mind does not given the desired result.

For purification of body there was a practice to smear cow dung on the body and then take a bath. Purification of the essential ingredients which are used for offering in the fire is also necessary and one of the items is cow dung. With cow dung, small branches of certain specified trees and some other specified vegetation or herbs are also required.

Till 1915 in the Indian Princely States where cow slaughter was banned the pyre for consigning dead bodies to fire were lit with the help of dung cakes only. When dung cakes became scarce, this ritual was performed on wood fire. For burning an average dead body, four quintals of wood is required. With depletion of forests, even wood is scarcely available and wherever it is available, it is very costly. In view of this situation, in some of the villages now a small bundle of burning grass is put on the face of the dead body and then it is buried. Thus the right of the Hindu population to perform even the last of the 16 rituals i.e. *AGNI SANSKAR* is snatched away.

Of all the 16 religious rituals referred earlier, starting from the birth of a human being, till his death, the *Agni Sanskar* is the last of these 16 rituals. It is a fundamental religious right of each Hindu. To protect this right, it is essential that the availability of dung cake is increased at a very fast pace. When an adult bullock is slaughtered it affects the *Agni Sanskar* of 10 persons per year. If a bullock is allowed to live 10 more years beyond the age of its premature death by slaughter, it can provide dung cakes for *Agni Sanskar* of 100 human beings. If wood is forced to be used for 'Agni Sanskar' in the absence of dung cakes, its cost would be Rs. 15 lakhs per tree as per the valuation done by Scientists.

VALUE OF SERVICES RENDERED BY TREES - LAKHS OF RUPEES !

According to a paper presented in the Indian Science Congress held in Varanasi in January, 1981, the valuation of a 15 years old tree at the rates prevailing at that time was Rs. 15.7 lakhs. The bifurcation of this value was arrived at as under:

Table 10 - Value ofa single tree

	Rs.
Oxygen	2,50,000
Control of air pollution	5,00,000
Retention of fertility of soil	2,50,000
Contribution towards recycling of water and controlling humidity	3,00,000
Providing shelter to birds & animals	2,50,000
Protein	20,000
Total	**15,70,000**

The above estimates do not include the value of fruits and flowers yielded by the tree or the value of its timber when it dies its natural death. The above information was given by Prof. T.M. Das of Calcutta Agriculture University while delivering his address as Chairman of the Indian Science Congress deliberating on the subject of "Plant and Pollution". This has been reported by Times of India in its 5th January, 1981 issue on page No. 5

DESTRUCTION OR SCARCITY OF HERBAL MEDICINES MEANS END OF AYURVEDIC MEDICAL CARE FOR POOR INDIAN POPULATION :

With the non availability of dung, our forests also get destroyed and with the destruction of forests many ayurvedic herbal medicines also became either extinct or scarce.

How many people can be treated with the costly *Bhasma* (oxides of various minerals like Gold, Copper, pearls etc.) and how many patients can afford such *Bhasma* ? On the other hand, the medicines under Allopathic system are also very costly and beyond the reach of poor people and thus a vast majority of poor people living in Indian villages carry on with illness for life, without any treatment.

Herbal medicines are the basis of Ayurvedic system of medicines. Similarly *Basmas* also are the basis of the system. These *Basmas* must be prepared on fire lit with the help of dung cakes only. If coal or electricity is used to make the *Basmas* then it will be like running an automobile with kerosene instead of petrol. What happens to an Automobile engine if kerosene is used, will also happen to the *Bhasmas* and the patients who consume such *Bhasmas*. Many medicines have to be purified before their use and such purification can be done only with the help of dung. In different branches of Ayurved *Paks* are made of different medicines and these *paks* must also be made on the slow burning dung cake fire only.

Now-a-days, because they are made on other types of fire, they do not yield the desired results and hence people have started losing faith in Ayurved.

Thus, by stopping the flow of dung and dung cakes to the Ayurvedic System, the government machinery has dealt a severe blow to the system and yet they are not tired of talking about providing encouragement to Ayurved ! This is nothing but cheating, and unfortunately the Scholars of Ayurved seem to be enjoying this act of cheating on the part of Government.

How could the scholars of Ayurved tolerate this state of affairs when an age old ancient system is put to such great peril. On one hand they talk of encouraging Ayurved and on the other, there is destruction of the most essential aspects of Ayurved i.e. herbal medicines, cow's milk and cow's ghee, dung and dung cakes. The duplicity of government can be seen from such occurrence.

If we have to prevent Ayurved from dying; the oldest medical systems, which is well accepted and which has withstood all the challenges to its principles of diagnosis, treatment etc. for centuries; then it is essential that the government be challenged, its duplicity is exposed and it be forced to increase the dung cake availability in the interest of this great medical science.

If Ayurved as a science eventually dies, it will be due to inaction and timidity and the urge of Ayurvedic Scholars to indulge in false flattery of the government machinery.

CHEAP FUEL HAS ALSO BECOME COSTLY

Abundant foodgrains may be cultivated but what if there is no fuel to cook the food? We cannot eat raw foodgrains, and for cooking, fuel is necessary. The cheapest and easily available fuel is only dung cakes. It can be available wherever needed. Its flow is unending.

Till the time our country had not resorted to animal slaughter, the rural population used to get free dung cakes for fuel. The affluents who used to buy dung cakes had to spend only Rs. 3 to 5 in a year.

Now people have to use kerosene and this kerosene which too has to be imported from countries which are exploiting to great advantage, the folly of our planners. When Nadirshah came to loot India, he had to cross the Indian Border and he also had to fight a fierce battle. Despite this, what he looted from this country and took away with him was just a drop out of the ocean of the wealth of this nation. Today the successors of Nadirshah have stormed into the kitchen of every household of our villages with the help of a can of kerosene. They can exploit us at their free will by increasing the price of kerosene as and when they feel like. They can cut short the supply of kerosene at their will and force us either to eat raw food or to starve or to surrender to the countries who are their allies and who are unfriendly to us.

This should make it very clear how valuable is the contribution of even a bullock in the field of fuel and how the sovereignty and security of the Nation is connected with it. Gas and kerosene once used are lost for ever and they are not renewable source of energy. The day when their availability becomes extinct, it will lead to starvation. Their prices keep on increasing with their increased use and in addition they create pollution.

With the compulsion to use alternative fuels like kerosene and gas in place of dung cakes, each family has been burdened with an additional annual expenses of Rs. 1,500/-. Is it not wiser to save this Rs. 1,500/- by reverting back to

dung cakes as fuel. There will be additional saving of about Rs. 75/- per annum for a family which is spent on washing powders, as the ash of dung cakes which will be freely available can serve the same purpose. This saving can be used to provide food, clothing, education to millions of children and can be utilised for such other noble purposes.

Potential value of dung as fuel would be clear from the following small calculation. India has a population of about 96 crores; 70% of this population i.e. 67 crore people live in rural areas. Considering 5 persons to a family, it means 13.4 crore families. Dung fuel, if available can be used by these rural families as was being done only a few decades ago. Due to non-availability of dung cakes for fuel , other types of fuel are used. For valuation purpose let us take the value to assess the fuel cost. The LPG cylinder is on an average priced at Rs.150/- and for a family of 5, one cylinder lasts for about a month. Thus each family has to spend Rs.1800/- per annum on cooking fuel. Thus for 13.4 crore families the fuel cost comes to 13.4 crore x Rs. 1800/- i.e. Rs. 24,120 crore. Thus theoretically speaking if the entire rural population reverts to dung cake fuel it will save the nation a whopping burden of Rs. 24,120 crores p.a. which is spent on one or the other form of fuel today. This is the unlimited potential of dung in its utility as fuel !

EFFECTS OF ANIMAL SLAUGHTERED ON FORESTS VIS-A-VIS FUEL SHORTAGE

After independence the availability of dung cakes reduced drastically. This forced people to use firewood as fuel. The ratio of firewood to foodgrain price doubled between 1975-85 which made cutting wood for sale economically attractive. Neglect of people's need for cheap and local fuel has made cutting wood for firewood a lucrative trade.

A World Bank report quoting figures from the Food and Agriculture Organization (FAO) states that the total extraction of wood in India was 264 million cubic meters in 1988 of which 240 million cubic meters was for fuel. Of the total wood consumed in the country 90% is for fuel. The remaining 10% comprises timber, pulp-wood and poles.

Table 11 shows source-wise energy consumption in household sector

Sr. No.	Energy	% share of energy forms (Rural)	% share of energy forms (Urban)
1.	Electricity	0.6	5.9
2.	Oil products	16.9	30.2
3.	Coal products	2.3	13.7
4.	**Firewood**	**68.5**	**45.5**
5.	Animal Dung	8.3	3.2
6.	Others	3.4	1.5

(Ref. A report of Working Group on Energy Policy 1979 adapted in the Report of Firewood study committee appointed by Planning Commission published by CMIE June 1982 Page 6)

The Report of the Fire wood study committee appointed by the Planning Commission in 1981-82 states that, "**If the present trend continues the fuel required to cook the food rather than food to cook may pose the greater challenge".**

According to Dr. Kushoo, an eminent Indian environmentalist, at the current rate of depletion of fire wood, 250 million people in the year 2000 will not be able to cook their food, let alone meet the energy needs. The annual requirement of fuel wood in India by the year 2000 is estimated to be 200 million tonnes. The shortfall has been estimated to be about 137 million tonnes.

(Ref. Business Standard 28 November, 1992)

At the Central Board of Minister of Forest and Environment meeting presided over by the late Prime Minister Shri Rajiv Gandhi, the shortfall of fuelwood was estimated to be around 100 million tons. In order to put further restriction on forest cutting, the government decided to import about 125 million tons of fuelwood which would cost Rs.4000 crores.

The following table shows time taken and distance travelled by villagers for firewood in different region:

Table 12

	Region	Year	Firewood Collection		Source
			Time taken (i)	Distance travelled (ii)	
1.	Chamoli (hills)				Swaminathan (1982)
	(a) Dwing		5 hr./day	over 5 km.	
	(b) Pakhi	1982	(average4 hr/day		
2.	Gujarat (Plains)				
	(a) Forested		Once every r days	N.A.	Nagbrahman &
	(b) Depleted		Once every 2 days	4.5 km	(Sambrani (1983)
	(c) Severely depleted	1980	4.5 hr/day	N.A.	
3.	Madhya Pradesh (Plains)	1980	12 times/week	5 km	Chanand bosbourah (1980)
4.	Kumaon (hills)	1982	3 days/week	5.7 km	Fogler and Dewan (1983)
5.	Karnataka (Plains)	N.A.	1 hr/day	5.4 km	Batliwala (1983)
6.	Garhwal (hills)	N.A.	5 hr/day	10 km	Aggarwal (1983)

Ref: Business Standard dated 2-4-1989

Cooking and heating requirement of a villager having a family of 5 members has been calculated to be around 1.25 million Kcal/year. About 20% of this requirement could be met from vegetative waste. Fuel wood would be needed to meet the remaining 80%. As such 1125 kg. of fuel wood would be required by a family annually. A tree of 5 years of age will yield

between 100 to 125 kg. of fuel wood approximately i.e. 10 trees of around 5 years of age will have to be cut to meet the fuel requirements of one family.

(Ref. Report of the Firewood Study Committee appointed by Planning Commission June 19982 - pp.27)

To make up the gap between demand and supply of fuelwood, 34 million hectares of land area is required to be planted with fuelwood crops during the next decade requiring an outlay of Rs.34,000 crores. According to `Indian forester, July 1978' firewood has a heating value of 4708 Kcal/ Kg. and dry dung cake has heating value of 2092 Kcal/kg. As explained earlier, a tree of 5 years of age will yield 100 to 125 kg. of firewood.

Dung available from a large animal (cow/bullock/buffalo) will be 5.0 tonnes p.a. Therefore, dry dung available will be 5.4 tonnes x 0.30 = 1620 kg/annum which is equivalent to 712.80 kg. of wood. Therefore one large animal, if kept alive, saves 6 trees every year. (Report of Fire Study Committee, June 1982, Page 13 and Letter from Punjabrao Krishi Vidyapeeth, Akola dated 16-4-93)

The destruction of forests for fuelwood will not stop as long as natural source of energy from non-wood sources is not made available to villagers at their door-steps. In this situation, it is necessary to increase the supply of cattle (i.e. cow and buffaloes) dung cakes to be used as fuel. Dung cake obtained from one cattle is sufficient for a family for a year. Dung cakes are generated within 24 hours only.

There are several economic, social and environmental advantages from using dung cakes, because of which it deserves to be considered an ideal energy source. Dung cakes as renewable and safe energy source deserves due recognition. In absence of LPG or kerosene, villagers cut trees for their daily firewood requirement. Since dung of one large animal per annum is equivalent to fuel of 6 trees, crores of trees can be saved by stopping slaughter of animals.

India's poverty is closely linked with its increasing deforestation and land degradation. As much as half of the 329 million hectares is considered degraded in one form or another. Satellite imagery in the seventies and eighties revealed that forests were losing tree cover at the staggering rate of 1.3 million hectares every year. Of 75 million hectares of forest under forest management, 40 million hectares are now without tree cover. The existing plant cover is only about 12% as compared to the ideal of 33%. The area under forest in India is half of what it was 50 years ago.

The widening gap between demand and supply of fuelwood is the main cause of fast depletion of forest cover which in turn, has proved to be ecologically disastrous as denudation leads to soil erosion, foods, shortage of water, loss of foodgrain production, and destruction of rural economy.

(Ref. The Hindu Survey of Indian Environment, 1992 pp. 31 - 37)

OH ! EVEN ASH ALSO IS NOT AVAILABLE !

How would you evaluate the value of ashes of dung cakes? These ashes can save us from the slavery of World Bank ! It may not be possible to assign any price in monetary terms to the ash which is left over after cooking on the dung cakes. However, it is very precious. This ash is very very useful in preservation of foodgrains. In olden days, the Kings used to preserve jowar for their subjects for use during drought year. For preserving jowar to last for years, equal weight of ash was mixed with jowar and it could then be stored in this way for 12 years without any damage. Even in normal course people could store foodgrains for 2 to 3 years in their storage tanks made of earth in each household, by mixing cow dung ashes in foodgrains. Today due to non-availability of ashes, people have forgotten its use. Now we borrow millions of dollars from World Bank for construction of air-conditioned warehouses for storing foodgrains. Now we resort to spraying of poisonous pesticides on foodgrains for their preservation, which adversely affect health of people. The World Bank and the Multinational Pharmaceutical Companies are taking advantage of scarcity of the dung and dung cakes. An old bullock may not be able to work in the farm or to pull weight, but it is capable of giving dung till its death and this dung can keep us free from inflation, free from diseases and also preserve our sovereignty and integrity of the nation.

ANOTHER IMPORTANT USE OF ASH

Cleaning of utensils is one of the routine and essential household chores. For centuries, the cleaning of utensils was done with the help of ash of dung cakes. Now, instead of dung cake, washing powder or other detergent has to be used. The expenses on this head comes to about R. 75/- to Rs. 100/- per annum per family. What was inexpensive or totally free, now costs lakhs of rupees for the society as a whole and the families in the middle class are the worst affected. The middle class families have to curtail their other expenses to meet this expense and the curtailment is either in their food expenses, education or medical expenses.

In 1960, an issue was raised in the Supreme Court that when the nation is spending just Rs. 5/- per head on education, how was it worthwhile to spend Rs.19/- to maintain an old animal. (The argument was presumably to justify animal slaughter). The issue today is that if we are unable to spend even Rs. 25/- per head on education, is it worthwhile to spend Rs. 75/- to Rs. 100/- on an activity like cleaning of utensils? Is it not worthwhile to save this 100 rupees and spend them on education by reverting to dung ashes as means to clean utensils.

CLOSURE OF SCHOOLS IMPARTING EXPERIENCE-BASED KNOWLEDGE :

In villages during winter, people used to make bonfire of dung cakes at night and sit around it talking. The youth folk helped elderly persons who were suffering from arthritis related problems by providing them fomentation from fire, and the elderly people used to talk about their own experiences in life, the family traditions, the social customs, the history of the villages and

thus pass on the rich experience and knowledge to the succeeding generation. The local poets used to sing our ancient epics like Ramayana and Mahabharata and thus kept alive the flow of culture in our society.

In the absence of dung cakes, these village square assemblies had to discontinue and thus the young generation was deprived of the flow of knowledge and real history. With the closure of such village square centres, the younger generation diverted itself and drifted to gambling dens and hooch shops.

One single animal be it a cow, bullock or a sheep, is much more valuable to the society compared to even a hospital or a college. This is so because the cattle dung creates conditions as described earlier which inculcate into the people the qualities of nursing, organization, social services, passing on knowledge of real history, maintenance and development of religions, social and family feelings and preventing the youths from drifting away to gambling dens and hooch.

DESTRUCTION OF FORESTS, WILD-LIFE AND VEGETATION :

With disruption of dung availability, our rich forests also got destroyed. Thousands of full grown giant trees which were destroyed, would value crores and crores of rupees at today's prices.

If the dung and dung cakes can preserve and protect these invaluable assets worth crores and crores of rupees, the dung itself can be considered to be worth crores and the value of the animal who provides such dung is naturally much more ! It might serve the interest (?) of a few butchers if animals are allowed to be slaughtered, but in preventing such slaughter, the nation would save assets worth crores of rupees and the religion and culture of the entire nation. With the depletion of forests, the scarcity of water set in. With scarcity of water many vegetarian animals such as deers and rabbits died due to thirst. With their death, animals like tigers, panthers etc. who used to survive on smaller animals also died due to hunger.

Thus with gradual depletion of the wild life, the manure which was available in the forests in the form of their dung and urine also stopped becoming available. With slaughter of goats and sheep who wander in forests, the manure in the form of their droppings and urine also became unavailable. Thus, many of the herbal medicines which used to naturally grow in the forests also became extinct or became scarce and also lost the effectiveness of their medicinal properties.

VILLAGES ALSO FELL PREY TO LIQUOR ADDICTION :

Most of the widely prevalent diseases in villages are due to cold and imbalanced elements in human body (known as *VAYU*) as also due to various injuries arising out of accidents. In all such diseases, one of the major therapy was fomentation by the dung cake fire.

The hot water bag fomentation is not available in villages for prevention from cold, cold related diseases and as protection against severe cold climate. The only way for protection from this was the fire of dung cakes and when this was snatched away, people turned to liquor. They started applying liquor

on the body for heat and also started consuming liquor, thus pushing up the demand for liquor and increased the number of liquor manufacturers and addicts.

SCARCITY OF HOUSES INCREASED :

With non availability of dung, the scarcity of houses in villages is more than 3 crores. All the cement plants of the country together also cannot meet this scarcity. The easiest way out is to increase the availability of cattle dung.

VALUE OF DUNG !

What is the value of cattle dung? Does this question still need an answer? The value of dung is much more than even the famous Kohinoor diamond.

"How is it viable to maintain an old bullock which consumes grass of Rs.700/- in a year and in return gives dung and urine worth only R. 500/- ?" How absurd and how unscientific and hollow this argument is, is clear from what is described below.

The market price of any commodity can be influenced (i.e. increased or decreased) by speculation and hoarding, by administrative measures or by similar calculated action. But this cannot alter its value. Grass can be priced as Re.1 per 10 kg. or Rs.5/- per kg. also But its value as the means to help animals to survive, to feed them and to give them strength cannot be altered.

The stalk of foodgrain plants which becomes useless after removal of foodgrains from it is the food for animals. When this useless stalk is returned by animals in the form of their dung, its value is astonishing.

Even an old bullock gives 5 tons of dung and 3,443 pounds of urine in a year which can help in manufacture of 20 cart loads of compost manure. For cultivating jowar and bajra on dry land, 5 carts of compost manure is required for each acre. Thus the compost manure provided by one single and old bullock can meet the manure need for 4 acres of land.

On irrigated land with the help of such manure, about 2,800 to 3,600 kg. of bajra can be grown on 4 acres of land and where irrigation facility is not available the yield can be about 1,500 to 1,600 kg. This can feed about 10 to 12 human beings throughout a year.

Thus there is a wide difference between concepts of price and value. Whether the foodgrain is priced at Re. 1 per 10 kg. or Rs. 10/- per kg.; it does not affect the intrinsic value of the foodgrains. Its value lies in its utility of providing nutrition and life to human beings. The right to life is a fundamental right and it can be basically protected only with proper food and feeding and the cheap and nutritious foodgrains required for feeding can be grown with the help of dung. Thus, the most fundamental thing to the fundamental right of living for the human beings is bovine dung. It is absolutely foolish to evaluate this function of dung in monetary terms.

A servant employed by us has to be paid wages for his labour. He demands wage rise, he also demands bonus, he resorts to strike if bonus is less than his expectation and also abuses the employer.

But our servants in the form of these dumb cattle do not demand any wages from us, do not demand any wage rise or bonus. They survive on whatever we offer them to feed and in return favour us with a bonus in the form of most invaluable dung. And still we are after the blood, meat, hides and the skin of such animals and for that we slaughter them alive. We do not wait till they die their natural death to get their hides and skin.

NEED FOR DUNG :

For land under cultivation it is necessary to use 5 tones i.e. 10 cart loads of dung manure per acre. If less manure is used the soil becomes weaker, gradually losses its fertility and becomes barren over a period of time.

At this rate, 43,07,50,000 acres of cultivable land of our country will need 215,37,50,000 tons of dung manure. An adult cattle on an average gives 4 tons of dung and 3,343 pounds of urine. A cattle less than 3 years of age would approximately yield half this quantity.

(Source: "Cow in India" Page 374 by Dr. Satishchandra Dasgupta quoting Dr. P.E. Lender who was agricultural expert of the Punjab State during British Regime).

Our cattle population is as under:

Table 13 Domestic Ruminant Population in the country.

	(In 000s)
Bulls and bullocks over 3 years of age	74,460
Cows of 3 years and above	56,400
Calves of less than 3 years	47,480
Total cow family	**1,78,340**
Buffaloes and its calves	57,430
Sheep	39,990
Goats	67,520
Total Cattle	**3,43,280**

Thus the total population of various types of above animals is 34.33 crore. The Advocates of cow slaughter are making propaganda in the country and abroad that the cow population alone is 34 crores and thus cheat the people and make them believe that slaughter of cow is necessary to keep in check their population. In fact the number of calves should be at least 2 to 2½ times more than the number of cows. However, in our country the number of calves is much less than the number of cows because under the guise of killing old bullocks more calves are slaughtered for their soft and tender skin.

Out of the above animal population only 16.82 crores of animals are adult animals (i.e. above 3 years of age). Animals of less than 3 years age are 6.76 crores and the number of sheep and goat is 10.75 crores.

Let us now consider the dung yield of the above cattle population;

Table 14 Dung yield of Domestic ruminant population

16,81,70,000	adult animals at 4 tonnes per p.a.	67,26,80,000
6,76,00,000	calves at 2 tonnes p.a.	13,52,00,000
10,75,10,000	goats and sheep at ½ tonne p.a.	5,37,10,000
	Total	**86,15,90,000**

(Source: Indian Agriculture in brief, 18th Edition by Agriculture Department of Central Government)

As we have seen above, for manure alone we need 215.37 crore tons of dung per annum. As against this, the dung production is only 86.16 crore tonnes. Thus for agricultural need alone the annual scarcity of dung is 129 crores of tonnes. Besides, this, we need 124.36 crore tonnes of dung to meet the needs for fuel, housing, preservation of foodgrains, repairs of houses and for cleaning utensils etc.

Thus as against our annual requirement of 340 crores tons of dung, the availability is only 86 crores tonnes, which is just 40% of the total requirement for manure alone. It is regrettable that out of the Six Planning Commissions so far, none has taken note of the colossal scarcity of bullocks for agriculture.

If animal slaughter is totally banned by legislation and is implemented with strictness and honesty then only it will be possible to meet this gigantic scarcity of dung manure.