

Q1-2019



Dagri Cow gets National Recognition



After Gir, Kankrej and Dangi, a fourth indigenous breed of cow from Gujarat will get national recognition paving way for conservation and preservation of its genes.

Anand Agricultural University (AAU) has carried out phenotypic characterization of 'Dagri cow' which according to the scientists is found suitable in the mountainous regions and found in abundance in the tribal heartland of Central Gujarat's

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Oral Hygine - How desi cow can help?



Using cow-dung for cleansing the teeth

Food collected in the spaces between the teeth during the process of eating, creates foul odor over a time, making the atmosphere within the void of the mouth impure. Ash made from burning dried cow-dung contains gases that have fragrance. Cleansing the teeth by forceful rubbing of this ash with finger onto the teeth disintegrates the odorous waves within the void of the mouth, and thus helps in retaining the purity of the mouth.

Avoiding paste will lead to conservation of environment as we avoid chemicals in paste moving into water and avoid water pollution also rural empowerment will take place when demand for cow dung based tooth powder increases resulting in job creation and arresting rural migration

ROG-NIVARAK DESI GOU



Biotechnology scientists at Junagadh Agriculture University in Gujarat have succeeded in their first attempt to kill Cancer cells using cow urine. They claim that cow urine can cure most types of common cancers such as those of mouth, cervix, lungs, kidney,

skin and breast.

The research team that included assistant professors Shraddha Bhatt and Rukamsinh Tomar and research fellow Kavita Joshi achieved the results after a year of experiments. "This research was very risky because we directly experimented on cancer cells procured in a bottle. We found the exact quantity of cow urine required to kill particular number of cancer cells in a day," Bhatt said.

"Chemotherapy kills healthy cells too while cow urine only kills infected cells," Tomar said.

In Ayurveda, Gomutra is claimed to be helpful in the treatment of leprosy, abdominal colic pain, bloating, and cancer.

A mixture of gomutra, Triphala, and cow milk is used for the treatment of anaemia.

It is also used in the treatment of fever by mixing it with black papper, yoghurt, and ghee (ghrita).

A mixture of gomutra and dharuharidra is used for epilepsy.

According to the head of the Ayurvedic institute Dhanwanthari Vaidyasala of Thodupuzha, Satish Namboodiri, it is also used for peptic ulcer, certain type of cancer, liver ailments, and asthma.

In 2010, the Go-vigyan Anusandhan Kendra in Deolapar funded by Rashtriya Swayam sevak sangh and the National Environmental Engineering Research Institute were granted a US patent for a gomutra-based drug which was claimed to prevent oxidative damage to DNA.

COW, AGRICULTURE AND FOOD SECURITY



From time immemorial, India has been an agrarian country and the cow has been the backbone of our agriculture. When fertilizers and tractors were unknown, cow was the only source sustaining the entire agriculture. Agriculture would not have been possible without cows.

Food security is most important for every country. Every country must reduce its dependence on external sources for its basic need- food. An important part of food security is that all the inputs should be locally available and cheap. Only a cow can ensure this major supply. The entire agricultural inputs are provided by the cow. Bull power ensures ploughing and transportation. Absolutely no dependence on any external source. Consider a scenario where due to a natural calamity or international strife, oil cannot be imported for one month. There will be absolute chaos in all spheres. While we can survive the impact on other sectors, can we afford a failure in agriculture? We cannot afford to miss an agricultural season. The entire agricultural operations will come to a standstill and the food prices will soar leading to civil strife.

During the last several decades, especially after green revolution, the use of chemical fertilizers, pesticides and tractors have dealt a severe blow to the importance of cows in agriculture. While productivity levels improved in the short term with their use, their long-term negative impact on health and environment has totally been ignored. In fact, most of the diseases of

today are being traced to the food we consume and fertilizers and pesticides are the major culprits. The cost of production has also gone up substantially due to the increase in the cost of farm inputs leading to higher food prices. The indiscriminate use of pesticides has also broken the food chain and hence contributed to most of the current problems faced in agriculture today. Research has also proved that these high productivity levels cannot be sustained over a long term as the soil quality deteriorates due to rampant use of fertilizers and pesticides. Once the fossil fuels (petrol and diesel) get exhausted or become very expensive, most of the mechanized farm equipment will not be of any use. The fundamental difference between the two competing agricultural paradigms as follows,

Modern Farming	Natural Farming
Centralization	Decentralization
Dependence	Independence
Competition	Community
Domination of nature	Harmony with nature
Specialization	Diversity
Exploitation	Restraint

Modern Farming

Today's chemical farms have little use for the skilled husbandry which was once the guiding principle of working the land. The emphasis today is solely on productivity - high input in exchange for high returns and productivity (mostly diminishing now however for farmers worldwide). Four important considerations - what happens to the land, the food it produces, the people who eat it and the communities which lose out - are overlooked.

Land exhaustion	The constant use of artificial fertilizer, together with a lack of crop rotation, reduces the soil's fertility year by year.
Fertilizers	High yield levels are produced by applying large quantities of artificial fertilizers, instead of by maintaining the natural fertility of the soil.
Nitrate run-off	About half of the nitrate in the artificial fertilizer used on crops is dissolved by rain. The dissolved nitrate runs off the fields to contaminate water courses.
Soil erosion	Where repeated deep ploughing is used to turn over the ground, heavy rains can carry away the topsoil and leave the ground useless for cultivation.
Soil compaction	Damage to the structure of soil by compression is a serious problem in areas that are intensively farmed. Conventional tillage may involve a tractor passing over the land six or seven times, and the wheelings can cover up to 90 per cent of a field. Even a single tractor pass can compress the surface enough to reduce the porosity of the soil by 70 per cent, increasing surface run-off and, therefore, water erosion. In the worst cases, the surface run-off may approach 100 percent - none of the water penetrates the surface
Agricultural fuel	As crop yields grow, so does the amount of fuel needed to produce them. European farmers now use an average of 12 tons of fuel to farm a square kilometre of land; American farmers use about 5 tons (1987 figures).
Biocide sprays	The only controls used against weeds and pests are chemical ones. Most crops receive many doses of different chemicals before they are harvested.
Cruelty to animals	On most "modern" farms, all animals are crowded together indoors. Complex systems of machinery are needed to feed them, while constant medication is needed to prevent disease. The cruelty involved in managing, breeding, growing and slaughtering farm animals today is unimaginably repulsive and horrifying.
Animal slurry	With so many animals packed together in indoor pens, their manure accumulates at great speed. It is often poured into lagoons which leak into local watercourses, contaminating them with disease-causing organisms and contributing to algae-blooms.
Imported animal feed	Many farms are not self-sufficient in animal feed; instead they rely on feed brought into the farm. This often comes from countries which can ill afford to part with it.
Stubble burning	In countries where stubble is burned, large amounts of potentially useful organic matter disappear into the sky in clouds of polluting smoke

Loss of cultivated biodiversity	Large and other chemical farms tend to be monocultures growing the same crop and crop variety
_	Native cultivars and animal breeds lose out to exotic species and hybrids. Many native animal breeds are today threatened with extinction. The same holds true for many indigenous plant varieties which have disappeared within the space of one generation.
Habitat destruction	Agribusiness farming demands that anything which stands in the way of crop production is uprooted and destroyed. The wild animals and plants which were once a common sight around farms are deprived of their natural habitat and die out.
Contaminated food	Food, both plant and animal products, leaves the farm contaminated with the chemicals that were used to produce it.
Destruction of traditional knowledge systems and traditions	Rural indigenous knowledge and traditions, both agricultural and non- agricultural, is invariably connected to agriculture and agricultural systems.
Control of agriculture inputs and food distribution channel	The supply and trading in agricultural inputs and produce is in the hands of a few large corporations. This threatens food security, reducing the leverage and importance of the first and the last part of the supply chain - the farmer and the consumer.
I .	Chemical agriculture is a threat to their livelihoods and changes their lifestyles, unfortunately not for the better.

In contrast, cow is the base of economic sustainable agriculture with only positive impact on environment. With only a pair of bulls and a cow, using natural farming techniques, up-to 30 acres of land can be cultivated for healthy organic produce. Using Gomaya and Gomutra, all the necessary inputs can be made including organic pest repellents. These techniques have been perfected and have been in vogue for several centuries. The cost of inputs is very low leading to lower food prices.



Panchagavya: low cost organic input for both crops and animals



Dr. K. Natrajan at his farm in Erode, Tamil Nadu filtering the PG solution for spraying

Increasing input costs due to inflation, lack of proper marketing facilities, an indifferent government policy and an unpredictable monsoon are some of the identified obstacles in farming operations.

"Except lowering the input costs all other issues are not in the hands of the poor farmer. "A low cost, easy to manufacture and proven input, which increases the yield finds popularity immediately among the ryots. Panchagavya (PG)- organic growth promoter -seems to be the perfect choice for many," says **Dr. Namalwar**, organic scientist. Several hundreds of organic farmers across the country today use PG for their crops.

Organic movement

"While referring to historical dates we use BC or AD. Similarly the history of the organic movement can be divided into two different eras, before PG and after PG," says Dr. Namalwar. An organic crop nutrient it can be easily made by farmers themselves and used as a spray for crops and mixed with water while irrigating. "Compared to chemical sprays, in the market which boosts good growth and yield, absence of similar inputs in organic methods was the main reason for the slow spread of the organic movement in the country," says Dr. Namalwar.

Dr. K. Natrajan, a practising physician and organic farmer from **Kodumudi** town, Erode, Tamil Nadu discovered PGnearly a decade back. "I never thought that our farmers would use PG in such massive quantities when I devised it," he says.

Overwhelming response

So overwhelming was the response from farmers across the country, that the Tamil Nadu Agricultural University (TNAU), Coimbatore, did a scientific study on PG and submitted a report stating that PG does increase yield.

In fact the University also started marketing PG to farmers. "Being pocket-friendly accounts for its main popularity," says Dr. Natrajan. One litre of PG can be manufactured at a cost of Rs. 20 if the inputs have to be bought (if the inputs are available in the farm, then there is no cost). An acre requires about three litres of PG as spray. If mixed with irrigating water then 20 litres will be sufficient.

Input details

The following inputs are required for its manufacture:

About five kg of fresh cow dung, three litres of cow's urine, two litres of cow's milk, curd (made from cow's milk) and toddy each, 500 gm of cow's ghee, three litres of sugarcane juice and tender coconut water each and 12 bananas. Cow dung and ghee are mixed well in a plastic drum and covered with a lid. For three days the mixture should be stirred well once during the morning and evening. On the fourth day all the other inputs are added and stirring continued for 15 days.

Shelf life

On the 18th day, PG solution can be used either as a spray (after filtering) or along with irrigation. PG made by this method can be stored for nearly six months.

At regular intervals tender coconut water, sugarcane juice or jaggery diluted in water must be added and stirred well. In the unavailability of sugarcane juice about 500 gm of jaggery diluted in three litres of water can be used.

Alternatives

Similarly in the absence of toddy, two litres of tender coconut water sealed in an airtight plastic bottle for a week (in a week it will transform into toddy) can be used. In the absence of tender coconut water, two litres of black grape juice can be used. Apart from crops Dr. Natrajan advocates PG as a medicine for cattle and poultry. "Cows yield more milk (nearly 2 litres more) when they are fed with PG. Similarly the egg laying capacity in poultry chicken also increases. Animals which are fed with PG have been known to be more healthy and resistant to several diseases," he says.

GOU-GYAAN - COW KNOWHOW



MALVI (aka Malavi, Manthani & Mahadeopuri)

The Malvi cattle breed is one of the most beautiful cattle breeds of India, found in the large area comprising Indore, Dewas, Ujjain, Shajapur, and Mandsaur districts of Madhya Pradesh. It is also bred in the north-eastern section of Hyderabad. This breed has developed into different strains such as light, medium and heavy in size, based on the soil conditions they are bred in. Though the Malvi is primarily known as a draught animal, the cows produce little but very good quality milk.

The Malvi are well adapted to native climatic conditions, and show **great endurance and ability** to carry heavy loads on rough roads.

Characteristics:

- Small in build with short, deep and compact bodies.
- White or greyish white in colour, and eventually with age their colour turns into pure white. The colour on the neck, shoulders, hump and quarters is greyish-black. The hair around the eye-sockets and eye membranes are black in colour.
- They have a short and broad head with a dished forehead.
- Their muzzle is broad, dark coloured and slightly upturned.
- They have short but powerful legs with strong black hooves.
- They have horns that emerge from the outer angles of the poll in an outward and upward direction.
- They have short and pointed ears that do not drop.
- They have drooping hindquarters and straight backs.
- They have beautiful well-developed and moderately pendulous sheath.
- Tails are of moderate length, with the black switch reaching upto fetlock.
- Average height of a male is 134 cms and that of a female is 120 cms. Average body length of a male is 132 cms and of a female is 118 cms.
- Average weight of a male is 500 kgs. while that of a female is 340 kgs. Average chest girth of a male is 175 cms and that of a female is 152 cms.
- The average milk production of this breed is about 900 kgs, ranging between 600 to 1200 kgs of milk per lactation.
- The milk produced is rich with about 4.3 % fat content.

This cattle breed has been studied at the Government Cattle Breeding Farm in **Shajapur district of Madhya Pradesh** for almost over fifty years. The management conditions for this breed is extremely good with feeds consisting of grass, fodder and concentrate. Fodder crops that are grown are mainly sorghum and maize. The concentrate is fed only to the bullocks. The estimated population of Malvi was around **fifty thousand during year 2002**, but has now improved to <u>around twelve lakhs</u> according to the latest Governmental count.

Gou Sankaranthi @ Bangalore ,Mysore & Chennai January 6th 2019 ,Sunday

Bangalore



More pictures ? Click here

Mysore

Dhoop preparation:

Pongal Preparation:



Click here for more pictures of Mysore event

<u>Chennai</u>













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Gurugram - Beginning a new chapter
January 21st 2019 ,Sunday















For more **Gurugram** event pics **click here**

Gift a plant @Dell EMC, Bangalore February 13th 2019

On the occasion of Dell Give Back to Employees, GoPals team conducted workshop on 13th February 2019 @ EMC Campus by gifting saplings to around 500+ employees. Employees were briefed about the different varieties of medicinal plants and it's uses

.EMC Employees actively took part in the sapling planting workshop by mixing the right quantity of cow dung ,soil and planted various saplings like "Lemon Grass", "Aloe Vera", "Brahmi", "Kidney Stone Remover ", "Insulin Plant" and "Amruthaballi"



For more details and photos, click here

GouVidya @ Srirangam, Tamilnadu March 9 & 10, 2019

Team GoPals, which is a group of volunteers from corporate who are into sustainable living, reviving indigenous agricultural practices and preservation of Desi Gou Mata, had the honor to learn Gou Palan at the Goushala maintained by Srimaan Trust in Srirangam, Tamil Nadu. It was a pleasure to learn basics of rearing Gou Mata like feeding her, cleaning her and milking. For some of our volunteers it was a first-time thing and a unique experience. The session GoPals volunteers had with Acharyan Sri Parasara Badri Narayana Bhattar Swamy was spiritually enlightening and something to be remembered. The volunteers were heartened to see the Veda Pathashala students perform Vedic rituals and carrying on our thousands of year-old Paramparas. Special thanks to Sri Ganapathy who is a practicing farmer who volunteered for Team GoPals for the past 6 months to conserve the local breed in and around Srirangam He has deep insights and practical experience on Gou which an asset in the field of Desi Cows. Team GoPals is grateful to Srimaan Trust, its Acharyas and students.











Sri Ganapathy teaching basics of desi cows @ Srirangam

Interational Yoga Day Celebrations GoPals stall @ CMR NPS school,Bangalore February 17th, 2019





For more details and photos, click here



