

Panchagavya is a group of derivatives of 5 elements obtained from cows i.e.

- Cow Urine
- Cow Dung (Gomaye)
- Cow milk
- Cow Curd (Godadhi)
- Cow Ghee (Goghrta)

It can be considered as a gift from the heavens for the absolute well-being and good health of human beings.

Ancient scriptures such as "Bhel Samhita", "Kashyap samhita", "Charak samhita", "Sushrutu Samhita", "Gad Nigraha" & "Ras Tantra Saar", speak highly about the divinity and significance of Panchagavya in human life.

It is believed that consumption of Panchagavya results in removal of physical as well as mental disorders and is an enhancer of Life force Energy, Physical Strength & Life Span.

#### Regular consumption of Panchagavya results in

- The removal of slow poisons from the body,
- Miraculous healing of food addictions,
- Cure from side effects of Alcohol & Tobacco consumption as well as Atmospheric Pollutants
- Strengthening of immune system

#### Panchagavya is prepared by the mixture of

- 1 part Cow Ghee
- 1 part Cow Urine
- 2 parts Cow Curd
- 3 parts Cow Milk

• 1/2 part – Cow Dung

The different constituents of Panchagavya have specific & unique healing properties and hence each of it can be used individually too for treatments of diseases and their prevention.

## [youtube=http://www.youtube.com/watch?v=Rtq69PRIx1w&w=410]

In the subsequent discussion, we shall be considering the properties of individual components of Panchagavya.

# **COW URINE**

- Gomutra is 95% water, 2.5% urea, and the remaining 2.5% is a mixture of minerals, salts, hormones and enzymes.
- Cow Urine is bitter, sharp and alkaline.
- Carbolic acid in Cow Urine is responsible for its property of cleanliness and purity.
- Cow Urine consists of
  - Phosphate
  - Potash
  - Lavan (salt)
  - Nitrogen
  - Uric Acid
  - Sodium Chloride
  - Calcium
  - Phosphorus
  - Lactose
  - Vitamin A, B, C, D, E
  - Enzymes
  - Hipuric Acid
  - Creatinin and Gold Acids

## Cow Urine: Few Facts, Benefits & Uses

- Milk producing cow's urine has increased amount of lactose which is very beneficial in heart and brain disorders.
- Eight month pregnant Cow Urine has increased amount of digestive juices.
- Heals Stomach Related ailments such as indigestion and constipation.
- Cow Urine is used in naturopathic treatment in preparation of medicinal Pastes; Sanjeevani Vati in Ayurveda and similar preparations are made by using Cow Urine.

#### Mainly, Cow Urine is used in preparation of

- Gomutra Alkaline churn which is Kapha Nashak
- Medohar ark (Cure for Obesity)

- In cure of respiratory troubles
- Urinary disorders
- Severe Skin disease's
- Eye ailments
- Chronic skin itching
- In Ayurved, ear ache is known as Karnshool and is caused by imbalance in Vata Dosha; Cow Urine drops can cure this ailment
- Many medicines are recommended to be taken with Gomutra in Ayurveda

As per Ayurved, Certain poisons can be refined and purified if soaked in Gomutra for 3 days before there safe and effective use on human body;

#### For Example:

- Dhatura (Dhatura metel) seeds (with shell peeled off) are considered purified after soaking in **Gomutra** for 12 hours.
- Cow Urine can be used for purification of Guggul (Comniphera Mukul), Loha (Iron) and Bhalataka (Semecarpus Anacardium)
- Detoxification of Aconite (Aconitum Napellus; Kuchla in Hindi)

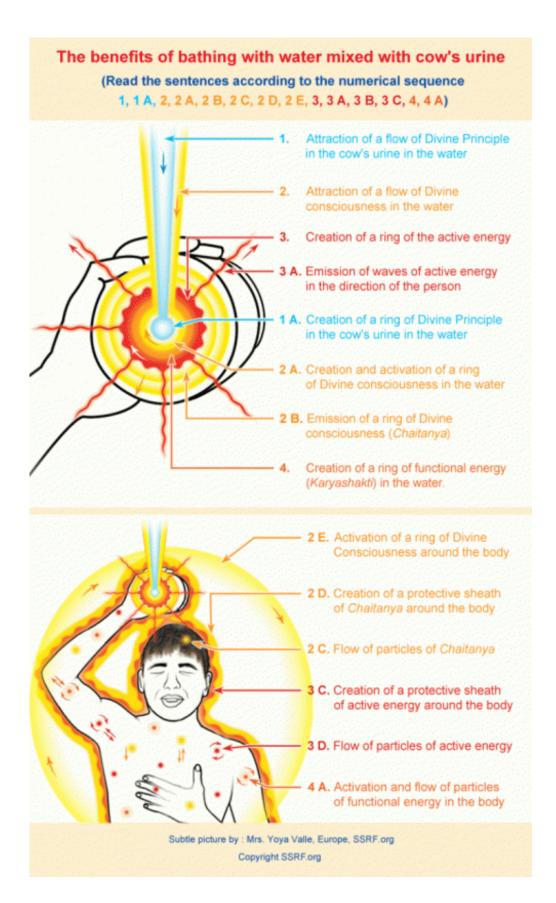
## **Cow Urine: Scientific Research**

According to Dr. Crawford Hamilton from America, use of Gomutra prevents heart ailments and facilitates smooth flow of urine for elimination of toxins from the body.

Few days of consumption of Gomutra, results in proper blood circulation, increased appetite and has proven to be an excellent medicine for issues regarding Renal and Kidney failure.

Dr. Simmers from Britain believes that Gomutra destroys the diseased organisms present in blood, thus removing the blood impurities.

In Nigeria also, significance of Gomutra as a medicine, has been well recognized.



# **Cow Urine: Some More Beneficial Effects**

- Speeds up the healing of wounds.
- Acts as a hair conditioner and is extremely beneficial in athlete foot disease.
- 21 days consumption of Gomutra is very useful for kidney stones.

- 1-2 ounce of Fresh Gomutra is very beneficial in Psoriasis.
- In Sebaceous cyst, Gomutra is effective in cleaning the wounds.
- Purification of environment.

Bio-enhancing is one of the many properties of Cow Urine; Cow Urine has bio-enhancing activity for Rifampicin, the front-line anti-tubercular drug used against tuberculosis, increasing its action up to seven-fold against **Escherichia Coli**, and up to 11-fold against Gram-positive bacteria.

The pesticides present in agriculture processes today have majorly spoiled, or in more specific terms, considerably poisoned the food we eat, such as Fruits, Grains and Vegetables etc. Consequently the resulting breeds of plants have been poisoned over time reducing their immunity enhancing power as compared to non-treated food products.

Since the source of energy in the form of food has lost its powers, its ability to sustain life energy has reduced, thus reducing our ability to fight the diseases and consequent weakening of our internal system.

A lot of research has been done on Panchagavya treatment for strength & enhancement of physical immunity. During this research process, effect of Cow Urine has been studied on the disease fighting capacity of mice.

In Cow Urine, certain chemicals were found which strengthens the disease fighting capacity and increases the life force energy / Prana for sustenance.

Antimicrobial and germicidal properties of Gomutra are due to the presence of urea (strong effect), creatinine, swarn kshar (aurum hydroxide), carbolic acid, other phenols, calcium and manganese; Gomutra exhibits the property of Rasayana Tattwa responsible for modulating various bodily functions, including immunity.

Latest research also shows that Gomutra also has the capacity to fight Cancer cells; its antiCancer effect is due to uric acid's antioxidant property and allantoin; immunity is improved by Swarn Kshar; and wound healing is promoted by allantoin.

Cardiovascular health is maintained by a number of its components: kallikrein is a vasodilator; the enzyme urokinase acts as a fibrinolytic agent; nitrogen, uric acid, phosphates and hippuric acid act as diuretic agents; ammonia maintains the integrity of blood corpuscles; nitrogen, sulfur, sodium and calcium components act as blood purifiers; while iron and erythropoietin stimulating factor maintain hemoglobin levels.

Renal health is maintained by nitrogen, which acts as a renal stimulant, and urinary components which act as diuretic agents. Its anti-obesity effect is due to the presence of copper ions; calcium promotes skeletal / bone health.

Aurum hydroxide and copper act as antidotes for various poisons in the body.

Through Research done by institutes like, Scientific and Industrial Research Organization team and Cowpathy Scientific Research Organization Center, Nagpur, it has been discovered that Gomutra holds significant importance in the treatment of Cancer and in enhancement of effect of Cancer medicines for faster and smoother recovery from this fatal illness.

Cow Urine has been granted US Patents (No. 6,896,907 and 6,410,059) for its medicinal properties, particularly as a bio-enhancer and as an antibiotic, antifungal and antiCancer agent.

With regard to the latter, it has been observed to increase the potency of "Taxol" (paclitaxel) against MCF-7, a human breast Cancer cell line (US Patent No. 6,410,059).

Such achievements highlight the role of Cow Urine in treatment of bacterial infections and Cancer, and demonstrate that Cow Urine can significantly enhance the efficiency and potency of other drugs.

The Science of Cowpathy has been implemented successfully even on pesticides generated diseases.

Scientists have found that Gomutra provides lymphocytes (a blood component), the capacity to resist the presence of pesticides & protects the DNA from damage which is an additional benefit in Cancer treatment.

Through the above discussion, It is quite evident that by the implementations of Cowpathy and Panchagavya, the techniques used over the years for wellness treatment in India have been based on valid Scientific Research.

Panchagavya line of treatment is accepted well and is effective not only in India but even the World Health Organization is taking substantial steps towards its implementation and its acceptance worldwide.

#### **Cow Urine: Implementation In Allopathic Treatments**

Allopathic form of treatment is facing a major issue today w.r.t to the long term effect of usage of such modern medicines.

On regular usage of these medicines, the microorganisms in human body turn immune to their presence and hence, slowly these medicines lose effect.

On the other hand, the body's self-protection mechanism also starts to get weaker against atmospheric pollution consisting of various harmful organism's like pests, fungi, etc.

As per WHO. by 2020, antibiotic form of treatment shall lose effect completely.

Hence in such circumstances, it is extremely important to find an alternative line of treatment.

Panchagavya line of treatment has given birth to a new dimension to healing methods.

In relation to Panchagavya, Farmers Scientific Research Organization has recently received a letter of rights from USA regarding Cow Urines effect on disease causing organisms and Tuberculosis.

It has been recently discovered that consumption of Gomutra, along with antibiotics, increases the healing effect of antibiotic and the microorganisms in body fail to develop immunity to antibiotics with the use of Gomutra.

In diseases like TB, if Gomutra is used along with TB medicine, not only the medicines usage is reduced but also the treatment time is brought down substantially leading to saving of time as well as money.

It appears so, that, Gomutra inhibits the growth of R-factor, which is a major component of Bacterial plasma and is responsible for body's self-healing & protection mechanism against bacterial invasion.

## **Cow Urine: Additional Research Facts**

- 1. In treatment of birds, effects of vaccinations is enhanced by use of Gomutra.
- 2. It augments B- and T-lymphocyte blastogenesis; and IgG, IgA and IgM antibody titers in mice.
- 3. It also increases secretion of interleukin-1 and interleukin-2, phagocytic activity of macrophages, and is thus helpful in the prevention and control of infections.
- 4. Due to its ability to enhance the free radicular activity, Persons who drink Gomutra regularly are said to live a healthy, youthful life, remaining unaffected by the old age issues.
- 5. It increases the egg production capacity in hens and sparrows.

Through finger prints technique, it has been found that the urine of Indian Breed cows is extremely effective and beneficial for medical treatments.

As per Ayurved, the property of Rasaayana Tattwa present in Indian Breed Cows, is responsible for production of antibodies against disease causing organisms which enhances immunity and healthy functioning of body.

In reality, Gomutra is as an effective medicinal substance of animal origin with countless therapeutic properties; additionally, it has applications as a bio-pesticide in organic farming along with cow dung, cow's milk and other herbal ingredients.

Bhaav Prakaash Nighantu describes Gomutra as the best of all types of animal urine, maybe that's why Gomutra is called "Sanjivani" and "Amrita" in Ayurveda.

# Presently, Intensive research on Cow Urine is on in various scientific institutes & Government Organizations, few of them being

- Scientific And Industrial Research Organization.
- Akhil Bhartiye Ayurvigyan Sansthan.
- Pantnagar Krishi Vidhyalaya.
- Bhartiye Pashuchikitsa Research Organization.

#### Effect of Cow Urine on the Resistance Capacity from Draviye / Substance Related Ailments

	Insecticides	B- Cell(%)	B-Cell from Cow Urine(%)	Reduction of Effect ofInsecticides through Cow Urine
1	Cypermethrin	56	16	40
2	Allethrin	92	60	32
3	Captan	87	45	42
4	Dimethoate	73	18	55
5	Methyl Parathion	87	54	33
6	Phorate	81	58	23
7	Mancozeb	60	29	31
8	Prapoksar	76	65	11
9	Theeram	61	39	22
10	Genab	83	68	15

#### Effect of Cow Urine on Cell Mediated Resistance Capacity

	Insecticides	T-Cell(%)	Cow Urine therapy	Effect of Cow Urine therapy
1	Cypermethrin	174	23	151

2	Allethrin	34	27	7
3	Captan	60	11	49
4	Dimethoate	66	21	44
5	Methyl Parathion	67	8	59
6	Phorate	14	5	9
7	Mancozeb	58	16	42
8	Prapoksar	104	62	42
9	Theeram	102	19	83
10	Genab	75	33	42

#### Effect of Cow Urine on Production of Free Radicals

	Insecticides	T-Cell(%)	Cow Urine therapy	Effect of Cow Urine therapy
1	Cypermethrin	174	23	151
2	Allethrin	34	27	7
3	Captan	60	11	49
4	Dimethoate	66	21	44
5	Methyl Parathion	67	8	59
6	Phorate	14	5	9
7	Mancozeb	58	16	42
8	Prapoksar	104	62	42
9	Theeram	102	19	83
10	Genab	75	33	42

#### Gomutra Ark – Distilled Cow Urine

Most of the Medicines prepared through the use of Cow Urine consist of Gomutra Ark which is effective in number of ailments due to its significant healing properties.

## Uses of Gomutra Ark – Distilled Cow Urine

Gomutra Ark is used in the treatment of following ailments:

- Flu
- Arthritis
- Tridosha's
- Snake Poison
- Small pox
- Chicken Pox
- Indigestion
- Edema
- Hepatitis
- Obesity
- Gastric
- Ulcers
- Stress
- Tensions
- Nervous Disorders
- Cardiovascular Diseases
- Asthma
- Tetanus
- Parkinson's disease
- Morning Sickness
- Fever
- Prevention of cell breakdown due to virus-bacteria such as Cancer, AIDS
- Diabetes
- Severe skin diseases
- Digestion issues
- Blood purification
- Leucorrhoea
- Irregular menstrual cycle
- Gynecological issues
- Urinary disorders
- Enhances memory power & DNA protection

## Role of Cow Urine in Apoptosis

	Jeevnashak	Protection of Cells from Self Destruction
1	Cypermethrin	8

2	Allethrin	16
3	Captan	14
4	Dimethoate	13
5	Methyl Parathion	14
6	Phorate	14
7	Mancozeb	6
8	Prapoksar	10
9	Theeram	8
10	Genab	11

#### **COW DUNG / GOMAYE**

The juice of cow dung constitutes Gomaye. It is obtained by filtering the dung by an extremely thin cotton cloth.

#### Gomaye is bitter in nature and is beneficial in following treatments

- Respiratory Ailments
- Acne & Pimples
- Joint Pains
- Neck Pain
- Sciatica
- Spondylitis
- Strengthening of Muscles

## Gomaye – As a Physical Beauty Enhancer

- Gomaye Soaps can remove skin wrinkles and bring glow to ones face.
- A mixture of Gomaye Juice, Geru, Multani Mitti & Neem leaves can be used to form a bathing soap which is quite beneficial in skin problems like itching, ringworm(daad), dandruff and such similar ailments.
- Mixture of Gomutra and Gomaye is used as body massage oil.
- Tooth powder made out of Gomaye does not allow cavities or germs to grow or stay, brings relief in mouth boils and ulcers, cures pyorrhea, removes bad breath thus preventing damage to mouth.

## **Gomaye for Environmental Purification**

Gomaye is considered as a substance which provides purity and cleanliness to the environment. Since Ancient time, Indian house owners apply Gomaye on the walls of the houses and kitchens for purification; Gomaye, being a disinfectant, also controls nausea and vomiting as it has high % of vitamin B12.

On the basis of several research projects based on Cow Dung, famous Italian Scientist, G. E. Beograd has proved that fresh cow dung can destroy the malaria and Tuberculosis causing microorganisms.

It provides increased resistance to illnesses and also has antiseptic properties.

# COW MILK

Amongst all sorts of Milk, Cow milk is considered supreme for excellent physical health.

People who consume milk from Desi / Indian breed cows do not get early troubles of old age.

#### **Cow Milk Benefits**

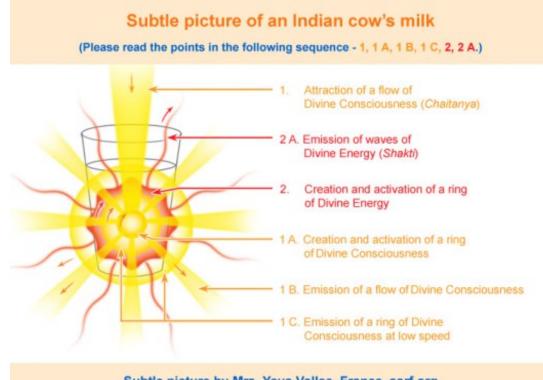
Sweet in taste & has coolant effect on the body and mind.

- Improves Ojas (According to the principles of Ayurveda it is the essential energy of the body which can be equated with the "fluid of life". Those who practice Ayurveda say that Ojas is the sap of one's life energy which, when sufficient, is equated with immunity and, when in-deficient, results in weakness, fatigue and ultimately disease.)
- Nourishes the body tissues
- Acts as natural aphrodisiac.
- Rejuvenating
- Improves intelligence & strength
- Increases breast milk in the feeding mother.
- Assists in easy movement of intestines.
- Relieves tiredness dizziness, excessive thirst and hunger.
- Useful in diseases like severe debility, relieving old fever, diseases related to urinary system, bleeding disorders such as nasal bleeding, heavy menstrual bleeding etc.
- Cow milk for newborn Cow milk is the next best thing to breast milk for the newborn.
- Cow milk calms Vata and Pitta, increases Kapha.
- Cow's milk is highly rich in calcium content. Calcium is essential for the growth and development of bones. It joins with phosphorous to form calcium phosphate, which is an integral element of hydroxyapatite, which in turn provides structure and strength to the bones.
- The calcium present in cow's milk has several other advantages as well. It helps in protecting the colon cells from the chemicals that cause Cancer. It is preventive against the migraine headaches and also reduces the PMS symptoms at the time of the luteal phase of the menstrual cycle.
- The calcium present in milk helps in oxidation of body fat and thus, decreases the secretion of parathyroid hormone. Hence, the level of this hormone is maintained at a low rate.
- Milk can prove extremely helpful in fighting against gout, which is a common type of arthritis.
- Cow's milk contains riboflavin (vitamin B2) and vitamin B12. Vitamin B12 plays a significant role in the production of red blood cells. Further, it prevents anemia and helps in the full development of nerve cells.
- Besides, it boosts the cells to metabolize carbohydrate, fat and protein.
- Both the vitamins are functional in the production of energy for the body.
- The vitamins are also functional in cardiovascular protection.

- Cow's milk contains iodine in rich quantity, which is an integral component of the thyroid hormones triidothyronine and thyroxine.
- The vitamin A present in cow's milk is necessary for the growth and development of epithelial and mucosal tissues. These tissues protect the body against toxins and invading organisms. Shortage of vitamin A leads to several diseases, like frequent cold, ear infections, rheumatoid arthritis and others.
- One cup of cow's milk provides 10.8% of the daily body's need for potassium. Potassium is required for the contraction of muscles, including the heart and is also necessary for nerve transmission.
- Milk, being rich in calcium and potassium, prevents the formation of kidney stones in the body

## Spiritual healing effects of Cow's Milk

#### Ref: www.spiritualresearchfoundation.org



Subtle picture by Mrs. Yoya Vallee, France, ssrf.org

We use different colours for labelling the different elements in the picture as they match the colours of the spiritual vibrations. For example, the spiritual vibrations of Divine Consciousness (or Chaitanya in Sanskrut) are yellow when seen through an advanced sixth sense of vision. Accordingly we have used yellow to label the points related to Divine Consciousness.

The following are some salient features about cow's milk obtained through spiritual research.

- An Indian cow's milk is one of the most sāttvik drinks. Milk from cows from other countries is 50% less sāttvik than the milk from an Indian cow. It has the ability to attract Divine Consciousness (Chaitanya) and emits subtle vibrations of Divine Energy (Shakti).
- As a result when we drink an Indian cow's milk, the cells in the body get charged with the sāttviktā present in the milk.

- There is a spiritual proverb in Sanskrut which states that our thoughts stem from the food that we partake of. Thus when we have sāttvik food and drink, the purification of the whole body takes place. Due to this there is a positive transformation of our thoughts as well. Sāttvik thoughts in turn lead to a person performing only righteous actions.
- The milk from an Indian cow is more sattvik than milk from other animals.

#### Various type's of Cow's milk

Red cow's milk is Vaat Nashak,

Brown cow's milk is Vaat and Pitt Nashak,

**Prasoota cow's milk** from her first few days of delivering a calf gets thick soon after heating it and is very beneficial in respiratory troubles.

The whey left in the process of making Cottage Cheese / Paneer is called Morat which is extremely useful in

- Atisaar
- Ayurvedic terminology for Diarrhoea
- Loose motion
- Watery stool
- Typhoid

#### Who should not drink cow milk?

- Those who are allergic to cow milk.
- Who have symptoms of Kapha imbalance.
- Who are Obese.
- Who have severe low digestion power.

#### Controversy with the modern science

Many argue that as we grow old, the enzymes useful for digestion and metabolism of milk no more exist in the body.

# **COW CURD / GODADHI**

Curd is obtained by curdling (coagulating) milk with lemon juice or vinegar, and then draining off the liquid portion. The increased acidity causes the milk proteins (casein) to tangle into solid masses, or curds.

In Susruta-Samhita, the virtues and properties of these modifications of curdled cow milk have been described in detail since it is the best of all kinds of food. Curd is a very nourishing food and a valuable source of protein, essential vitamins (Riboflavin etc.) and minerals (Calcium & Phosphorus).

#### Diseases and Symptoms cured by Cow curd

- According to Ayurveda curd accelerates digestion (Agni tattva), stimulates taste buds and act as appetizer.
- It helps to strengthen the immune system.
- Curd absorbs water from intestines, and, by virtue of this property, it is widely used to treat diarrhea.

- It mitigates Vata Dosha (Gout), increases kapha (Cough) and Pitta (Acidity).
- It is found beneficial in diseases of duodenum.
- Consuming curd proves beneficial for those suffering from vaginal infection and the risk of high blood pressure.
- It improves the quality and quantity of semen.
- It reduces irritability of bladder and helps in emptying bladder easily.

### Curd is of three types

Sweet, Sour & Bitter.

On churning curd, the remaining whey or liquid is called Buttermilk / Mattha in Hindi.

Sweet Buttermilk is Kaphakarak (Creates Kapha in body) and Pittashamak (alleviates Pitta Dosha)

Sour Buttermilk is Vaatnashak( eliminates Vaata) and Pittakarak (Creates Pittadosha)

It is good for treatment of Diarrhoea, Loose motion, Watery stool, typhoid & intestinal issues.

Buttermilk made out of Cow curd has been identified as equivalent to "Amrit";

A person who regularly consumes buttermilk does not fall ill.

# COW GHEE /CLARIFIED BUTTER / GOGHRTA

Cow Ghee (Ghrta) in Ayurveda, the ingestion of Ghee is like offering the finest of fuels into the fires of digestion-Agni tattva. Ghee builds up the internal juices of the body-Rasa, which are destroyed by aging and increases Ojas (strength), the underlying basis of all immunity and the "essence of all bodily tissues".

Buy Cow Ghee

According to Bhav Prakash Nighantu (written by Bhav Mishra), cow Ghee is not only helpful in improving eye-sight and digestion but also improves memory, intelligence, complexion, voice and physical beauty. It gives strength to the body and increases the life span.

#### Ghee, In Ayurveda

Among the four types of oily material, Ghee is the undisputed choice of Ayurveda due to its power to assimilate effectively the properties of the ingredients added to it without losing its own properties. Numerous Ayurveda medicines are prepared by the use of Cow Ghee.

Ghee is believed to be the best for human consumption. It is full of nutritive qualities. Ghee is sweet, soft, cold potency, slightly coating, brings about Oleation, effective in flatulence, psychiatric disorders, epilepsy, abdominal colic &fullness and fever. It mitigates Vata and Pitta.

It improves,

- digestive fire
- memory
- intelligence
- voice

- luster
- skin softness
- immunity
- strengthlifespan
- eye strength
- It acts as,
- Aphrodisiac
- relieves sins
- poverty
- toxicity and evil spirits.

Due to "cold" property, it mitigates Pitta

Due to "oiliness" it mitigates Vata

Due to "processing with other medicinal herbs", it mitigates Kapha.

Drinking Ghee relieves the colic pain of Pitta origin.

Ghee stimulates biliary secretion and contraction of gall bladder.

It is ideal diet for heart patients suffering from excessive cholesterol in their blood.

It removes all sorts of poisons from body.

Ghee is also used in yajna (ritual of sacrifice) and religious ceremonies

#### **Process of Ghee making**

#### Ghee is prepared by following methods:

- 1. The cow milk on heating produces cream; Ghee is then obtained by heating this cream. This type of Ghee is useful in Blood, Pitta & Eye related disorders/diseases.
- 2. The curd of milk from cows is churned to obtain butter, which is heated to obtain Ghee. This type of Ghee is useful in ailments like Tuberculosis, Anemia, Piles & Pitta disorders.

# Use of Cow products in Agriculture & Energy production

India is an agricultural country and 70% of its population is dependent on agriculture for its survival. Since time immemorial, cows have been a major contributor onto the field of agriculture. Historical data is proof of the fact that, as long as there has been loving focus on Cow's welfare and its treatment as described in ancient scriptures, we have achieved highest level of progress in the field of economy and spirituality.

#### Few facts about the Economic Progress with Cow Products

For Farmer community in Punjab, India, milk production from cows has been much more beneficial financially, than Agriculture.

As per statistics published in 1989:

Dairy industry production / hectare - Rs. 4548

As against yearly production of grains being:

Dhaan-Wheat - Rs. 2423

Peanuts-Wheat - Rs. 1870

Wheat-Cotton - Rs. 1798

Makka-Wheat - Rs, 1788

We, as a nation are highest producer of cow's milk in the world.

Amongst the milk production in the country, 40% comes from cows.

The White Revolution, also known as Operation Flood, gave a major boost to the dairy sector in India in the late 1960s by producing milk in rural areas through smallholder producer cooperatives and moving industrially-processed milk from these smallholder sources to urban demand centers. This established the much-needed linkages between rural producers and urban consumers. The growth achieved has been uninterrupted ever since and culminated in India becoming the world's single largest producer of milk since the mid-1990s.

With over 80-million farming households involved in dairy related activities, the dairy industry has emerged as a single largest contributor to the Indian economy. More than 70 per cent of India's milk is produced by households who own only one or two milk animals.

The reason behind white revolution was not just to protect and support existence of Indian cow breed but majorly to support the survival of rural life of poor farmers and their rise in society standards.

**Before the White Revolution** started the farmer's income was derived almost entirely from seasonal crops. The income from milch buffaloes was undependable. Only private traders and middlemen gained as the marketing and distribution system for milk was controlled by them. Being perishable, farmers were forced to sell milk to whoever offered to buy. Often, they had to sell the cream of the milk at throwaway prices.

#### **Role of Cow Products in Energy production**

Most of the developed countries today are facing a serious issue regarding energy production. It is estimated that petrol, diesel and kerosene oil reserves shall be extinct in 20-25 years.

If we dedicatedly work on wellness of cows and their preservation over the coming years, the energy predictions envisaged today can be avoided.

Compiled and Presented by Miss Meeta Jain