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NATURAL REFORMING WITH THE HELP OF COW URINE

Sumit V. Khangar¹, Kishan R. Tiwari², Ninad R. Meshram³, Prakash R. Chavan⁴

¹Chemical department of J.D.I.E.T Yavatmal, Maharashtra, India, smitvkhangar@rediffmail.com

²Chemical department of J.D.I.E.T Yavatmal, Maharashtra, India, kishantiwari171@gmail.com

³Chemical department of J.D.I.E.T Yavatmal, Maharashtra, India, ninadmshram12@gmail.com

⁴Chemical department of J.D.I.E.T Yavatmal, Maharashtra, India, prakashchavan.chem@gmail.com

Abstract

The effect of cow urine and equivalent nitrogen, potassium and sulphur treatment on pasture yield, botanical composition herbage chemical composition, and N fixation by clovers were examined during winter and spring. Urine caused large increases in ryegrass yield, due entirely to its N component. The effect on yield lasted 2-3 harvests and was followed by a decrease in clover growth. The sulphur treatment (Sodium Sulphate) reduced the depressive effect of N on clover growth. Urine increased the concentration of grass (particularly the nitrate fraction) and increased the potassium concentration of grass and clover. N fixation by clover was markedly decreased by urine, particularly during the winter. The treatment were replicated at either end of a paddock to determine the influence of the previous grazing method (nine years of break-feeding in the same direction, with no back fencing) on fertility transfer. At the 'low fertility' end, lower levels of pasture producing and soil nutrients and pasture response to urea was higher.

Index Terms: pastures; pasture yield; nitrogen (nutrient); cattle; urine; soil fertility; potassium; sulphur; plant nutrients; plant nutrient absorption; plant growth; pasture composition; nitrogen fixation

1.1 INTRODUCTION

In a cow based mostly economy, dung and piss are the foremost resource of the cow economy, next solely to bullock energy. Given this, that an easy resource like cow piss will have such curative powers is impossible. Relating to the advantages of cow piss showcases its multiple uses. The cows' uses in agriculture and agricultural functions like tilling, transportation, manure and tormenter repellents are well-known. Dried garbage (Gobar) is employed prolifically in rural Asian nation as fuel for hearth and an influence resource. Setting friendly Gobar Gas Plants across rural Asian nation can facilitate save the layer and forestall warming. Traditional agriculture has been generally considered everywhere has a joint effort of people and cattle in present past a very deal of importance has been given to individual animal product and formulation. The panchgavya formulation is maintained in ayurveda prepared using the five components derived from cow viz.

2 METHODS AND MATERIALS:

2.1 Procedure

The vapour of cow urine is to be collected by tube device like in distillation process. An earthen or iron pot with cover having tube for vapour outlet is filled with cow urine and put over fire for heating. The vapour which comes out from this device through the tube, is collected in pot. The pot is put over cold water, to cool the vapour and get it condensed. The water under the pot should be changed regularly to keep the

pot and water cool. The tube of device has to be transparent, so that vapour is visible. If smoke starts coming out, reduce flame or fire. The quantities of ark (distilled urine) are not the same as whole cow urine or asav, as many components remain in the residue and some of them are lost as vapour. Yet it is more popular as it does not smell. Benefits will be achieved on taking for longer period. It can be easily given to children and women. If honey is added with it, it becomes more effective. Dose 12 millilitre after food with honey.

2.2 As io-pesticide and bio-enhancer

Panchgavya made up of five cow products; milk, crude, ghee, urine, and dung, is also used as fertilizers and pesticides in agricultural operations. As per recent studies cow urine has proved to be an effective pest controller and laticide when used alone and also in combination with different plant preparations shown in fig. The recent invention related to cow urine was its role as a bio-enhancer. Distillate cow's urine is an activity enhancer and availability facilitator for bio active molecules (antibiotic, antifungal and anticancer drugs). The distillate helps in absorption of antibiotic across the cell membrane in animals cells, gram positive and gram negative bacteria at 40-50°C, transport across the gut wall by two to seven times. It also increases the activity of gonadotropin releasing hormone molecule conjugate with bovine serum albumin (GnRH-BSA) and zinc. The GnRH-BSA conjugate has a deleterious effect on reproductive hormones and estrous cycles of female mice. So, concentrated cow urine acts as a bio-enhancer.

2.3 Agriculture

Cow's urine boosted the annual rye grass yield by causing an increase in nitrogen (N) component of the soil and a marked depression in nitrogen fixation by 10% annually in clovers particularly in winter. The effects on yield lasted 1-3 harvests and were followed by a decrease in clover growth. Total nitrogen content in the cow urine is very high ranging from 6.8 to 21.6 gm/l of which an average of 69% is urea. Urine increased the N concentration of grass (particularly the nitrate fraction) and increased the potassium concentration of grass and clover. Increased pasture growth from urine patches has been observed of immunization effect to modulate these effects. Cow urine has been granted US Patents (No. 6,896,907, 6,441,059 and 6,410,059) for its medical properties. It acts as an enhancer of anti-infective, anticancer agent /nutrients from compounds, antibiotics drugs, therapeutic, nutraceutical, ions and also independently as a bioactive agent even N fertilizer application which may be due to greater amount of N applied or to some interactions with one of the other elements urine such as potassium or sulphur. Estimation of nitrogen supply content by using khejindal method.

2.4 Cow urine fermentation:

1. Cow urine (Bison benasus L) are accommodated and incorporated into the plastic drum.
2. Gangajal, turmeric, intersection ireng, ginger, kencur, drotowali founded and then put in a plastic drum. The addition of materials to eliminate odors and provide a sense of cow urine undesirable pests.
3. After that, molasses is inserted into a plastic drum, then put the starter *Sacharomyces cereviceae*. Molasses and starter *sacharomyces cereviceae* is useful for fermentation of and latter once the liquid fertilizer can increase the number of beneficial microbes that exit in the soil.
4. Fermentation of cow urine settling for 14 days and stirred every day.
5. Plastic drum is closed by napkins cloth or paper.
6. Finally, after 14 days liquid manure is filtered and packaged.
7. Cow urine often causes environmental problems because it creates unpleasant odors. However, the touch of fermentation of technology in the form fermentation cow urine can be used as organic fertilizer. Fertilizer is very good to return of soil fertility. With fermentation cow urine is the use chemical fertilizers can be reduced by up to 50% for the first phase, and the next phase of use chemical fertilizers can be reduced even more.

2.5 Panchagavya:

Milk, curds, drawn butter (unqualified butter) dung and excrement, once mixed is termed Panchagavya. The concoction is seen to extend resistance, rejuvenate cells,

cure cancer, and cut back dependence on antibiotics. It conjointly forms the idea of sturdy nutrient wealthy manure for the soil because it contains earth friendly microbes, that is crucial for agriculture. significantly, these healthful properties are unit seen solely in autochthonous cows.

2.6 Farmers club kali talavadi in brief:

Farmers from this club being all the animals at one place underneath one shed and collect the excretion from these animals throughout night hours. This farmer's club was established in twentieth Gregorian calendar month 2010 engaged in assortment and use of cow excretion and promoting cow excretion as a bio fertiliser in cotton, groundnut, maize, castor, chillies. All cows square measure Kakrej in breed. All the works is being done by senior and nonworker of that village. All persons square measure terribly dedicated therein work. Currently they need collected 175675 lts of cow excretion and oversubscribed 168182 lts @ Rs.2.50 Composition of Cows Urine: Water - ninety fifth : organic compound - a pair of.5% : Minerals, Hormones, Salts & Enzymes - a pair of.5%

3. RESULT AND DISCUSSION

3.1 Composition of Cows Urine: Water - 95% : Urea - 2.5% : Minerals, Hormones, Salts & Enzymes - 2.5% Gaumutra Ark (Distilled Cow Urine)

cost benefit:-

Requirement of Inorganic fertilizer in one Acre of Land

Urea (50 kg) = 285 Rs.

DAP (25 kg) = 500 Rs

Total Cost = 785 Rs

Requirement of Cow Urine in one Acre of Land

Requirement for 1 Acre = 100 lts

1 Lt Cost = 2.5 Rs

Total Cost = 250 Rs

Net Savings for production in 1 Acre is = 565 Rs

NOTE: - If cow urine is used in field continuously for three years then there will be no need of chemical fertilizer.



Fig-1. Minrelsenzimes for formation of cow urine 3.2 usages: it's employed in completely different forms like;

1. Cow excreta as Associate in Nursing Antimicrobial Agent,

2. Effect of Cow excreta on Leukaemia:
 3. Cow excreta as Associate in Nursing Antimicrobial Agent:
 4. Effect of Cow excreta on Wounds:
 5. Anti Cancer properties of cow excreta
 6. Immune- Modulation
 7. Effect of cow excreta fertiliser on quality of Pasture:
 8. Development of Cow excreta primarily based disinfectant:
 9. Cow excreta has opposed mastigophoran effect/
- lit.3.3Physical test



Fig-2. Growth of crops

3.4 Impact of cow urine

- 1) After analysis of soil it's found that there's no any deficiency of small nutrients.
- 2) Colour of leaves is more greenish other than the use of urea application.
- 3) Residual effect of cow urine is more pronounced in next cropping
- 4) Changes in Soil Texture
- 5) Creates good environment in soil for earthworm growth
- 6) Due to use of cow urine in the crops up to 10-12 days after spraying it works as a insecticides.
- 7) It helps as growth promoters of plants
- 8) During this year due to use of cow urine in groundnut crops, leaves didn't show yellowish discoloration which is seen every year
- 9) As compared to previous year farmers have got good returns in both the side as yield and income also.

3.5 Adverse Effect:

Little amount of common side effect of urine therapy include diarrhoea, itch, pain, fating of shoulder, fever. Which appears more frequently in patients suffering long term or more serious illness. Each episode may last 3-7 days, but sometimes it may last for 1-6 months. Hence, some abstain from this therapy due to such bad episode and others due to the stigma associated with it. If one persists and overcomes the difficulty, if anyone can enjoy the eventually happiness of healthy life.

CONCLUSION

After regular use of cow urine in the crops farmers have found that soil microorganism has increased along with the crop production. It has also increase the soil texture and structure. There was no occurrence of any insect pest

and diseases .Cow urine works as growth promoters. The present study revealed that higher grain and Stover yield, plant height and number of leaves in maize with panchagavya, cow urine which were comparable to recommended fertilizer treatments at higher level (200% and 300%).It can be concluded that presence of rich plant growth substances, both major and micro nutrients, beneficial microbial population in organic liquid manures have helped to ring rapid changes in phenotypic characteristics of plant and also improvement in growth ultimately improving in the productivity of the crops. Liquid organic manure like panchagavya could be prepared locally by farmers themselves and obtain increased yield levels. Such practices would pave way to reduces use of external inputs and increase sustainability among organic farmers in the developing countries

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