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QUARTERLY TECHNICAL BULLETIN FOR RESEARCHERS, EXTENSION WORKERS AND TRAINERS IN AGRICULTURE

"The light of curiosity absent from childrens eyes, twelve year olds with the physical stature of eight year olds. Youngsters who lack the energy to brush aside flies collecting about the sores on their faces, amazingly show reflexes of adults crossing traffic. Thirty year old mothers who look sixty, all these are common images in the developing countries, all reflect inadequate nutrition. All have societal consequences.

- Allen Berg, 1973 -

CONTENTS

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Editorial Committee - W.P. Albert, S.Arasasingham, P. Ganeshan & I.M. Gunawardana

EDITOR : I.M. Gunawardana

FRUIT CROPS SUBSIDY SCHEME

The Ministry of Agricultural Development and Research has launched on a fruit subsidy scheme from 1st. July, 1981. The aim (of this scheme) is to develop the fruit industry in a planned and sustained basis for the benefit of the farmers, processors and the consumers. This subsidy scheme will operate initially in selected districts (for the crops mentioned) to maximise the use of resources. The areas and crops have been selected, based on studies carried out by the Ministry and the Dept. of Agriculture. High potential areas have been selected on basis of data climate, physiography, water resources, crop performances etc. Marketing and processing facilities have also been considered in the preparation of this development plan. Regional specialization of crops is the ultimate of this subsidy scheme - (a factor that is paramount when perishable commodities are handled). The scheme will help the small farmer as well as the larger farm units to make the produce available for the local market at reasonable rates, and also establish the base for an export market. Regional specialization anticipated is in the following manner.

BASIS OF ELIGIBILITY FOR SUBSIDY

The minimum extent of land to be cultivated under this scheme is given below:

Crop	Subsidy/acre	Region of Specialization (district)
Citrus	2,500.00	Amparai, Moneragala and Badulla.
Mango	2,500.00	Puttalam, Vavuniya, Mullaivu and Hambantota.

Crop	Subsidy/acre	Region of Specialization (District)
Banana	2,000.00	Kegalle, Hambantota, Kurunegala, Trincomalee, Jaffna (Mainland) and Walawe.
Pineapple	3,500.00	Colombo and Gampaha.
Passion fruit	4,000.00	Badulla, Gampaha and Kalutara.
Avocado	2,000.00	Kandy, Kegalle and Badulla
Rambuttan	1,500.00	Colombo, Gampaha and Kegalle.
Mangosteen	1,500.00	Kalutara, Gampaha and Kandy.

BASIS OF ELIGIBILITY FOR SUBSIDY

The minimum extent of land to be cultivated under this subsidy scheme is given below:

Fruit Crop	Minimum extent for eligibility
Mango ...	1 Ac.
Mangosteen ...	1 Ac.
Rambuttan ...	1 Ac.
Bananas ...	½ Ac.
Citrus ...	½ Ac.
Passion Fruit ...	½ Ac.
Avocado ...	½ Ac.
Pine-Apple ...	1/4 Ac.

In the case of holdings where complementary subsidies are operating (e.g. coconut) the minimum number of fruit plants stated below should be planted:

monocul = monoculture

Crop	Complementary Plantation crop	Remarks	Minimum fruit trees (vines or plants) per ac.
Pineapple	Coconut		(Mauritus -4000 (Kew -7000
Pineapple	Rubber		Mauritus -4000 Kew -7000
Pineapple		Monocul:	-do- -8000 12000
Passion-Fruit	Coconut		- 200
Passion-Fruit	Rubber		- 300
Passion-Fruit		Monocul:	- 400
Citrus	Mixed Culture		- 100
Citrus		Monocul:	- 200
Mango	Mixed Culture		- 20
Mango		Monocul:	- 300
Banana		Monocul:	- 400
Avacado	Mixed culture		- 50
Avacado		Monocul:	- 100
Rambuttan	Mixed culture		- 50
Rambuttan	Mixed Culture		- 100
Mangosteen	Mixed Culture		- 20
Mangosteen		Monocul:	- 40

The subsidy will be restricted to one fruit crop on the same land. The upper limit of planting will be ten acres for the private sector. State owned institutions are eligible for extents exceeding 10 acres. Selected high quality planting material will be supplied from Government and registered private nurseries.

The scheme will be operated by the Department of Agriculture in collaboration with the Department of Minor Export Crops. Application forms giving details of the form of subsidy will be available at all Agricultural Service Centres in the above districts.

The applications will be received by AIA incharge of the district. Applications that do not conform to the conditions stipulated, will be rejected and the applicants will be informed accordingly, giving reasons for rejection of the application.

Inspection of land and the payment of subsidies will be attended to by the officers of the Department of Minor Export Crops. Technical advice, supervision, registration of plant supply nurseries, raising of plants, and supply of bud wood required for this scheme will be the responsibility of the officers of the Agriculture Department in the district.

පළතුරු වගා සහනාධාර යෝජනා ක්‍රමය

කෘෂිකර්ම සංවර්ධන සහ පර්යේෂණ අමාත්‍යාංශය, 1981 ජූලි 1 වන දින සිට ක්‍රියාත්මක වන පරිදි-පළතුරු සහනාධාර යෝජනා ක්‍රමයක් ආරම්භ කර ඇත. මෙහි අරමුණ පළතුරු නිෂ්පාදනය වැඩි-කිරීමයි. මෙම යෝජනා ක්‍රමය තෝරාගත් දිස්ත්‍රික්ක වල, තෝරාගත්පළතුරු බෝග කිපයක් සඳහා ක්‍රියාත්මක වේ. එක් අයෙකුට සහනාධාර ලබාගත හැකි උපරිම වගා වපසරිය අක්කර 10කි. සහනාධාර ලැබීමට වගා කල යුතු අවම ඉඩම් ප්‍රමාණය මෙසේය. අඹ, මැගුස්, රඹුටන් සඳහා අක්කර 1යි. කෙසෙල්, දොඩම්, වැල් දොඩම්, අලිපේර සඳහා අක්කර 1/2 යි. අන්නාසි සඳහා අක්කර 1/4යි. පළතුරු බෝග අක්කරයක් වගා කිරීමට ගෙවන මුදල් ප්‍රමාණයන් මෙසේය. දොඩම් සහ අඹ, රු: 2500බැගින්. කෙසෙල් හෝ අලිපේර රු: 2000 බැගින්, රඹුටන් සහ මැංගුස් වීත් රු: 1500 බැගින්, අන්නාසි අක්කර 1 වගා කිරීම සඳහා රු: 3500 බැගින්.

பழப் பயிர்ச் செய்கை உதவிக் கொடை செயற்பாட்டுத் திட்டம்

உள்நாட்டுப் பழ உற்பத்தியைக் கூட்டும் நோக்கமாய், விவசாய அபிவிருத்தி ஆராய்ச்சி அமைச்சினால் 1981ம் ஆண்டு யூலை மாதம் 1ம் திகதியிலிருந்து செயற்படும்படி - 'பழப் பயிர்ச் செய்கை செயல்பாட்டுத் திட்டம்' ஒன்று ஆரம்பிக்கப்பட்டுள்ளது. முதன் முதலாக இத்திட்டத்தை மேற்கொண்ட மாவட்டங்களில், அந்தந்த கால நிலைக்கு ஏற்ற பழப் பயிர்ச் செய்கை மேற்கொள்ளப்பட்டது. ஒரு விவசாயிக்கு அளிக்கப்படக்கூடிய உச்ச உதவிக் கொடை 10 ஏக்கர் பயிர்ச் செய்கை நிலப்பரப்பை அடக்கும். அல்லது ஆகக் குறைந்தளவு பயிர்ச் செய்கை பண்ணப்படவேண்டிய பரப்பளவு பின்வருமாறு: மா, மங்குஸ்தின், றம்புட்டான் 1 ஏக்கர்; தோடை, கொடித் தோடை, சீமைக் கொய்யா ½ ஏக்.; அன்னாசி ¼ ஏக்கர்.

1 ஏக்கர் பழச் செய்கைக்கு வழங்கப்படும் உதவிக் கொடை விபரம் பின்வருமாறு: மாவுக்கும் தோடைக்கும் ரூ. 2500.00; வாழைக்கு/சீமைக் கொய்யாவுக்கு ரூபா 2000.00; றம்புட்டான், மங்குஸ்தீனுக்கு ரூ. 1500.00; அன்னாசிக்கு ரூ. 3500.00.

HINTS ON PRUNING PEAR TREES

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INTRODUCTION

Pruning involves the removal of superfluous shoots and branches. Purpose of pruning is to control and regulate growth and to influence favourable flowering and fruitfulness to get quality fruits and repair injury to trees. Pruning helps practices such as spraying, dusting, harvesting, fertilizer application and inter-cultivation.

OBJECTIVES OF PRUNING PEAR TREES

1 To increase the vigour of old trees and also to regulate the amount and direction of growth.

2 To remove weak and undesirable branches.

3 To remove dead, badly diseased or injured branches.

4 To remove interbearing branches.

5 To maintain the balance between top growth and root system.

6 To regulate and distribute the main branches to facilitate the heavy bearing of fruits.

LIGHT PRUNING VS HEAVY PRUNING

Light, timely and common sense pruning is better than heavy pruning, because heavy pruning may result in long delays in flowers and fruiting. However, unpruned very old trees should be heavily pruned to get the proper shape, size and required height.

TYPES OR FORMS OF PRUNING

Trees are usually trained or pruned when they are young to get the following types or forms:

(1) The open head
(2) The central leader
(3) The modified leader.

OPEN HEAD TYPE (OHT)

The laterals or main branches in this type of head are generally forced to grow closer together. Advantage of OHT is the low height that allows easier spraying and picking of fruits. Disadvantage of OHT is that the main branches are close together and they are usually weak and may break during strong winds, or during heavy fruiting time, also these trees are smaller and do not have a large bearing surface.

CENTRAL LEADER TYPE (CLT)

In this system the main stem is allowed to grow tall. More lateral branches may grow, spaced further apart, up and down the trunk. The tree would generally develop this form when no pruning is done. CLT has the advantage of having strong branches. The disadvantage is the trees are very tall. Harvesting may be difficult and expensive.

MODIFIED LEADER TYPE (MLT)

In this system the central stem or leader is allowed to grow as in the case of CLT, but the leader is lightly suppressed by cutting it back. The suppression of the central leader at intervals tend to produce a tree less in height than the CLT and with stronger branches than those formed in the OHT. The type of head is considered best to train trees in their early years of growth.

THREE TYPES OF PRUNING IN PEARS

Note the relative height of the trees.

(a) Openhead type
(b) Central leader type
(c) Modified leader type

PRUNING OF OLD TREES

Old trees which have never been pruned or have not been pruned for a long time should be subjected to heavy pruning. The over crowded old branches and the very tall limbs are pruned to a convenient height or completely removed with the pruning saw (at an angle of 45° to allow adequate sun light and seration inside the canopy. A wood dressing should be applied to the cut surface.

In heavy pruning of pear trees leave at least a few lower branches with enough foliage on the tree. If not the mortality rate will be high. The superfluous twigs of left over branches should be removed later.

POINTS TO REMEMBER WHILE PRUNING

Pruning of branches should be done with sharp tools to give a clean cut. Secatures or pruning shears, pruning knives, pruning saws and carpenter saws are useful and handy for this purpose. Branches should be cut at an angle of 45° so that rain water will not stagnate but easily get drained off to prevent decay of cut surface. Remove very tall and deseased branches to allow enough sun light to penetrate inside the canopy. Try to get a spherical shape as far as possible. Spherical shaped trees are balanced and are least affected by strong winds during heavy fruiting. Shoots from the base called water shoots too should be removed unless it has to take the place of a diseased or broken branch.

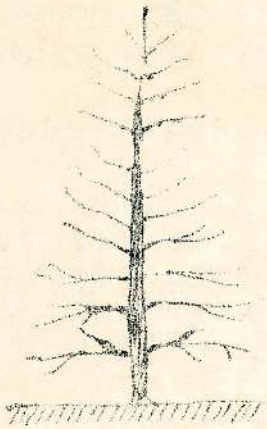
An application of any standard wood dressing like Cankerdoute to the new cut surface will prevent decay and die back in branches. In the absence of wood dressing ordinary household paints will suffice.

All epiphytes, moss and lichens should be completely removed from the branches leaving no trace of them to re-establish. Lichens and moss are easily removed with a wire brush or a ball of coir strings.

If there are any holes at the base of large trees apply a mixture of insecticides and fungicides to the hole and cement it so that water will not stagnate in them.

It is a good practice to remove the dead bark at the vase of the trees. They normally harbour some off the insect pests and apply Bordeaux mixture* to a height of 2-3 ft. after pruning and removal of moss etc. Bordeaux mixture could be applied to the base of the trees using an ordinary brush. The mixture will control fungal infestation and also kills insect pests.

(CHT)



(CLT)

(MLT)

පෙයාස් ගස් කප්පාදු කිරීම

පෙයාස් ගස්වල මල් සහ ගෙඩි හටනොගන්නා සහ පළදාවට උපකාරී නොවන අතු සහ රිකිලි කප්පාදු කිරීම හොඳ අස්වැන්නක් ලැබීමට උපකාරීවේ. කප්පාදු කල ගස්වලින් අස්වනු නෙලා ගැනීමත් පහසුය. වයස්ගත වූ ගස්වලට නව ජීවනයක් ලබාදීමත් කප්පාදු කිරීම උපකාරීවේ.

පෙයාස් ගස් හැඩගැස්වීමට භාවිතා කරන කප්පාදු ක්‍රම තුනක් ඇත.

කප්පාදු කිරීමෙන් පසු ගසේ අතු සහ කඳන් වල කැපූ ස්ථානවල සුදුසු කෘමි රසායන ආලේපයක් ආලේප කල යුතුය. කෝණයකට අතු කැපීමෙන් කැපූ ස්ථානවල වතුර රැඳී තිබීම වලක්වා ගත යුතුය. ගස කප්පාදු කිරීමෙන් පසුව කඳ මත ඇතිවෙන සහ පාසි කොහු ලනුවක් ගුලිකර ගසේ ඇතිල්ලීමෙන් ඉවත් කල හැක. කප්පාදු කිරීමේදී බිමට වැටුනු අතු සහ රිකිලි එකතු කර පුලුස්සන්න.

'பெயார்ஸ்' மரத்தைக் கத்தரித்தல்

பெயார்ஸ் மரங்களில் பூக்க பலன் தராத கிளைகளைக் கத்தரித்தல் மூலம் விளைவு கூடுவது அவதானிக்கப்பட்டுள்ளது. முதிர்ந்த மரங்களைக் கத்தரிப்பதனால் இவை புத்துயிர் பெற்று நல்ல விளைச்சலைக் கொடுத்துள்ளன. கத்தரிக்கப்பட்ட மரங்களிலிருந்து பழங்களை பறிப்பது இலகுவாயிருக்கும்.

பெயார்ஸ் மரங்களைக் கத்தரிக்க மூன்று முறைகள் கையாளப்படுகின்றன.

மரத்தைக் கத்தரித்த பின்னர் கத்தரிக்கப்பட்ட கிளை அல்லது தண்டை இரசாயனச் சேர்வை கலந்த திரவத்தால் முழுக்கப் பூசிவிடல் வேண்டும். கிளைகளைக் கத்தரித்த பின்னர் அவ்விடங்களில் நீர் தேங்கி நிற்காது தடுத்தல் வேண்டும். கத்தரித்தபின் தண்டில் ஏற்படும் கழிவு மற்றும் பாசியை கயிற்றால் தேய்ப்பதன் மூலம் அகற்றலாம்.

கத்தரித்தலின் பின் நிலத்தில் விழுந்துள்ள கிளைகள், மொட்டுக்களைச் சேர்த்து எரிக்கவும்.

WHEAT CULTIVATION IN SRI LANKA

Wheat can be grown successfully in Bandara wela and lower Uva regions. Since 1979 research work has been done on wheat cultivation in these areas. Average yields of 2000 lbs of wheat grain per acre has been obtained in these areas.

During 1980 / 81 Maha season wheat has been cultivated in Kegalle district, with good results. The variety cultivated at Kegalle was ACC-4073.This is a Philippine variety.

The Hon. Minister of Agricultural Development and Research, Mr. E.L.Senanayake has directed the Department of Agriculture to extend wheat cultivation and also grow wheat on a trial basis in all the suitable agro - ecological regions of Sri Lanka.

The Work Plan

1. 1000 acres of wheat will be grown in Badulla, Moneragala and Kegalle districts during 1981/82 Maha season.

2. To find out areas suitable for wheat cultivation:
   - every Government farm will have ½ acre grown under wheat.

3. Wheat "Mini-kits" will be issued to tO farmers in the following districts:
   * Badulla
   * Moneragala
   * Kegalle

4. Demonstration plots will be established near all the Agricultural Service Cen -

res in Badulla, Moneragala and Kegalle districts.

5. 1 acre of wheat will be grown in a private farm in Kegalle district.

6. To ascertain optimum time for planting wheat, trials will be done conducted in the Government Farms.

In potato growing areas

"To control bacterial wilt disease of Potato crop rotation with wheat is beneficial", according to Dr. Kishore (Regional Representative of CIP for South Asia). In India in a field that had 75% wilt incidence by growing three successive wheat crops, wilt incidence had been reduced to 3%.

TRIGO 1 wheat variety

Trigo 1 wheat variety was evolved in the Philippines. Its characteristics:

- High tillering ability
- Moderate lodging resistance
- Resistant to foot rot *(Sclerotium rolfsii)*
- Moderately resistant to Helminthosporium leaf spot disease.

* Heading occurs 51-61 days after sowing.
* The crop matures between 90-100 days from sowing.
* Average number of spikelets per spike = 15.

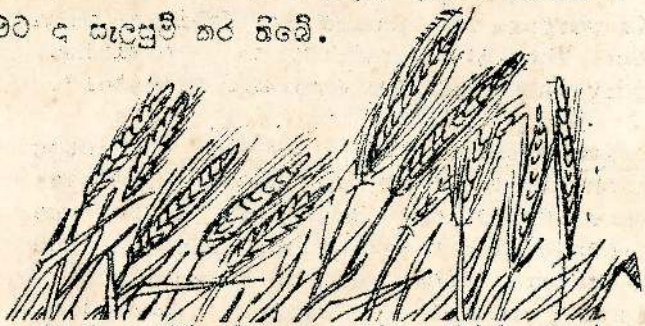
Grains are red, medium in size
Protein content 13.6%

The Department of Agriculture will provide seed of this variety for multiplication to farmers during Maha 1981/82. Wheat seed produced will be purchased, processed and resold to farmers.

ශ්‍රී ලංකාවේ තිරිඟු වගා කිරීම

පසුගිය වර්ෂකිපය තුළ පැවැත්වූ තිරිඟු වගා පරීක්ෂණ ප්‍රතිඵල අනුව බණ්ඩාරවෙල සහ පහළ උඩ ප්‍රදේශවල සාර්ථක ලෙස තිරිඟු වගා කළ හැකිබව පෙනේ. අක්කරයකින් - තිරිඟු ඇට රා: 2000 පමණ අස්වැන්නක් මෙම පෙදෙස් වල ලැබිය හැක.

බදුල්ල මොණරාගල කෑගල්ල දිස්ත්‍රික්ක වල-ගොවීමහතුන්ට අත්හදා බැලීම සඳහා 1981/82 මහ කන්නයේදී තිරිඟු වගා බීජ සපයනු ලැබේ. මේ දිස්ත්‍රික්කවල ගොවිසේවා - මධ්‍යස්ථාන අසළ ආදර්ශ වගා පිහිටුවීමෙන්ද් තිරීක්ෂණ ලබාගැනීමට අදහස් කර ඇත. උසස් අස්වනු ලබාගැනීම සඳහා තිරිඟු වගා කළ යුතු කාලසීමාව නිශ්චය කිරීම සඳහා අවශ්‍ය පරීක්ෂණ කටයුතු - කිරීමට ද සැලසුම් කර තිබේ.



இலங்கையில் கோதுமைப் பயிர்ச் செய்கை

கடந்த சில வருடங்களாக பண்டாரவளை, மற்றும் கீழ் ஊவா மாகாணங்களில் நடாத்தப்பட்ட பரிசோதனை-முடிவுகளின் பிரகாரம், இப்பிரதேசங்களில் மிகவும் திருப்தி கரமாய் கோதுமை விளைவிக்கலாமென நம்பப்படுகின்றது. ஒரு ஏக்கரில் கோதுமை விதை 2000 இறாத்தல் வரை விளைவு பெறலாம் என பதுளை, மொனராகலை, கேகாலை மாவட்ட விவசாயிகளுக்கு அடுத்து வரும் 1981/82 மகா போகத்தில் விளைவிப்பதற்காய் கோதுமை பயிர்ச்செய்கை பொட்டலங்கள் வழங்கப்பட்டுள்ளன. அத்துடன் அந்தந்த விவசாய விஸ்தரிப்பு சேவை நிலையங்களினூடாகவும் மாதிரிக் கோதுமைப் பயிர்ச் செய்கை செய்ய தீர்மானிக்கப்பட்டுள்ளது. கூடிய விளைச்சலைப் பெறக்கூடிய கால எல்லையை வரையறுக்கு முகமாய் தற்போது பரிசோதனைகள் நடாத்தப்பட்டுக்கொண்டிருக்கின்றன.

PEST CONTROL - NEW STRATEGIES

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It is not possible to eradicate insect pests. Therefore we must try to keep pest population under control. This can be achieved by adopting known methods of pest control in an integrated manner. We also know that nearly all crop plants can toler ate a certain degree of damage without an appreci able loss of yield. Economics of the damage caused should be the criterion for deciding whether to control the pest or not.

For this purpose one should be familiar with three pharses: They are equilibrium position, economic injury level and the economic threshold.

(1) Equilibrium Position (EP) is the average population density of an insect group over many number of seasons or years. There are ups and downs in their pupulation due to natural factors. The mean of these fluctua- tions is the general equilibrium position. This is comparable to, say, the annual rain fall for Peradeniya being 93".

(2) Economic Injury Level (EIL) or Economic Injury Threshold (EIT) is " the lowest pest population density that causes economic damage." This is the level at which damage can no longer be tolerated, and where the cost of control measures equals the loss caused. It is desirable to start control measures before this level. This is compara ble to the height of dam built across a river. Extensive damage to the dam and the surrounding area is anticipated when flood waters rise above a certain level.

(3) Economic Threshold (ET) or Economic Treatment Threshold (ETT) represents a pest population lower than the economic injury level. It indicates the level at which the farmer has to initiate control measures. Since there will be a lapse of time between treatment and control, economic threshold is always lower than the economic injury level. This again is comparable to the spillway designed to prevent flood waters going over the dam.

Economic threshold for any crop pest is not an absolute value. Neither pest population nor crop losses are static. They are dependent on variables such as stage of development of the crop varieties, cultural practices, environment, cost of control tactics, price of produce, etc. For example threshold value is lower for a young plant than for a mature plant, since the latter can tolerate a higher pest population without adverse effect. Marketing price of produce will also influence the values. E.g. The number of brown plant hoppers a rice crop can tolerate will be higher, say, at Rs.40/- per bushel of paddy than at Rs.54/- per bushel.

Economic thresholds are obtained by assessing crop losses due to pests in simple paired - treatment experiments. Plants of one plot are allowed to be damaged by naturally occuring pest population. Pest population is assessed by an appropriate method. Plants of the other plot are protected from the pest by an appropriate pesticide, or any other control method.

The mean yields are subjected to statistical analysis. Such experiments are conducted for a minimum of three years, in as many representative regions as possible. By using these results one can calculate the average regression line for economic threshold of damage by the pests for any particular region. In subsequent years only estimates of pest intensity need be made in a

suitable sample of fields. Then by referring to the calculated regression line one can estimate the likely average yield reduction. This crop loss information is made use of in calculating crop revenue and control costs to establish economic thresholds.

(To be continued in Krushi Vol.4 No 2)

<u>පුවක් වගාව</u>

පසුගිය අවුරුදු කීපය තුළදී, පුවක් ගස් දහස් ගණනක් කපා ඇත. සමහර ප්‍රදේශවල පුවක් වගාව විනාශ මුඛයට පත්ව ඇත. මෙසේ කපන ගසක් වෙනුවට පුවක් පැලයක් සිටුවීමේ ආදර්ශය අනුගමනය නොකිරීම සහ පුවක් වැදගත් වගාවක් වශයෙන් නොසැලකීමක් නිසා මෙම තත්ත්වය උග්‍රවී ඇත. ඒ නිසා ගම්මාන වල දැනට වසර කීපයකට පෙර තිබූ පුවක් අරඹ අද දක්නට ඇත්තේ කලාතුරකිනි.

පුවක් මිල ඉහළ යාමට එක් හේතුවක් වී ඇත්තේ ගස් කපා විනාශ කිරීමය. යුධයට පෙර පුවක් අපනයනයෙන් වර්ෂයකට රු. 3,000,000 පමණ ආදායමක් ලබා ඇත. දැන් ක්‍රමයෙන් අපනයනය කරන ප්‍රමාණය අඩුවන අතර රටට විශාල ආදායම් මාර්ගයක්ද අහිමිවී ඇත්තේ අනුකම්පා විරහිතව පුවක් ගස විනාශ කර දැමීම නිසා වේ.

පුවක් මෙරට එදිනෙදා ජීවිතයේ අත්‍යාවශ්‍ය පාරිභෝගික ද්‍රව්‍යයක්ව පවතින අතර අපනයන ආර්ථික ද්‍රව්‍යයක් ලෙසද වැදගත්ය. ඒ නිසා පුවක් වගාවක් විනාශ මුඛයට භාජනය වී ඇති ප්‍රදේශවල මෙන්ම පුවක් වගාව ව්‍යාප්ති කල හැකි ප්‍රදේශවල පුවක් නැවත සිටුවීමේ ව්‍යාපාරයක් වහාම ආරම්භ කල යුතුය.

වගාවනට හානිකරන කෘමී සතුන් සහමුලින් වඳ කල නොහැකි වුවද, ඔවුන්ගේ ජනගහණය පාලනය කල යුතුය. මේ සඳහා කෘමීන් මර්දනය කිරීමට ක්‍රම කිපයක් ඒකාබද්ධ කර, ක්‍රියාත්මක කල යුතුවේ. මේ සඳහා කෘමී සතුන්ගේ ජනගහණය පවතින රටාව අවබෝධකර ගැනීම ප්‍රයෝජනවත්ය.

(1) සමතුලිත තත්වය (වර්ෂ හෝ තන්න කිපයක් මුලුල්ලේ කෘමී ජනගහණයේ සාමාන්‍ය ප්‍රමාණය)

(2) ආර්ථික වශයෙන් හානිදායක තත්වය(මේ තත්වයේදී කෘමීන් - නිසා සිදුවන හානිය ආර්ථික වශයෙන් වැදගත්වේ.) මේ සීමාවට වඩා කෘමී ජනගහණය වැඩිවීමට අනුපාතිකව සිදුවන ආර්ථික අලාභය උග්‍රවේ.

பூச்சிகளைக் கட்டுப்படுத்த ஓர் புதிய உபாயம்

பயிர்ச் செய்கைக்கு நாசம் விளைவிக்கும் பூச்சிகளை முற்றாகக் கட்டுப்படுத்த முடியாவிடினும் அவற்றின் எண்ணிக்கையைக் கட்டுப்படுத்தக்கூடியதாயுள்ளது.

இதற்காக பூச்சிகளைக் கட்டுப்படுத்தக்கூடிய பல முறைகளை ஒன்று சேர்த்து, ஓர் முறையைக் கையாளுதல் - வேண்டும். இதற்கு பூச்சிகளின் வாழ்க்கை வட்ட முறையைத் தெரிந்திருத்தல் அவசியமாகும்.

1. சமநிலை நிலை (சில வருடத்தில்/தொடர்ச்சியான - போகங்களில் காணப்பட்ட பூச்சிகளின் சாதாரண எண்ணிக்கை).
2. பொருளாதார மட்டத்தில் ஏற்படும் நஷ்டம் (இந்த முறையில் பூச்சிகளினால் ஏற்படுத்தப்படும் பொருளாதார நஷ்டம் மிக முக்கியமானது).

LEMON GRASS

THE GRASS OF MANY USES

I.M.Gunawardene
Agricultural Officer

Introduction - Lemon grass is a very hardy plant and can be grown in the dry zone areas. Lemon grass oil is obtained by distilling the leaves and shoots of lemon grass plant. After distill ing the oil - the residue - called spent grass can be used as a cattle feed, mulching material or for manufacture of paper and card boards. Lemon grass can be harvested at three month intervals and therefore regular income is possi ble.

Lemon grass oil - Lemon grass oil is an important source of citral. Lemon grass oil is used in the manufacture of perfumes, soaps, hair oils, scents. Lemon grass oil has bacterial pro perties. Ionine obtained from Citral in the lemon grass oil is used for manufacture of Syn thetic Vitamin A. It is also used as a sudori fic and also as a diuretic agent. Lemon grass oil is also an insect repellant.

Where it can be grown? Research work done at Maha Illupallama has proved that satisfactory results can be obtained by cultivation of lemon grass in the unirrigable highlands of the dry zone. The extent of such lands available in this region is about 1.8 million acres. This grass grows best on well drained soils.

Propagation - "Slips" removed from mother plants can be used as planting material. Within a period of 10 - 12 months the slip produces many more slips, ultimately becoming a clump consis ting of 80 - 100 slips.

Planting season - Planting must be done with the rains of Maha or Yala season. Planting rows should be 2 feet apart.

Harvesting : The first crop can be harvested 2-3 months after planting. Then onwards depending on rainfall you can get four to five harvests a year. During the first year yield of herbage could be about 26,000 lbs. (yielding about 63 lbs oil). In the second year about 46,000 lbs of herbage can be harvested (yielding about 93 lbs oil).

Why lemon grass? Stray cattle, buffalo, deer do not consume this grass even when the flush is tender. Therefore crop can be easily protected without fencing. During drought or due to fire, only the aerial parts of the plant suffer. The underground root stock resumes growth with the next rains. Lemon grass is resistant to pests and diseases. Because of profuse tillering, planting material is cheaply available.

As an agro-industrial crop. Lemon grass oil could be a potential foreign exchange earner for Sri Lanka. The by-product thrown away afer dis tillation (the spent grass) is useful as a cattle feed. The dung and urine from animals can be digested in a bio gas plant to obtain bio gas for oil distillation. The effluent of bio gas plant can be used as a manure for the lemon grass crop. Thus lemon grass seems to be an ideally suited crop for dairy farmers in the dry zone.

සේර වගා කිරීම

සේර දැඩි පැලෑටියකි. නියඟයට ඔරොත්තු දෙයි. වියළිකලාපයේ වගා කල හැක. සේර පැලෑටියේ කොල සහ දඬු වලින් සේර තෙල් සිඳ ගත හැක.

සුවඳ විලවුන්, සබන්, හිස ගල්වන තෙල්, සඳහා මෙන්ම කෘතිම විටමින් ඒ නිපදවීමටත් සේර තෙල් ප්‍රයෝජනවත්ය.

තෙල් සිඳීමෙන් ඉතිරිවන රොඩු ගව ආහාරයක් වශයෙන් හෝ කඩදාසි නිෂ්පාදනය සඳහා භාවිතාකළ හැක. පළමුවරට කොල කැපීමෙන් පසු මාස 3-4 කට වරක් බැගින් වර්ෂ කීපයක් තෙල් සිඳීමට කොල කැපිය හැක.

<u>සේර වගා කිරීම</u>

සේර රිකිල්ලක් සිටුවා මාස 10-12 ගත වූ විට එය රිකිලි 80-100 සහිත පඳුරක් බවට පත්වේ. එවැනි පඳුරු දහුරා සිටුවීමට රිකිලි ගත හැක. පේළි දෙකක් අතර අඩි 2 පරතරය තිබෙනසේ වර්ෂාකාලයේදී රිකිලි සිටුවන්න. පැල සිටුවා මාස 2-3 පසු පළමුවරට කොල කැපිය හැක.

<u>අස්වැන්න</u>

අක්කරයකින් අවුරුද්දකදී ලබාගත හැකි කොල ප්‍රමාණය රා: 26,000 සිට රා: 46,000 පමණ වේ. මේ ප්‍රමාණවලින් සිඳගත හැකි තෙල් ප්‍රමාණය අනුපිළිවෙලින් බෝතල් 63 සහ 93ක් වේ.

<u>சிற்றொனெல்லா பயிர்ச் செய்கை</u>

சிற்றொனெல்லா சக்தி வாய்ந்த ஓர் பயிராகும். வரட்சியைத் தாங்கக்கூடிய இதை வரண்ட வலயத்தில் பயிர் செய்யலாம். இலை, தண்டிலிருந்து சிற்றொனெல்லா எண்ணெய் பெறப்படுகின்றது. இவ்வெண்ணெய் வாசனைத்தைலம், சவர்க்காரம், நுளம்புப் புகை என்பவற்றைத் தயாரிக்கப் பாவிக்கப்படுவதுடன், செயற்கை விற்றமின் 'ஏ' உற்பத்தியாக்குவதற்கும் பிரயோசனப்படுகின்றன.

சிற்றொனெல்லா ஒரு மட்டத்தை நட்டு 10 - 12 மாதங்களின் பின் 80 - 100 மட்டங்களையுடைய புதரைப் பெறலாம். இந்த மட்டங்களைப் பிரித்து நடுகைக்கும் பாவிக்கலாம். ஆரம்ப மழையோடு இரு பாத்திகளிடையில் 2' இடைவெளியிருக்கத் தக்கதாக ஒவ்வொரு மட்டத்தை நடவும். 2 - 3 மாதங்களின் பின் முதல் முறை இலை அறுவடை செய்யலாம். அதன் பின் 3 - 4 மாதங்களுக்கு ஒரு முறையாகப் பல வருடங்களுக்குத் தொடர்ச்சியாய் இலை அறுவடை செய்யலாம்.

ABSTRACTS

Identify Sulphur Deficiency:

Soil sulphur deficiency is a rapidly spreading problem common in many regions. It too often goes unrecognized or misidentified. The result is reduced yields, Sulphur deficiency symptoms are frequently confused with symptoms of Nitrogen defi ciency. Sulphur deficiency symptoms are:

(i) Small spindly plants with short slender stalks;
(ii) retarded growth;
(iii) delayed maturity, and
(iv) light green to yellow leaves.

SOURCE : World Farming V 22 pages 36-39,41 May,1980

Animal Feed From Crop Processing Wastes:

Outstanding examples of crop processing wastes used as animal feed are oil cakes and cereal wastes. Their advantages as animal feed are

(i) low moisture content;
(ii) high protein content, good digestibility and ease of storage, handling and transport.

The new crop processing wastes currently being investigated and considered here do not have one or more of these advantages. Discussed in this study are wastes from fibre crops, furit crops, sugar crops, nuts and seeds and vegetable crops, used for canning and processing. The chemical composition of the processing wastes of these crops are given.

Source : Industry and Environment 3(1) p.6-8, Jan 80

A Multipurpose Vegetable Crop.

The drumstick (horse-radish or West Indian ben) tree is a multipurpose vegetable crop indigenous to North West India. The main use of drumstick is the consumption of the tender pods as a vegetable, but also leaves and flowers can be used as vegetables, and the oil extracted from the seed is useful for illumination and cosmetics. Drumstick gum can be used for making printing ink and all plant parts have some form of use. Drumstick is commonly propagated by cuttings and is mainly grown along fences and in homegardens. In India high-yielding cultivars (over 600 pods per tree yearly) have been selected. Plant population is about 625 trees per ha. First yield can be harvested in 8-12 months after planting. The drumstick tree is not very susceptible to diseases and pests.

Source : Economic Botany V.34(3), P.276-283, July 80

WORLD FOOD DAY

16 October 1981

Bibliography of Sri Lanka Scientific Papers

The Bibliography (2 volumes), covering the period from 1960 to 1976, is confined to the fields of Agriculture, Forestry, Fisheries and Veterinary Sciences. This includes the following publications monographs, periodical articles, leaflets, annual reports, abstracts and letters, besides some unpublished papers and reports presented at Seminars. The subject arrangement is based on the UDC (Universal Decimal Classification) system

Source : National Science Council of Sri Lanka.

Oil Seeds Seen as Fuel Alternative

Sunflower oil has proved to be suitable as a fuel for operating diesel engines. The economics of production show that, at present, oil from seed crops cost about 50 per cent more than petroleum oils.

Minor modifications to Injection units or fuel additives will be needed to ensure smooth operation. Getting oil from sunflower seed is 98 per cent efficient, using mechanical and solvent extraction techniques.

"There is no requirement for massive funds for extraction of sunflower oil in comparison with those needed to extract oil from shale."

A massive programme to produce vegetable oil for fuel purpose could be developed. Such a programme can help to generate employment opportunities (and also save foreign exchange).

Source : Agricultural News Letter & Vol.8 No.10 October, 1980 (page 5).

- කෘෂි කලාපයේ පළ කිරීම සඳහා වන කෘෂිකාර්මික ලිපි ඕනෑම පුවිසට භාරගන්නෙමු.
- කෘෂි කලාපයේ ඉංග්‍රීසි ලිපිවල සංක්ෂිප්ත අනුවාදනය වෙනුවට සම්පූර්ණ අනුවාදනයක් අවශ්‍ය නම්, ඔබේ ඉල්ලීම, කෘෂි සංස්කාරක වෙත යොමු කරන්න.
- විමසීම් එවිය යුතු ලිපිනය

  කෘෂි සංස්කාරක
  ලේඛණ විකාශන මධ්‍යස්ථානය
  අධ්‍යාපන හා පුහුණු අංශය
  කෘෂිකර්ම දෙපාර්තමේන්තුව
  පේරාදෙණිය.

Utility Of Mango Kernel

Mango kernel contains 5.6% crude protein, 13.6% other extractables, 0.8% crude fibre, 78.4% total carbohydrate and 2.4% ash. Dry mango kernels can be stored without deterioration for more than a year. In different countries, people use mango kernels for human consumption as boiled kernels, kernels pickled in oil, baked mango kernal, and kernel flour. They are a good source of starch. Starch can be extracted easiy with tannins and fats as by-products. The dried kernels with less than 10% moisture content can be used as an animal nutrient supplement. Seed oil is another by-product. It can be extracted in an expeller or by solvent process and used for making soap. The seed meal left after extraction of oil can be used as a cattle feed or manure. A mango seed decorticator able to decorticate one quintal (100 kg) of dry seed per hour has been designed, fabricated and tested in the Agricultural Engineering Department of Pantnagar University, in India.

Source : Institute of Agricultural Research, Nigeria.

Rice Bean

Rice bean is a popular pulse crop in North East India. The crop is resistant to

(i) the yellow mosaic virus disease;
(ii) Cercospora leaf spot disease, and
(iii) Bacterial leaf spot disease.

Green pods, the unripe seeds of the nearly mature pods, the mature seeds and also the leaves can be cooked in numerous ways for human consumption. After harvest, the plants are used for feeding cattle.

Source : Economic Botany Vol.34(3) P.260-263, July 80.

ගෙන්දගම් ඌනතාවය හඳුනාගන්න

සිහින් දුර්වල කඳන් ඇතිවීම වර්ධනය පමාවීම, පිපීම පමාවීම, සහ පත්‍ර ලා පැහැයෙන් යුක්තවීම ගෙන්දගම් ඌනතාවයේ ලක්ෂණයන්ය. ගෙන්දගම් ඌනතාවය නිසා ලා පැහැ පත්‍ර පළමුවෙන් - දක්නට ලැබෙන්නේ ලපටි කොටස්වලය. සෝයා, කපු, තක්කාලි, රටකජු, ගෝවා, මිරිස්, සලාද ආදී බෝගවල ගෙන්දගම් ඌනතාවය ඇතිවියහැක.

සත්වාහාර

බෝග පැසයිජේදී අපතේ යන නිවුඩු හා පමණර බෝගවල කොළ පිදීමෙන් ඉතිරිවන ද්‍රව්‍ය සත්වාහාර සඳහා සුදුසුය. මෙවැනි ආහාර විශේෂ ගුණාංග කිහිපයක් මෙසේය. (1) අඩු කෙසමකය. (2) ඩාංශ ජලකඨිනතා වලින් සාරවත් බව. (3) දිරවීමට පහසුවීම. (4) සතුන් කර කෑමීය හැකිවීම ආදියයි.

මිනිසාගේ ප්‍රයෝජනවත් බෝගයක්

ශේරාපු ඇට වලින් තෙල් ලබාගැනීමට, කොළවලින් ගන්නා මැලියම් වර්ග නිපදවීමට, කොළ මල් සහ ලපටි කරල් ව්‍යංජන පැහැසීමට අමතරව ඖෂධයක් වශයෙන්ද ප්‍රයෝජනවත් මුරුංගා ඇත්ත වශයෙන්ම බහුකාර්ය බෝගයකි. අඹු පිටුවා මාස 6-12 මුරුංගා ගසේ [illegible]. නාම රෝග වලට කොළින් බෙහෙත්කරනු ලබන මුරුංගා ගසේ කොළ ඉතාම පෝෂණදායකය.

අඹ ඇට මදයෙන් ප්‍රයෝජන ගනිමු.

වේලා ගත් අඹ ඇට මද වර්ෂයක් පමණ වකනුරු කල්තබා ගතහැක. අඹ ඇට මදයේ 5.6% මාංශෝත්පාදක ධාතු අඩංගුය. අඹ ඇට මද තම්බා, බැද හෝ පිටිකර ආහාර පිළියෙල කල හැක. සත්වාහාර වශයෙන්ද අඹ ඇට මද ප්‍රයෝජනවත්ය. අඹ ඇට මදයේ තෙල් (සබන් සෑදීමට ගතහැක) ඉවත් කර ඉතිරි වන ද්‍රව්‍ය ගව ආහාර වශයෙන් දිය හැක. පැයකට අඹ ඇට කිලෝග්‍රෑම් 100 ක් ලෙලි ගැසිය හැකි යන්ත්‍රයක් ඉන්දියාවේ නිපදවා තිබේ.

<u>වාගොල්ල තිරිඟු වගා අත්විල</u>

පී. බී. ගුණරත්න
ගොවිපල කළමනාකරු (පුහුණු)

වගාකල ප්‍රභේදය - ඒ සී 4073

වැපිරීමෙන් අස්වනු නෙලීමට කාලය දින 82

ඒ සී 4073 ප්‍රභේද ලක්ෂණ

- රෝගවලට ඔරොත්තුදෙයි.
- පඳුරු ගැසීම හොඳයි.
- කරලක බීජ සංඛ්‍යාව 12-15 පමණ.

<u>බීජ ප්‍රමාණය</u> - අක්: 10 (ව.අ.4000) - කි.ග්‍රෑම් 44

<u>ලැබුණු අස්වැන්න</u> - අක්: 10 (") - කි.ග්‍රෑම් 2800

<u>සුදුසු වගා කාලසීමාව</u>

යලට - අප්‍රේල් මුල සතියේදී වැපිරීම
(ජූනි අස්වනු නෙළීමට)

මහට - නොවැම්බර් පළමු හෝ දෙවන සතියේදී වැපිරීම.
(ජනවාරි අග අස්වනු නෙළීමට)

වාගොල්ලේ තිරිඟු වගා කරන ලද්දේ
පේළි අතර අඟල් 14 පරතරයක් සහ
පේළියේ පැල අතර අඟල් 3-4 පරතරය තබමින්.

පොහොර යෙදීම

පාදීය පොහොර (වර්ග අඩි 360^{2}) වී කිලෝග්‍රෑම් 5 1/2 සහ
යූරියා " 5 1/2.
බීජ සිටුවා සති 4 දී යූරියා " 4.
බැගින් යොදන ලදී.

පැලෑටි මේරූ අවස්ථාවේදී උස අඟල් 24 ක් විය.

மாவிதைப் பருப்பின் முக்கியத்துவம்

மாவிதைப் பருப்பில் பின்வரும் முக்கிய போசணைப் – பதார்த்தங்கள் அடங்கியுள்ளன. புரதம் 5.6%, காபோ ஐதரேற் 78.4%, கொழுப்பு 2.4%. உலர்த்தப்பட்ட பருப்பை ஒரு வருட காலம் வரை சேமித்து வைக்கலாம். இதை மாவாக்கி விலங்குணவு தயாரிக்கவும் உபயோகிக்கலாம். அவிக்கப்பட்ட அல்லது பொரிக்கப்பட்ட அல்லது மாவாக்கப் பட்ட பருப்பை மனித உணவாகப் பாவிக்கலாம். பருப்பிலி ருந்து பிரித்தெடுக்கப்படும் எண்ணெயிலும் சவர்க்காரம் செய்ய லாம்.

மாங்கொட்டையிலிருந்து பருப்பை வேறாக்கி பிரிக்கும் இயந்திரத்திலும் 1 மணித்தியாலத்தில் 100 கி.கிராம் மாங் கொட்டைகளில் பருப்பு வேறாகப் பிரிக்கலாம். இவ்வியந்திரம் இந்தியாவிலுண்டு.

'லைம் பீன்'

இந்தியாவில் சிறந்த அவரைப் பயிராகப் பிரபித்தி பெற்ற இவ் அவரை, மஞ்சள் வைரஸ் நோயை, பக்டீரியல் புள்ளி நோயை, மற்றும் சேகல்போறு நோயை எதிர்க்கும் தன்மையுடையது.

இவ் அவரையின் தண்டுகளையும், இலையையும் மாட்டுத் தீவனமாகப் பாவிக்கலாம்.

பெற்றோலுக்குப் பதிலாக காய்ச்சப்பட்ட எண்ணெய்

டீசல் இயந்திர வாகனங்களை இயக்குவதற்கு சூரிய காந்தி எண்ணெய் உகந்ததெனக் கண்டுபிடிக்கப்பட்டுள்ளது. சூரிய காந்தி எண்ணெய் டீசல் எண்ணெயை விட 50% விலை குறைவா யிருப்பினும் இதைப் பயிர் செய்து எண்ணெய் காய்ச்சுவதன்மூலம் நாட்டின் வேலையில்லாத் திண்டாட்டம் ஓரளவு பூர்த்தியாவ தோடன்றி அந்நியச் செலவாணியும் குறைக்கப்படும்.

பல காரியங்களுக்காக ஒரு மரக்கறிப் பயிர்

முருங்கை ஓர் சிறந்த ஒளடதமாகவும், மரக்கறியாக வும், எண்ணெய் பெறுவதற்கும், மற்றும் மை, ஒட்டும் பிசின்கள் தயாரிக்கவும் பயன்படுத்தப்படுகின்றது. வீட்டுத்தோட்ட வேலை களில் நடக்கூடிய இம்முருங்கையிலிருந்து, முதிர்ச்சியடைந்த ஒரு வருடத்தில் 600 காய்களைப் பெறலாம். நோய்களும், பூச் சிகளும் இதைத் தாக்குவது குறைவு.

PLANNED INTERCROPPING YIELDS HIGHER PROFITS

I.M.Gunawardene
Agricultural Officer

Intercropping involves growing together two or more crop species, to enable them to exploit the environment more advantageously. Under rainfed farming conditions, intercropping must be designed to include at least one crop that survive unfavour able weather and return an economic yield. This is a insurnace against the unpredictable weather and erratic rainfall. If the rainfall and weather conditions are good or optimum, the inter cropping system should prove to be more useful and profit able than growing a single crop.

INTERACTION BETWEEN CROP SPECIES

If the two species grown together are mutually beneficial, there is co-operation.

Competition exists when the two crops are mutually harmful, competing for water, light, nutrients and space.

Both these relationships, co-operation and competition are density dependant. At Low plant densities competition is less. Competition increa ses as the plant density increases.

Competitive ability is inherited. But the yield and competability depends on the genotype-environment interactions and management practices adopted by the farmer.

WHY INTERCROP?

Intercropping has many advantages. Some of them are:

(1) Eliminates risk of total crop failure if, rainfall is subnormal.

(2) Greater profitability if normal good weather prevails.

(3) Biological fixation of nitrogen, contributes to increased yields of one or both crops.

(4) Increased production of protein per hectare. This helps to improve nutritional status of our standard rice diet.

(5) Greater efficiency in land use and agricultural productivity.

CHOICE OF CROPS AND VARIETIES

Depending on the local agro-climatic conditions, domestic requirements and marketing facilities the crops and variety must be chosen.

In drought prone areas crops such as Meneri, Gingelly, Pigeon Pea and Horse Gram deserves careful consideration. Crop plants with different developmental rhythems offer greater risk cover.

Combinations of shallow and deep rooted crops are useful to make the best use of available soil moisture. Inter cropping system should be used as a way for increased income, upgrading human food and also to produce more livestock feed

IMPORTANCE OF PLANT TYPE

Plant types of different heights, growth duration periods, canopy growth habits, growth rates etc. are available in most crop species.

Dwarf Sorghum varieties such as IS 2941, have definite advantages for inter cropping compared to the traditional tall sorghum varieties. Among the soya bean varieties the short duration types can often be superior to the long duration types.

Competitive effects of one crop on another provide opportunities for selection of least competing crops for your inter cropping programme.

COMPETITIVE EFFECT OF THE INTER CROP ON THE MAIN CROP:

Agricultural research workers in India have observed the yield reduction in the main crop, when it is intercropped.

The table below indicates the percentage yield reduction of the main crop, when inter cropped with other crop species.

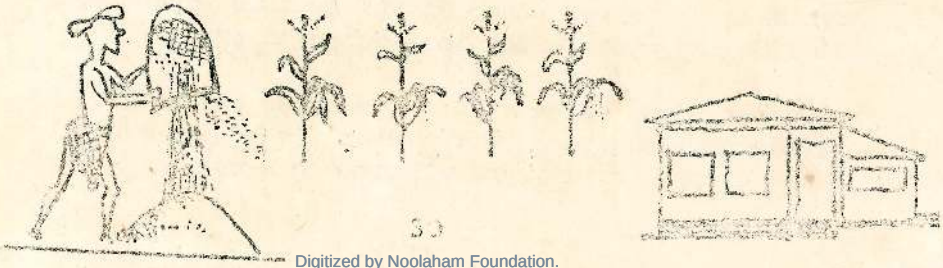
Main Crop	Inter Crop	Yield of Main Crop (Kg/Ha)	Yield reduction (%)
Sorghum	None	4631	None
Sorghum	Soybean	4078	12%
Sorghum	Ground-nut	3610	22%
Sorghum	Caster	2654	43%
Sorghum	Sunflower	1049	78%

(Reference Bulletin of IARI.RRS-Hyderabad-India-Jan.75)

Further research work has shown that the reduction in the yields of Sorghum was not significant when it was inter cropped with Soybean ground nut and Cowpea.

ADVANTAGES OF INTERCROPPING

When intercropping is planned with suitable crops that do not significantly depress yield of the main crop, the total production usually has a monetary value far greater than that could have been achieved by growing the main crop alone.



මිශ්‍ර වගා කිරීම සැලසුම් කරන්න

බෝග දෙකක් හෝ ඊට වැඩි සංඛ්‍යාවක් එකවිට ඉඩමේ වගා කිරීමෙන් වැඩි ආර්ථික ලාභ ලැබේ. අහස් දියෙන් යැපෙන ඉඩම් වල මිශ්‍ර වගාවක් ඇති කිරීමේදී තද ජල හිඟයට ඔරොත්තු දෙන බෝග වර්ගයකුත් තෝරා ගන්න. හොඳින් ජලය ලැබෙන ඉඩම් වලදමිශ්‍ර බෝග වගාකිරීමෙන් යහපත් ප්‍රථිඵල ලැබේ.

බෝග දෙකක් එකම ඉඩමේ එකවර වගා කරන විට බිම් ඒකකයට සුදුසු පැල සංඛ්‍යාව සහ වගා කල යුතු බෝග සහ ප්‍රභේද කල්පනාකාරීව තෝරාගත යුතුය. බෝග දෙක අතර, ජලය, ඉඩ කඩ, හිරු එළිය සහ පෝෂණ ද්‍රව්‍ය සඳහා හදබල තරඟයක් ඇති නොවිය යුතුය.

එක් බෝගයකින් අනෙක් බෝගයට ප්‍රයෝජනයක් ලැබෙන විට සහයෝගිතාවයක් ඇත. එක බෝගයක් නිසා අනික් බෝගය පීඩාවට පත්වුවොත් එවිට තරඟයක් ඇත. වවන බෝග වලින් යහපත් අස්වනු ලැබීමට ගොවියා, භූමිය, පැලෑටි වල අවශ්‍යතා සමග්ට සැපයිය හැකි සාධක සප්පායම් ප්‍රමාණය අනුව බෝග තෝරාගත යුතුය.

திட்டமிடப்பட்ட கலப்பு பயிர்ச் செய்கையினுல் அதிக இலாபம் பெறலாம்

இரண்டு/மூன்று பயிர்களை திட்டமிட்டு ஒரே வயலில் ஒரே காலத்தில் பயிர் செய்யும்போது அதிக இலாபம் பெறலாமென நம்பப்படுகின்றது. இரண்டு பயிரை நடும் போது ஒரு பயிரினுல் மற்றப் பயிருக்கு நன்மை ஏற்படும் விதத்தில் இரண்டு பயிரையும் தெரிந்து கொள்ளல் வேண்டும்.

இல்லையெனில் ஒரு பயிர் வளர்ந்தும், மற்ற பயிர் தேவையான நீர், இட வசதி, சூரிய ஒளி, போசணைப் பதார்த்தங்கள் பெறும் பொருட்டு மற்றப் பயிருடன் போட்டி போடக்கூடிய நிலை ஏற்படும்.

அத்துடன் போட்டியிடும் தரமோ/ஒத்துழைத்து வளரும் தன்மையோ ஒரு குறிப்பிட்ட அளவு நிலப்பரப்பில் காணப்படும் தாவரங்களின் எண்ணிக்கையையும் பொறுத்ததாகும். எனவே பயிரைத் தெரிவு செய்யும்போது கால நிலைக்கேற்றவாறு பயிர் வர்க்கங்களைத் தெரிவு செய்வதில் கவனம் செலுத்துதல் வேண்டும்.

GROW AND USE AZOLLA

P.A. Tennakoon
Agricultural Officer

Azolla is water fern. It can fix atmospheric nitrogen. Therefore Azolla should be grown in paddy fields and incoporated into the soil to enrich the soil.

Nutritional requirements of Azolla:

Studies done at International Rice Research Institute shows that :

(1) Deficiency of Iron, Phosphorus and Calcium affects growth of Azolla. Deficiency of these elements can :

* retard growth of Azolla
* lowers rate of nitrogen fixation

(2) Azolla tolerates Potassium and Magnesium deficiency.

Field experiment with Azolla:

In this experiment 1.25 Kg (Fresh weight of Azolla innoculum was added to experimental plots of 25 square meter size.

Results of the experiment: Table A1

Treatment	Grain Yields Tons/Ha.
None ...	1.48
Mid-season puddling	2.36
Azolla inoculation	0.85
Azolla inoculation and mid-season puddling	2.15
Phosphorus fertilization	1.86
Phosphorus fertilization and Azolla inoculation	2.02
Phosphorus addition, Azolla inoculation and mid-season puddling	2.35

Observations:

1. Addition of 30 Kg.Phosphorus/ha.stimulated Azolla growth.
2. Ih Phosphorus treated plots the surface coverage of Azolla was as follows:

	22 days later	40 days later
Without Phosphorus	62%	76%
With Phosphorus	85%	96%

(3) On 41st day after transplanting Azolla was incorporated in the soil.

Incorporation of Azolla in the soil:

1. Drain water from the plots
2. Incorporate Azolla by using a hand weeder between rows of rice plants.

Azolla production:

80-120 Kg.Azolla (Fresh weight) is adequate for one hectare.In about 25 days fresh weight of Azolla will be about 15 t/ha.(fresh weight) 30-40 Kg.N/Ha.

Therefore Azolla can be grown in paddy fields as well as in swamps and canals near paddy fields and incorporated into the soil.

Field experiments with Azolla in BG.11-11

A preliminary field experiment was conducted using Azolla on small plots (1.2 m. x 1.2 m) with rice(Variety BG.11.11). The plots were inoculated with Azolla 3 weeks before transplanting followed by a second inoculation one week after transplanting. 150 g.fresh weight of Azolla was used on each plot. Azolla treated plots gave as high yield as plots which received 88 Kg.N/Ha.(Table A2).

TABLEA2: Effect of Azolla on Yield of rice:

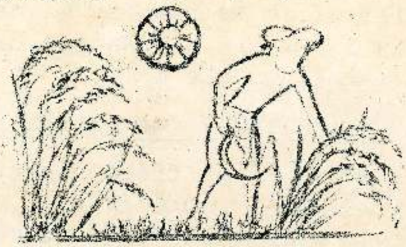
Treatment		Grain Yield Index
Azolla	Treatment	
No	None	100
Yes	None	132
Yes	P,K,	232
No	PK, and 88 Kg.N /Ha	195

ඇසොලා

ඇසොලා ජලයේ පාවෙමින් වැඩෙන මීමත කුලයට අයත් ඉතා කුඩා ශාකයකි. ඇසොලා ශාකය ආශ්‍රිතව වැඩෙන ඇල්ගී ශාකයන් මගින් වායුගෝලීය පිටාත්තක තිර කරනු ලැබේ. මේ හේතුව නිසා ඇසොලා පසට (හෝ මඩට) යටපත් කල විට ඒවා දිරාපත්වීම නිසා පසට පිටාත්තක එකතුවේ.

ගොයම් පැල පේලියට සිටුවා හෝ (වපුරා) ජලය බඳින විට ලියැද්දේ ජලය මත ඇසොලා වපුරන්න. දින 20-30 පමණ ගත වූ විට ලියැද්දේ ජලය ඇසොලා වලින් වැසියයි. එවිට ජලය කපාහැර වල් නෙලන යන්ත්‍රයක් ගොයම් පැල පේලි අතර යොදා, ඇසොලා මඩට මිශ්‍ර-කරන්න.

මෙසේ ඇසොලා මඩට යට කිරීමෙන් ලැබෙන - පිටාත්තක ප්‍රමාණය කුඹුරු අක්කරයකට යුරියා පොහොර රාත්:40 ක් පමණ යෙදීමකට සමානවේ. ඇසොලා යෙදීමෙන් ධාන්‍ය අස්වැන්න 20-30% පමණ ප්‍රමාණයකින් වැඩි වන්නේය.



அசோலா

நீரில் மிதந்து வளரும் அசோலா பன்னத் தாவரக் குலத்தைச் சேர்ந்தது. வாயுவிலிருக்கும் நைதரசனை வேறு பயிர்கள் உபயோகிக்கக்கூடிய நீர் நிலைக்கு மாற்றி - சேமித்து வைக்கும் விசேடத் தன்மை இந்த அல்காவாகிய அசோலாவுக்கு உண்டு. அசோலா வெகு சீக்கிரமாய் - வளர்ந்து இனப் பெருகும். இதை மண்ணுக்குள் தாழ்த்துவதன் மூலம் மண்ணுக்கு நைதரசன் சேர்க்கப்படும்.

வயலில் நாற்று நட்ட பின், நீர் கட்டும் போது அசோலாவை விதைக்கவும். அசோலா செழித்து வளர்ந்த பின் வயலின் நீரை வெளியேற்றி களைகட்டும் இயந்திரத்தை வரிசைக்கிடையில் இட்டு மண்ணுக்குள் தாழ்த்தவும். அசோலா இடுவதால் நெற் பயிர்ச் செய்கையில் 20-35% விளைவை கூட்டலாம்.

RICE SRRAW AS A FERTILIZER MATERIAL*

T.M.Gunawardene

INTRODUCTION

About 800,000 hectares of rice is cultivated annually in Sri Lanka. Assuming that,

- Average rice yield is 2.9 t/ha,and
- Grain : straw ratio is 1:1.

annual rice straw production will be about 2.3 million tons. At current fertilizer prices, the amount of nitrogen, phosphorus and potassium con tained in this amount of straw worth about Rs. 625 million. (Unsubsidised fertilizer rice).

Numerous uses are made of rice straw; some of them are:

(1) Animal feed to feed cattle and buffaloes.
(2) Mulching material-for ginger, turmeric yams.
(3) Industrial raw materials-paper manufac ture.
(4) Thatching material-houses,sheds.
(5) Fertilizer-incorporation into paddy soil.

SRRAW AS A FERTILIZER

Rice straw is useful as a fertilizer material because:

(a) It contains all the nutrients required for the growth of the rice plant.

(b) It is particularly rich in nitrogen, potassium and silicon.

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*Adopted from a report by Dr. S.L.Amarasiri (Research Officer) and Mr. K. Wickramasinghe (Research Officer), Central Agricultural Research Institute, Gannoruwa, Peradeniya.

COMPOSITION OF RICE STRAW (APPROXIMATE)

Nutrient element	Amount of nutrients in Kg -100 Kg(straw)	4 tons straw
Nitrogen	.60	24
Phosphorus	.08	3
Potassium	1.80	72
Silicon	6.00	240

METHODS OF USING STRAW AS A MANURE:

Rice straw can be:

(a) Applied to the soil and ploughed in,
(b) Burnt and the ash can be broadcast on the soil and ploughed in, or
(c) Composted. Rice straw compost is bulky. Therefore, transporting and broadcasting it in the field may be tedious and expensive.

ADVANTAGES AND DISADVANTAGES

If straw is directly applied to and the soil, tillage can be difficult because straw may get entangled with the plough.

During decomposition fresh straw liberates gases and organic acids that can be harmful to the young rice plants. (Establish the next rice crop only after the applied straw has decomposed adequately.

If the harvest is threshed in the liyaddas by using a portable whacking frame or pedal thresher, straw can be left in the field, eliminating need for its transport

Some farmers return fresh straw to the rice field, plough it in and get good results. But this method may not be suitable for general use throughout Sri Lanka.

THE HEAP METHOD:

A method successfully used by some farmers in Kegalle District is described below:

* Soon after threshing straw is returned to the liyaddas and heaped (base of the heap is about 4-5 square meters and the height is about 4-5 meters.

* Rice is grown in the rest of the liyadda in the usual manner.

* The straw heap gets moistened from irriga tion water in the liyadda as well as rain.

* Straw is well decomposed when the rice crop is about to be harvested.

* After harvesting the rice crop the decom posed straw is uniformly broadcast in liyadda and incoporated into the soil by ploughing.

Often straw cannot be stored at the threshing floor until the field is ploughed. Therefore the farmer may have to transport the straw back to the field soon after threshing. Ploughing will take place later.

SOME USEFUL SUGGESTIONS:

* You can reduce the amount of straw to be hand led by leaving about 15cm stubble at harvesting stage. This helps to reduce the size of the heap too.

* As potassium is leached during decomposition, the tendency is for the soil in the vicinity of the heap to be enriched with potassium. There fore, the heap should be made at different spots each season.

* The heap should be made away from the bunds to prevent invasion by rats.

* Straw heaps are not recommended in fields that do not have standing water during the growth period of the rice crop as this condition may lead to requirement of a longer time for decom position.

ADVANTAGES OF RICE STRAW APPLICATION

- Plant nutrients are added to the soil.

- The organic matter content of the soil is increased.

* Amount of fertilizer to be added can be reduced.

VERY IMPORTANT:

* If you are growing rice in the:

  - Low country dry zone
  - Intermediate zone, or
  - Mid country wet zone.

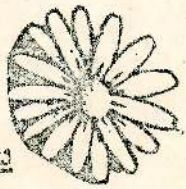
you need not add any muriate of potash to your rice crop, if all the straw removed from the field is returned to the liyaddas.

TRENDS FOR THE FUTURE:

The heap method of composting rice straw in the liyaddas is being tried by several farmers at present. Their experiences should be shared with those farmers who have not tried this method. This method deserves to be adopted on a much wider scale than at present.

CONCLUSIONS

Fertilizing rice fields with rice straw helps to increase rice yield. Straw is a valuable plant nutrient carrier and therefore must be used to the maximum advantage. The amount of rice grain harvested depends on the amountof plant nutrients available to the rice crop. Therefore,for farmers in particular, and for the nation as a whole, utilization of rice straw to the maximum advantage is very important.



නිගමනය

- ජනතාවගේ ආහාර අවශ්‍යතා සපුරාලීමටත්, නිෂ්පාදන ද්‍රව්‍ය අලෙවියෙන් විදේශ විනිමය ඉපැයීමටත්, ජනිය මාංශ ඇතිකිරීමටත් කෘෂිකාර්මික නිෂ්පාදන ප්‍රමාණයන් වැඩි දියුණු කළයුතුය.
- කිවැරදි ක්‍රම සහ ක්‍රියාමාර්ග භාවිතය, කෘෂිකර්ම සංවර්ධන ඉලක්ක සපුරාගැනුමට ප්‍රයෝජනවත්වේ.
- කෘෂිකර්ම සංවර්ධන වේගය, වැඩිකිරීම හෝ එම වැඩිකිරීම සඳහා උපකාරීවීම අපේ යුතුකමය.
- ජනතාවගේ අපේක්ෂා ප්‍රමාණයට සරිලන තරමට සහ වැඩිවන ජනගහනයේ අවශ්‍යතාවයනටද සරිලන තරමට, නිෂ්පාදනය වැඩි දියුණු කල යුතුයි.
- කිරිලෝපු තටුව තොනැවති ඉදිරියටම යයි. ඒ ගමනඩ සමානව ජනතා අවශ්‍යතාවයන්ද ඉදිරියටම යයි. එම අවශ්‍යතා ප්‍රවේශ-යට වඩා වැඩි ප්‍රවේගයකින් ආහාර නිෂ්පාදනය දියුණු විය යුතුය වැඩි විය යුතුය.

ගොයම් පිදුරු පොහොරක් හැටියට

වී වගා කල කුඹුරකින් ලැබෙන පිදුරු ප්‍රමාණය හෙක්ටාර් 1ට ටොන් 2.9 පමණවේ. පිදුරුවල ගොයමට අවශ්‍ය මූලද්‍රව්‍ය වන ජීවානීතක ප්‍රභාෂ ද සහ යවක්ෂාර අඩංගුය. මෙම මූල ද්‍රව්‍ය ලබාගැනීමට වැයවන මුදල අනුව අවුරුද්දකදී මෙරටනිපදවෙන පිදුරුවල " පොහොරමය වටිනාකම" රු: දසලක්ෂ 625 පමණ වේ. එහෙයින් පිදුරු අපතේ නොදමා ලියදිවලට යොදීම සුදුසුය. කෑගල්ල දිස්ත්‍රික්කයේ සමහර ගොවීහු අස්වනු කපා පාගා - ගැනීමෙන් පසු එම පිදුරු ලියදි මැද (වර්ග මීටර් 4-5 පමණ බිම් ප්‍රමාණයක් වැසෙන සේ) ගොඩ කරති. ගොඩක උස මීටර් 4 පමණ වේ. ලියැද්දේ ඉතිරි කොටස ඊසා වගා කර එම වගාවේ අස්වනු කපාගැනීමෙන් පසු - ගොඩේ දිරාපත්වූ පිදුරු ලියැදිවල වපුරා ඊසා වී, වගා කරති. ඊළඟ වගාවේ වෙනත් ලියද්දක හෝ ලියැද්දේ - වෙනත් තැනක පිදුරු ගොඩ කරති. ගොඩම වැවෙන කාලයේ ලියැදිවල ජලය බැඳ තැබිය හැකි කුඹුරුවලට මේ ක්‍රමය සුදුසුය.

பசளையாக நெல் வைக்கோல்

நெற் பயிர்ச் செய்கை பண்ணப்பட்ட 1 ஹெக்டயர் ஏக்கர் வயலிலிருந்து 2.9 தொன் வைக்கோலைப் பெறலாம். இவ்வைக்கோலில் நெற் பயிருக்குத் தேவையான போசணைப் பதார்த்தங்களான நைதரசன், பொஸ்பரஸ், பொட்டாசியம் உள்ளன. இப்போஷணைப்படி, ஒரு வருடத்தில் வயல்களிலிருந்து பெறப்படும் வைக்கோலில், "வைக்கோல் பசளையின் போசணைப் பெறுமானம்" 625 கோடி ரூபாவாகும். எனவே அறுவடையின் பின் வைக்கோலைத் திரும்பவும் வயலுக்கிடுவது விரும்பத்தக்கது.

கேகாலை மாவட்ட விவசாயிகள் நெல்லை மிதித்த முடிந்தபின் வைக்கோலை, அதே வயலின் நடுப் பகுதியில் 4 - 5 சதுர மீற்றர் பரப்பும், 4 மீற்றர் அளவு உயரமான குவியல்களை அமைத்து நொதியவிடுவர். மீதி வயலை பண்படுத்தி நெற் செய்கை பண்ணுவர். அறுவடையின் பின் அடுத்த நெற் செய்கைக்கு தயார் செய்யும் போது அழிக்கப்பட்ட வைக்கோல் நொதித்த வயலுக்கு சேர்க்கக் கூடிய நிலையிலிருக்கும்.

A cross between M.I.2 chilli variety and Tobasco (Kochchi) has shown resistance to the chilli leaf curl complex. Further investigations are being done at the R.R.S. Maha Illupallama to determine suit ability of this variety before being released for long scale cultivation.

Thifanox controls Mung Bean Yellow Mossaic Virus

Thifanox (a new systemic insecticide) controls the Mung Bean Yellow Mossaic Virus. It controls White fly and leaf eating beetles as well. This chemical also promotes the growth of the plant.

News about Green Gram

Two selections of green gram recommended to the National Seed Committee for release are EG 3X M12 12F and selection 77-262. Both varieties are high yields.

EG
* is a Philippine variety
* it has better grain quality than M.I.4
* it has a wider canopy (thus can smother weeds)
* is more tolerant of Mung Bean Yellow Mosaic Virus.

Mung Bean Yellow Virus Disease

The variety 77-262 is susceptible to this disease but this disease can be avoided by adjusting time of planting and also by clean cultivation.

කොළ හැකිලීමේ රෝගයට ඔරොත්තුදෙන මිරිස් වර්ගයක්

මහ ඉලුප්පල්ලම පර්යේෂණ මධ්‍යස්ථානයේදී, කොළ හැකිලීමේ රෝගයට ඔරොත්තුදෙන මිරිස් වර්ගයක් නිපදවා තිබේ.

මුං කහවන්වීමේ වයිරස් රෝග මර්දනය

සංස්ථානික කෘමිනාශකයක් වන තිපැනොක්ස් මුං වගාවට ඉසීමෙන් වයිරස් රෝග කාරකයාවන සුදු මැස්සා මර්දනය කල හැක. මෙම කෘමි නාශකය ඉසීමෙන් කොල කන කුරුමිනියන් ද මර්දනයවේ.

මුං ඇට ප්‍රභේද දෙකක්

වැඩි අස්වනු ගෙනදීමේ හැකියාව ඇති මුං ඇට - ප්‍රභේද දෙකක් මෑතකදී වගාකිරීම සඳහා නිර්දේශ කිරීම සඳහා කටයුතුකරනු ලැබේ.

මුං කහවන්වීමේ වයිරස් රෝගය

77-262 නමැති ප්‍රභේදය මෙම රෝගයට ඔරොත්තු දෙයි. සුදුසු කාලයේදී වගා කිරීමෙනුත් වගාබිම පිරිසිදුව තබාගැනීමෙනුත්, මෙම රෝගය වලක්වා ගත හැක.

இலை சுருள் நோயை எதிர்க்கும் ஓர் மிளகாய் வர்க்கம்

மகா இலுப்பள்ளம ஆராய்ச்சி நிலையத்தில் இலைச் சுருள் நோயை எதிர்க்கும் ஓர் புதிய மிளகாய் வர்க்கம் கண்டுபிடிக்கப்பட்டுள்ளது.

பாசிப் பயறில் ஏற்படும் மஞ்சள் வைரஸ் நோய்த் தடுப்பு

கூட்டுத்தாபனத் தயாரிப்பான திபநொக்ஸ் பூச்சி நாசினி பயறில் ஏற்படும் மஞ்சள் வைரஸ் நோய்க் காவியான வெண் ஈயை கட்டுப்படுத்துகின்றது. அத்தோடு — இதைப் பயிருக்கு விசிறுவதனுல் பச்சை மஞ்சள் வண்டுகளும் கட்டுப்படுத்தப்படுகின்றன.

பாசிப் பயறு இரண்டு வர்க்கங்கள்

அதிக விளைவு தரும் இரண்டு பாசிப் பயறு வர்க்கங்களை பயிர்ச் செய்கைக்கு சிபாரிசு செய்யும்பொருட்டு நடவடிக்கைகள் எடுக்கப்பட்டுள்ளன.

CARE OF BABY PIGS

About 25% of piglets farrowed do not reach market weight and many die soon after birth. High piglet mortality requires attention. Several adverse conditions and stresses at birth make baby pigs prone to disease.

In the new born pigling the liver cannot convert fat or protein into carbohydrate (glucose) during the first few days of life. If they dont get this source of energy from sow's milk (Colostrum) the level of glucose in blood falls very low (hypo glycaemia) leading to weakness and death. The sow's first milk is rich in antibiotics. The baby pigs intestine can absorb them directly during the first few hours after birth but this ability declines rapidly and is lost after 24 hours. It is essential that the new born pig should get copious amount of cow's milk in the first hour of its life. Also the baby pig's body mechanism for conserving or dissipation of heat is well developed only after 20 days age.

Careful nursing and protection are therefore very important for ensuring the health of piglets. The condition of the sow profoundly influences the health of piglets. Sows with health problems would give a bad start in life to the baby pig and thus be responsible for the early mortality. Therefore the sows must be well nourished, and healthy to reduce mortality of baby pigs.

Source: Asian Livestock

Vol.III No.6 June,1978 P.4.

ඌරු පැටව් රැකබලා ගැනීම

අලුත උපන් ඌරු පැටවකුට දින කීපයක් ගතවන තුරු ආහාරයෙන් සරල කාබෝහයිඩ්රේට් (විශේෂයෙන් ග්ලූකෝස්) නිපදවා ගත නොහැක. එහායින් ඊරියගේ කිරෙන් ලැබෙන ග්ලූකෝස් ප්‍රමාණය අඩුවුවහොත් රක්ත හීනතාව රෝගය වැළඳේ. ඉපදී පැය 24ක් ගතවනතුරු මවු කිරෙන් ලැබෙන රෝගවලට ඔරොත්තු දෙන ද්‍රවය ඒ අයුරින්ම ශරීරයට උරාගැනීමේ හැකියාව පවතින නමුත් එම හැකියාව ඉන්පසු නැතිවේ. එහෙයින් ඉපදුනු විගස පැටවාට යහමින් මුල් කිරි උරා බීමට ඉඩ සැලසිය යුතුයි.

පැටවාට හොඳින් කිරිදීමට ඊරියකට හැකිවන්නේ ඇය සෞඛ්‍ය සම්පන්නව සිටියොත් පමණි. එහෙයින් ගැබ්බර ඊරියන් නිරෝගිව - තබා ගැනීමත්, ඔවුන්ට පෝෂ්‍යදායක ආහාර ප්‍රමාණවත්ව සැපයීමටත්, කුඩා ඌරු පැටවුන් නිරෝගිව ඇති දැඩි කර ගැනීමට උපකාරවේ.

பன்றிக் குட்டிகளைப் பராமரித்தல்

பிறந்த பன்றிக் குட்டிகளுக்கு காபோஹைதரேற்றிலிருந்து குளுக்கோஸ் பெறக்கூடிய ஜீரண சக்தியில்லாமையினால் தாய்ப் பன்றியின் பாலிலிருந்து நேரடியாக குளுக்கோஸைப் பெறும். இக் குளுக்கோஸ் பிரமாணம் குறையுமிடத்துக் குருதிச் சோகை நோயுண்டாகும். பன்றிக் குட்டி பிறந்தவுடன் 24 மணித்தியாலத்துக்குள் கூடியளவு தாய்ப் பாலை அதாவது கடும்புப் பாலை குடிக்கப் பண்ணுதல் - வேண்டும். ஏனெனில் இதில் நோயெதிர்க்கும் தன்மையும், குடலுக்குள் நேரடியாக உறிஞ்சப்படக்கூடிய தன்மையும் - உண்டு. இது 24 மணித்தியாலங்களுக்கு மட்டுமே பாலிலிருக்கும்.

குட்டிகளுக்கு நல்ல முறையில் பாலூட்ட தாய்ப் பன்றி நல்ல ஆரோக்கிய நிலையிலிருக்க வேண்டும். இவ் ஆரோக்கிய நிலை பன்றி கருப்பட்ட பின் போஷாக்குள்ள உணவை அளவோடு கொடுத்து நல்ல முறையில் பராமரிப்பதன் மூலம் அளிக்கலாம். இப்படிச் செய்வதால் பன்றிக் குட்டிகளையும் நோயின்றி வளர்க்கலாம்.

IMPROVING ROUGHAGE QUALITY

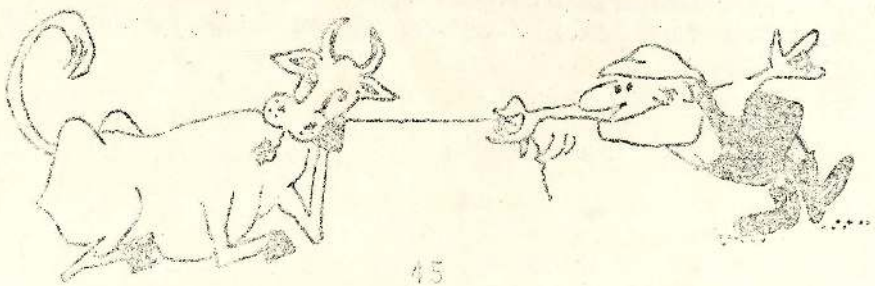
The quality of cereal straw can be made more acceptable and nutritious as a livestock feed. Rough age treated with U M mixture, can be given to rumi nants over five months age. The animals show higher intake of roughage to treated. This prac tice is of great value when fodder is scarce.

A farmer having four heads of cattle or buffaloes would need about 30 kg of treated cereal straw daily. Treated cereal straw can be stored in bales of any convenient size. Baling will save storage space. Hand operated baling presses that are effi cient, inexpensive and easy to operate have been fabricated in India. Growing calves, fed solely on Urea-molasses treated low protein roughage (eg. cereal straw) were able to derive sufficient nutri ents to maintain their body weight

U + M mixture treatment

For a small scale feeding trial, use paddy straw 100 kg, urea 1.5 kg, molasses eight kg. Dissolve urea in four litres water, mix with molassen adding more water if mixture is viscous. Spread the straw evenly on non-pervious floor. Sprinkle the urea molasses mixture over it and turn frequently with a wooden fork. During dry weather the moisture evapo rates rapidly and the straw can be pressed soon after into 25 kg bales.

Source-Asian Livestock Vol.III No.7 July,1978. P4.



ගව ආහාරයට - සුපිරි පිදුරු

ගොයම් පිදුරු කිලෝග්‍රෑම් 100කට යූරියා කිලෝග්‍රෑම් 1.5ක් සහ මොලෑසස් (සීනි නිපදවීමේදී ඉතිරිවන පැණි) වතුර ලීටර් 4ක දියකර ඉතා හොඳින් මිශ්‍රකර කඩා - ගවයන්ට කෑමට දිය හැක. අමු - තණකොළ හිඟවන වියළි කාලවලදී මෙසේ සකස්කල පිදුරු මාස 5 ට වැඩි වයස් වසු පැටවුන්ට ආහාර සඳහා සුදුසුබව ඉන්දියාවෙන් වාර්තා වේ. මෙසේ සකස්කල පිදුරු මිටි බැඳීමට අතින් ක්‍රියාකරවන යන්ත්‍ර ඉන්දියාවේ ඇත. පිදුරු සහ යූරියා උක් පැණි මිශ්‍රණය ඉතා හොඳින් ඒකාකාරව මිශ්‍රකිරීම අත්‍යාවශ්‍ය. (ඉතා හොඳින් මිශ්‍ර නොකල හොත් වැඩිපුර යූරියා ආමාශගත වූ ගවයන්ට බලවත් හානි සිදුවිය හැක).

மாட்டுத் தீவனமாக உத்தமான வைக்கோல்

யூரியா 1.5 கி.கிராமை 4 லீற்றர் மொலாச-சில் (சீனி உற்பத்தியின் பின் மிகுதியாகும் சக்கை) கரைத்து இக்கரைசலை 100 கி.கிராம் வைக்கோலுடன் நன்றாய்க் கலந்து மாட்டுக்குத் தீவனமாகக் கொடுக்கலாம். வரட்சி காலத்தில் பசுந் தீவனத்துக்கு ஏற்படும் தட்டுப்பாட்டினைத் இம்முறையில் தயாரிக்கப்பட்ட வைக்கோலைக் கொடுப்பதன் மூலம் தவிர்க்கலாம். வைக்கோலுக்கு யூரியா, மொலாசஸ் கலக்கப்படும்போது ஒரே சீரான முறையில் கலக்கப்படல் வேண்டும். இல்லாவிடில் யூரியா மாட்டின் செமிபாட்டுத் தொகுதிக்கு பலத்த சேதத்தை ஏற்படுத்தும்.

இவ்வைக்கோல் கலவையை 5 மாதத்துக்கு மேற்பட்ட கன்றுகளுக்கும் ஊட்டலாமென இந்தியாவில் நடத்தப்பட்ட பரிசோதனைகள் கூறுகின்றன. இவ்வைக்கோலைக்-கட்டுக்களாயக் கட்டி சேமிக்க விசேஷ யந்திரம் இந்தியாவிலுண்டு.

FAO - WORLD FOOD DAY - 16TH OCTOBER

I.M. Gunawardene
Agricultural Officer

An Annual World Food Day has been established by the Food & Agricultural Organization (FAO) of the United Nations. The World Food Day will be observed for the first time on 16th October, 1981. and will be celebrated every year thereafter.

What is FAO?

FAO is a Co-operative Organization of 147 nations that have pledged to:

* raise levels of nutrition and standards of living of the people under their jurisdiction
* secure improvement of the production and distribution of all food and agricultural products
* improve the conditions of the rural populations; and thus contribute to an expanding world economy and ensure humanity's freedom from hunger.

Why talk about food?

* Out of more than 4000 million people living in the world today nearly 500 million are seriously malnourished. Consequences of malnourishment are:
  - human misery and suffering
  - chronic illnesses, and
  - premature death
* In the far east region alone, Vitamin A deficiency blinds over 100,000 children every year.

Why food problems exist? There are several reasons for food shortage and under-nutrition. Some of them are:

* inadequate food production
* poverty (lack of money to buy food)
* ignorance of the importance of consuming a balanced diet
* reduced yields due to drought, floods or poor management wastages losses due to pests diseases poor processing and stor age methods.

What should be done? We should make a strong resolution to increase food production and use our resources efficiently to produce more food. Our farmlands the rivers and the seas remain to be exploited more efficiently.

We should adopt better irrigation methods and cropping patterns, grow suitable high yielding crop varieties and follow good management practices.

We can improve productivity of farm animals by using better breeding, feeding, and management prac tices.

We should train and guide farmers to adopt improved farming practices.

Harvesting, processing, storage of produced food must be carefully done to avoid losses interms of both quality and quantity.

We should produce enough food to meet the food needs of the nation.

Co-operative efforts are needed:

Increasing food production calls for Co-oper ation from people involved in varous aspects of agricultural production. As many farmers as possi ble should be provided with knowledge, skills, materials incentives, motivation and guid ance.

History has made it evident,that no nation can achieve progress economically, socially or politi cally - if many of its citizens do not have enough to eat. National progress and prosperity will be impossible to achieve as long as there are large numbers of people who can neither produce nor buy adequate food for their needs.

The significance of the World Food Day

"World Food Day is the opportunity for all those concerned about world hunger to renew their commitment and to take vigorous action."

Edovard Sauma
DIRECTOR GENERAL FAO

The World Food Day is a good opportunity for us to remind ourselves that :

* In 1974, the World Food Conference set a 4% target for average annual increase in the food and agricultural production of the developing countries. But the rate of increase actually achieved was barely 3% a year.
* In 58 nations increase in food production was lower than their increase in population. This situation was further exacerbated by increases in the demand for food by those with rising incomes.
* We should deliberately probe the food problems with our colleagues (and farmers to stimulate and activate their responses to jointly contribute our share to overcome poverty and food shortages in our communities.
* We should think kindly of those, who sacrifice their energy, time and efforts to regularly supply foood commodities to the markets, from where we purchase them.

◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆

Action has been taken to take the message of the "World Food Day" to the people. One approach in this strategy was the Puppet Show exhibited at "Esala Mela" in Kandy held at the Bogambara Grounds from 6.8.1981 to 15.8.1981.

It is proposed to organize debated seminars, field days and many other activities based on the theme of food. Information on these activities will appear in 'Krushi" Vol.4 No.2.

Events on the World Food Day

Special radio (and television) programmes will be bradcast. The news papers will carry feature articles and perhaps supplements. There will be public announcements, special programmes, debates rallies, seminars and field days.

We should actively participate in these programmes. Lest us resolve positively, firmly and willingly to support the programmes designed to eliminate hunger and poverty from our society.

ලෝක ආහාර දිනය

1981 ඔක්තෝබර් මස 16 වන දිනය ලෝක ආහාර දිනය ලෙස සම්මත කර තිබේ.

මානව සමාජයෙන් කුසගින්න මැදපෝෂණය ආහාර හිඟය ඉවත් කරලීමට කෘෂිකාර්මික නිෂ්පාදනය වැඩි දියුණු කිරීම සඳහා, ජනතාවගේ අවධානය ප්‍රබල ලෙස යොමු කිරීමට විශේෂ උත්සව, සම්මන්ත්‍රණ, ගුවන් විදුලි වැඩ සටහන් එදින පවත්වනු ලැබේ.

ඔබේ පවුලේ, සමාජයේ සහ රටේ ආහාර ප්‍රශ්නය ගැන සිතීමත් සාකච්ඡා කිරීමෙන් සහ ඵලදායක ක්‍රියාමාර්ග දියත් කිරීමෙන්, ලෝක ආහාර දිනයට ඔබත් හවුල්වන්න.

කවර පුද්ගලයකුට වුවත්, විශ්වාසදායකවූ, ස්ථිරයාරවූ, දියුණුවක් ලහාකර ගතහැකි එකම මාර්ගය ඔහුගේ

- ආත්ම විශ්වාසය
- ආත්ම ශක්තිය
- ආත්මොපකාරය

තුලින් ආරම්භ වන්නේය.