

Krishi Vigyan Kendra, Tindivanam
Success Stories / Case studies - Year: 2016-2017

1. Title of the Success Story : Vermicompost - A profitable enterprise

Details of Success Story :

1. Background

Mr. Jayakanthan is a small farmer owning about 4 acres of land and 4 numbers of cows. Mr. Jayakanthan has a big family he is living with his mother, wife and three children. Due to his family situation he could not able continue his higher studies. Hence, after completing his schooling he was joint as a labour in a granite company and struggled a lot to earn sufficient money to run his family. About 4 year ago, Mr. Jayakanthan came to know about vermicomposting from the his neighbor.

2. Intervention Process

After heard about the vermicompost, Mr. Jayakanthan approached Krishi Vigyan Kendra at Tindivanam during 2013. KVK advised to attend the training programmes on vermi compost. Based on the knowledge gained through KVK training programmes he tried Vermicomposting in open ground under tree shade by using silpaulin bag. For this composting method he collected his own field's earth worms and used cow dung and farm waste. He harvested about one ton of vermin compost in 45 days and sold for Rs. 7000/- which gave a great satisfaction to Jayakanthan.

3. Intervention Technology:

The technical backstopping was provided by the experts of the KVK. Jayakanthan continuously attended the training programmes at KVK and properly learnt about proper selection of worms, selection of farm waste, construction of pit and harvesting technologies. He started the vermicompost in a permanent structure by constructing cement dub with the size of 6 X 3 X 2 ft. Initially he was constructed one hub and increased to 3 nos. He purchased earth worms from KVK, Tindivanam.

4. Impact Horizontal Spread

Mr. Jayakanthan regularly invited to the training programmes conducted at KVK, Tindivanam to share his success story to the trainees. The success story of the Jayakanthan triggered other farmers to start the vermipost as an income generation activity. KVK also facilitated to market the vermicompost. KVK documented the success story of Jayakanthan

and it was telecasted in Dhoordharshan Kendra during 2016. Jayakanthan got more contacts related to vermicompost due to the wide publicity.

5. Impact Economic Gains

Mr. Jayakanthan regularly harvesting about 42 tonnes of vermicompost at an interval of 45 days. He is selling the compost for Rs. 10000/- per ton. In addition, he is also selling the earth worms for Rs.400 per Kg.

6. Impact on Employment Generation

The training programmes and exposure from several events triggered Jayakanthan's interest and he started the vermicompost in an entrepreneurial mode. Since, he realized vermicompost as a profitable enterprise he has planned to commercially sale his vermicompost in the name of Marutham Vermi compost.

2. Title of the Success Story : CO(BN) 5 - A successful green fodder variety in Villupuram district

Details of Success Story :

1. Background : Mr.Iyyanar is a progressive farmer and also a milk producer living in the Kandamangalam village, Kandamangalam Block, Villupuram district. He is maintaining about nine milch animals inclusive of foreign breeds viz., Holstein Friesian, Jersey & our country breed Gir and on an average he is producing about 65 litres of milk every day. PANLAIT, the cooperative milk society of Pondicherry, procuring milk from his dairy farm @ Rs.24 /litre. In addition to the dairy farm, Mr.Iyyanar cultivating crops like cowpea, brinjal in his 2.5 acres farm land. He also raising the fodder crops viz., Cumbu Napier hybrid, fodder sorghum for feeding his milch animals in his farm. Among various fodder crop varieties CO(CN) 4 was a successful Cumbu Napier hybrid crop and being cultivated in dairy farms. Mr.Iyyanar also was cultivating CO(CN) 4 for his fodder requirement.

But CO(BN) 5 is a multi cut Cumbu Napier hybrid fodder crop which is having higher yield potential than the CO(CN) 4. It is the latest released Cumbu Napier hybrid fodder released from TNAU during 2012. It was released as a high yielding green fodder variety suitable for cultivating throughout the country. Its yield potential is 370 t/ha with high leaf stem ratio of 1.02 to 1.19. Because of its high leaf stem ratio the palatability of this variety is high. It is a multi cut fodder variety and we can cut once in 45 days after initial harvesting period of 60 days. It is propagated through setts. In view of introducing this fodder

variety to Villupuram district a Front line demonstration was conducted at Kandamangalam village. Mr.Iyyanar actively participated in the FLD programme and succeeds well.

2.Intervention

Our KVK, Tindivanam Team conducted a FLD on Demonstration of CO(BN) 5 , a multi cut Cumbu Napier hybrid crop at Kandamangalam village, Kandamangalam Block, Villupuram district during 2015-16. The planting was completed by 25.01.2016. Fresh setts of CO(BN) 5 were provided to the farmers for planting. The demonstration on planting setts in the field , Off campus training about cultivation practices of CO(BN) 5 were conducted by KVK Team in the FLD farmer's field.

3.Process

Mr.Iyyanar helped us to identify the dairy farmers for conducting the FLD and Ten FLD's were completed at Kandamangalam village.

4.Technology

About 30,000 CO(BN)5 setts were provided to the farmers for planting. The regular cultivation practices of CO(BN)5 were taught to the FLD farmers through Off campus training.

5.Horizontal spread

CO(BN)5 is a high yielding fodder crop with better palatability. Mr. Iyyanar practically experienced the high palatability of CO(BN) 5 (95%) by feeding his own cattle. He shared his experience with his fellow dairy farmers. Because of this success of the CO(BN) 5 in Mr. Iyyanar's field, the other farmers were also interested and asking for planting material of CO(BN) 5. Though the CO(BN) 5 can be propagated through the setts, Mr. Iyyanar allocated some area of his fodder field for propagation. He himself sold about 14 tonnes of CO(BN) 5 setts to the voluntary farmers through KVK, Tindivanam.

6.Economic gains

CO(BN) 5 is a high yielder in terms of green fodder . Mr. Iyyanar obtained 314 tonnes of green fodder per ha in addition to 35 tonnes of setts for propagation. He is selling the green fodder @ Rs. 2.50 per kg after meeting his own demand. For propagation, the setts are being sold @ Rs. 7.00 /kg. By cultivating CO(BN)5 as a fodder , the farmer has earned Rs 7,85,000/ha per year from seven cuttings and by selling setts he earned Rs. 2,45,000/ha/ per year. The net income realised was Rs. 7, 07,500.00 with the BCR of 3.19. Though the

propagating material is setts, *i.e.* vegetative part, the purity of the seed material is being maintained indefinitely.

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| <p>Demonstration of planting of CO(BN) 5 Cumbu Napier setts at Mr.Iyyanar's field , Kandamangalam village</p> | <p>Off Campus training on "Production technologies of CO(BN) 5 at Kandamangalam village.</p> |
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| <p>CO (BN) 5 Cumbu Napier hybrid in early stage</p> | <p>CO (BN) 5 Cumbu Napier hybrid in maturity stage at Mr. Iyyanar's field</p> |

3. Title of the Case Study : Management of Postpartum anoestrus for improving the breeding efficiency in crossbred cows

Details of Case Study :

1. Background

In India, dairy herd in rural and urban is maintained with high yielding crossbred cows. Because of high yielding potential, fertility of the cows has been stated to decline drastically due to negative energy balance, poor heat detection methods and postpartum endocrinopathies leading to ovarian disturbances. Under healthy condition, a cow exhibits estrus symptoms within 60 days of postpartum period. In case of postpartum anoestrus condition, the cows show extended period of 3 months or more. The extension in postpartum period will increase the duration between calving to conception which could cause substantial reproductive and economical loss to the dairy industry. Though the prevalence of postpartum anoestrus condition varied from 10 to 40 %, early resumption of ovarian activity through hormonal treatment is a major concern to improve the herd performances.

2. Intervention Process

To manage postpartum anoestrus, frontline demonstrations were conducted at Azhagapuram village of Kallakurichi block, Villupuram district in TamilNadu. Ten pluriparous cows were selected which were in postpartum anoestrus condition by rectal examination and based on the history of absence of estrus symptoms for 3 to 6 months or more. All the animals were given deworming bolus orally and kept under mineral mixture supplementation for two months.

3. Intervention Technology:

Progesterone Impregnated Intra Vaginal Device (PRID) + Prostaglandin F2alpha (PGF2 α) protocol was demonstrated in this study as an intervention. The animals were inserted intra-vaginally with PRID on 0 day and on 8th day single dose of PGF2 α was injected intramuscularly. PRID was withdrawn from the cow on 9th day and observed for heat symptoms.

4. Result and Discussion

Of these ten animals, eight cows exhibited the detectable symptoms on 10th day and the remaining two animals did not show any signs of estrus. Artificial Insemination was done to eight cows consecutively on 11th and 12th day. Later rectal palpation was done to confirm the pregnancy status on 90th day of insemination. The findings revealed that an induction of estrum through PRID was 80% (8/10) with the conception rate of 75 % (6/8) which was substantially greater than the average conception of 60-65% under conventional methods.

5. Conclusion

From this study, it is concluded that management of postpartum anoestrus using PRID and PGF2 α enhanced the exhibition of heat signs and conception rate and this would be effective in improving the breeding efficiency in cross bred population. Treating the postpartum animals with this protocol was cheaper and effective in augmenting the reproductive performance of the cross bred milch cows which were in negative energy balance and postpartum endocrinopathies.



