

*Staad*

Report On

Facilitation of Groundnut Thresher Activity for Early Pod Separation  
A Post-harvest Technology Intervention - Rainy Season of 2004  
March 2005

Of the project on  
Aflatoxin Contamination In Groundnut In Southern India;  
Raising Awareness And Transferring  
And Disseminating Technologies To Reduce Aflatoxin

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For the  
**International Crops Research institute for the Semi-Arid Tropics (ICRISAT)**  
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## Facilitation of Groundnut Thresher Activity for Early Pod Separation Post-harvest technology intervention of rainy season 2004

During the 2003 – 04 harvesting season, it was decided to supply a groundnut thresher free of cost to the farmers in one of the villages of the aflatoxin project where PVS trials were held, with the understanding that they undertake early pod stripping on a sharing basis. The thresher was provided by ANGRAU to the farmers of West Narsapur village, Singanamala mandal of Anantapur district on an experimental basis, under the aegis of Accion Fraternal/ RDT and the process was facilitated by STAAD.

The experiment was mainly conducted to ascertain whether farmers would take the benefit of low cost and easily accessible threshers for early pod stripping. Farmers were asked to pay only the operators wages and a small daily rent to cover the costs of repairs and maintenance if any<sup>1</sup>. Though the thresher was provided after the main threshing season and the crop was also very meager due to extensive drought, farmers, realizing the gains of undertaking early pod stripping have requested for supply of a thresher under similar conditions, for the 2004 – 05 season too.

With this demand in view, it was decided to introduce mechanical threshing as a post harvest technology intervention for early pod stripping in the Pileru area (Chittoor district) of the project also, where threshers are not commonly used. Ontillu village was selected for the intervention and with support from 'Sahajeevan' the NGO partner in the PVS process of the project, ANGRAU supplied the thresher free of cost while the coordination was done by STAAD. The conditions for providing the thresher were to be similar to the ones suggested for the West Narsapur village.

### **The West Narsapur Story (Anantapur district)**

A meeting was convened to facilitate the process of establishing threshing activity in the current season (2004 - 05) and the meeting was attended by the farmers, the Socio-Technical Officer (STO) of Accion Fraternal/RDT, and facilitated by STAAD. The members of the committee were drawn from the various groups operating in the village. Of the seven members of the committee, four members belong to the village Water Shed Committees, one to Rythu mithra group (farmer SHG), one to the women SHG, and one to the Village Development Committee.

The farmers/ members decided that the thresher committee formed in the last season be retained as such and the conditions of use and operation of the thresher shall be the same as in the previous year. However, it was agreed that access to women and poor farmers would be given priority in the allocation.

- The committee followed a lottery method for allocation of thresher to farmers as in the previous year.
- Initially, since the thresher arrived early this year and harvesting was not yet complete, some of the farmers who completed their harvesting early were given a chance to use the thresher out of turn depending on the need of the farmers.
- Ten farmers, 6 of whom were women, used the thresher during the 13 day period before the lottery based allocation system was put to effect.
- Information on the rotation system was announced through the village public address system and a total of 55 farmers participated in the lottery. A majority of the small farmers, some women farmers and a few rich farmers had a chance to participate in the lottery system.
- Since the crop was better this year due to improved rainfall conditions, it was expected that the thresher would be used for a period of atleast two months as there was a great demand for the free thresher and the farmers were getting used to undertaking early pod stripping if cheap threshers were easily accessible.
- Due to this increase in threshing activity farmers requested for a second thresher since the threshers in the village were sent on hire basis to the neighbouring villages. The request could not be acceded.
- The thresher required a few repairs, such as a problem with the bearings, broken welding done on the body and a broken fan blade before it was put to use. The overall condition was otherwise good.
- Some of the medium, small and marginal farmers of the village had expressed that they would be willing to contribute their share and buy threshers on a community basis and use it on the patterns established through the rotation system, if new threshers could be supplied to them at subsidized prices.

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<sup>1</sup> Details of the impact of providing the thresher are provided in an earlier report.

## **The Pileru Story (Chittoor district)**

After the decision to introducing early pod stripping by mechanical threshers as a post harvest technology intervention in the Pileru area was taken, Sahajeevan conducted a reconnaissance meeting with the farmers of the area and informed the project members that the farmers were skeptical of the use of mechanical threshers as it would damage the fodder quality of the haulms.

It was therefore decided that some of the farmers be asked to visit Anantapur area, observe the threshing activity first hand and take the opinion of the farmers there on the fodder quality and then take a decision about the use of threshers. Subsequently, some of the farmers came up with idea that it would be easier if the thresher was sent to Pileru on a trial basis so that all the farmers in the area could also observe the actual process instead of only a few representatives going over to Anantapur. And so, finally, ANGRAU dispatched the thresher to Pileru and demonstrated its use.

### **Formation of a Thresher Committee at Ontillu**

A meeting was convened at Ontillu (a PVS village) to facilitate the formation of the committee that will be responsible for regulating the use of the thresher on a sharing basis. The meeting was attended by the farmers and representatives of ANGRAU, Sahajeevan and STAAD.

The thresher committee was formed with the farmers of Ontillu village taking due representation from various groups operating in the village. Of the eight members in the committee, five members belong to Rythu mithra groups, the two women members to the women SHGs, and one independent farmer. The members were represented not only from Ontillu but also from the neighbouring villages which are part of the PVS process and where it is expected that threshers would be introduced in future. The following decisions were taken.

The committee decided that Sri. Venkatappa Naidu, a PVS farmer would be the chairperson of the committee. The thresher would be parked at the residence of Sri. Venkateshwara Chowdhary, a rich farmer of Muguluvaripalli village, which is about a quarter Km from Ontillu, though he is not a member of the thresher committee. The thresher will be transported by a tractor because the area is rugged and sloped.

The thresher was to be used between 9.00 am and 5.00 pm for a days charge, and the timings were to be suitably adjusted to the working hours of the local labour and extendable, depending upon the quantity to be threshed without having to pay for an extra day, for just an hour or two of extra work.

Since the thresher was being introduced for first time and also due to misconceptions about the fodder, the committee opined that there might not be demand in the initial stages, the thresher was to be used on a first come first serve basis.

The committee opined that awareness would be brought among the fellow farmers about the use of the thresher and if any demand arises in the future, a lottery system would be followed. The project coordinators however suggested to the committee, that they should give first-usage option to the poor and women farmers, and any left over time from a days work with another farmer shall be provided to the poor/ women farmers without charges.

The entire process of use of thresher such as collection of charges, payment of operator wages, mechanical repairs, etc., would be the same as implemented in West Narsapur village. The amount to be paid per day of threshing was decided to be Rs. 150/- and Rs. 50/- shall be paid as day wages to the operator. Maintenance of accounts and book keeping for this season would rest with the chairman of the thresher committee and supervised by Sahajeevan. It was agreed that a decision would be taken on the method of utilization of any surplus amounts after such a situation arose.

### **The Impact**

Since harvesting was in progress when the thresher arrived at Ontillu, and there were rains continuously for more than a week thereafter, effective demonstration could not be undertaken. Most farmers had hurriedly undertaken pod stripping manually or quickly stacked their crop in order to avoid damage since it was found that the thresher was not effective in pod separation when the haulms were wet. A farmer

who tried to persist with the mechanical threshing under the high moisture conditions reportedly spent twice as much as would be normally spent on manual stripping.

Finally, only five farmers in all could use the thresher. However, a large number of farmers were always present to observe the threshing process every time the thresher was used. Based on their observations and actual experience of using the thresher, farmers of Ontillu and the neighbouring villages expressed that -

1. It was beneficial to use the thresher as it saved them the burden of transporting the entire crop from their fields to the villages. Minor savings in the form of restricting animals and labourers eating some of the crop had also been observed by the farmers.
2. Early threshing is beneficial as it helps save some of the crop from storage pest attacks.
3. The haulms though broken are cleaner as the thresher tends to segregate the heavier soil clods and the lighter broken haulm. This has resulted in the cattle enjoying the fodder better (without the soil and stones getting between their teeth) as compared to the haulms obtained from manual stripping.
4. The haulms also get better dried during the threshing as compared to the manual operation and so has better staying capacity during storage, while haulms from the manual operation tend to get mouldy due to the presence of moisture.
5. It is cheaper to use mechanical threshers if they can be accessed on the free supply basis.
6. Presence of some amount of moisture in the haulms optimizes the capability of the thresher and so field drying period and consequently watch and ward expenses can also be reduced. The fact that farmers in the area sell the crop immediately after harvest with some amount of moisture only adds to the crop weight getting them higher revenues.
7. Some pod breakages are observed but the damage is of minor consequence.
8. Though the immature pods are separated leading to loss in overall yield, farmers in this area are not paid higher prices for shelling percentages that are higher than the base price limits and so are used to the practice of remixing the immature pods for getting higher net incomes.

With all these benefits observed, and only a few disadvantages, farmers of Ontillu have requested for the supply of free threshers for the ensuing season with explicit understanding that they could use the machine on a sharing basis and through a rotation system.

Some of the farmers also expressed that they would be willing to contribute their share and buy threshers for themselves, if new threshers could be supplied to them at subsidized prices.

### **Conclusion and action for follow-up**

Farmers clearly expressed that the mechanical thresher was handy to facilitate early pod stripping and found the overall economics working towards their favour. Since the entire process was deliberated by the project team on a sharing concept, access to thresher on a permanent basis has greater probability of sustaining the practice of early pod stripping in Anantapur and Chittoor districts.

STAAD's assessments with farmers of West Narsapur and Pileru this year revealed their enthusiasm with using thresher to speed up pod stripping. They are very keen to own threshers for this purpose but expressed their financial helplessness to even pool up enough resources with government subsidy for buying a thresher. In order to sustain this enthusiasm and to promote the project's goal of early pod stripping, STAAD approached AP govt's Department of Agriculture (DoA) for a sanction of government subsidy for purchase of one thresher each for West Narsapur and Pileru. DoA has finally approved it and it was up to us now to make this happen.

STAAD managed a deal with RDT and SAHAJEEVAN finally, in that they would negotiate with farmers to agree to pay 50% of the balance of the sum that is to be paid to the suppliers after the govt. subsidy amount was subtracted from the original cost. STAAD had offered to pay the rest of the 50% amount from its tiny development fund. This meant that, of the total cost of about Rs.60,000/- for the new thresher, govt.'s subsidy would cover Rs. 30,000 and the rest of the money would be paid by farmers and STAAD in equal amounts.

STAAD however, insisted that the thresher ownership should go to a self-help group and preferably to a women's group. While RDT closed the transaction with the supplier for the women's group of West Narsapur village by collecting the money from their members and STAAD and paying it up to the supplier, they are also helping Sahajeevan close the deal with the same supplier for Ontillu farmers also, so that both the machines could be supplied at the same time.

Once these machines are delivered, they will be handed over to the groups formally, after clearly establishing the terms for ownership and use by the members who have contributed for the purchase of the threshers. With RDT in the lead and Sahjeevan toeing its line, we were in the process of finalizing this deal while this report was being drafted. Once the dates for handing over the machines are finalized, project members will be informed. STAAD had decided to go ahead with its share of contribution as it felt the dire necessity of the farming community that had helped it and the project members undertake the research activity enthusiastically and without and direct benefits and also since there is no allocation for this kind of transaction in the project budget and we were keen to ensure a continuum to the process initiated under the project.

### **Recommendation**

We will be in a position to ensure some good outputs in 2005 if the project gets the extension. It will also give us an opportunity to observe the benefits of using mechanical threshers (supplied through the subsidies) as a means of reducing aflatoxin contamination by undertaking early pod stripping as a technological intervention. It will also be possible to ascertain the benefits derived by the marginal, small, medium and women farmers from the use of their own threshers – a means that was not available earlier – and how they shift from the practice of storing the entire harvested crop before undertaking pod stripping activity.

Extension of the project will also provide for undertaking interesting observations on how these farmer groups react to using machinery and equipment under a group ownership and their reactions based on the patterns of contributions as well as the possibilities and constraints to replicate this model on a larger scale.