AGRICULTURAL TECHNOLOGY IMPROVEMENT PROJECT (ATIP)

GUIDELINES FOR ORGANISING A ROW PLANTING CONTEST AT DISTRICT AGRICULTURAL SHOWS

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ATIP WORKING PAPER

ATIP WP-28

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DEPARTMENT OF AGRIC. RESEARCH
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1. SUGGESTED SCORING SYSTEM FOR ROW PLANTING CONTESTS ....... 5

ACRONYMS

AD Agricultural Demonstrator
ALDEP Arable Land Development Programme
APRU Animal Production Research Unit
ATIP Agricultural Technology Improvement Project
DAO District Agricultural Office (Officer)
DAR Department of Agricultural Research
RTC Rural Training Centre
ABSTRACT

Over the past few years, row planting farmer contests have been used as a strategy for promoting quality row planting. These contests have the advantage of providing a form of entertainment while conveying a message.

This paper describes one of the row planting contests held in the Central Agricultural Region, and provides general guidelines for future contests. Important points to note about these contests are the collaborative efforts by numerous agencies involved in the contests and the responsibilities and duties associated with running the contests.

INTRODUCTION

In spite of the lackluster adoption pattern of row planting in the Central Agricultural Region, on-farm research has shown that most farmers could benefit from adopting a basic row planting package that includes: good ploughing, row planting and inter-row cultivation (Siebert, Modiakgotla, Malatsi, and Caplan, 1990). Many farmers fail to profit from this package because they are not confident enough to try row planting, or they have not mastered the techniques. Some farmers own planters but are not using them or are using them incorrectly.

To support the extension service’s recommendation of row planting, ATIP Mahalapye began to investigate ways that could help to promote the use of this farming technique. Three promotional options have been studied:

(a). Custom-hire row planting scheme at village level.
(b). Farmer training courses at district level.
(c). Row planting contest at regional level.

Both the custom-hire row planting scheme and farmer training have been documented (Modiakgotla, 1989; Siebert et al., 1990). Presented in this paper are some general guidelines, based on contests held in Mahalapye, on organizing a row planting contest at District Agricultural Shows. This activity promotes and publicizes row planting to a large audience.

HISTORY OF THE CONTESTS

The first row planting contest was held at the 1988 Mahalapye Agricultural Show. In this pilot contest, only three farmer teams and one demonstration team from the Mahalapye Rural Training Centre (MRTC) competed. Four operations were included: ploughing, harrowing, planting and inter-row cultivation. Contestants were requested to bring their own donkey traction and labour assistants, but equipment was provided by the organising committee. The time required for these four operations made the event long and lessened its publicity impact.

In 1989, contests were sponsored at Mahalapye and Machaneng. A single organising committee consisting of researchers, extension, ALDEP and the MRTC directed both contests. Contestants for these two contests were recruited through ADs and each contestant was to be the best row planting farmer from an extension area. Six contestants representing nearly that many extension areas participated in each of the shows. The 1989 contest only included row planting and inter-row cultivation. These two operations are the focal point of
the promotion ar::; in this way the contest could be conducted in about 45 minutes. Ploughing was eliminated because it required too much time to perform and the audiences were already familiar with the operation. Harrowing was also dropped because its use is specific to certain situations.¹

Contests were organised in 1989 in four other agricultural districts of the Central Region. These contests received some backing from ATIP/DAR and the MRTC. This support, and the organisation of the committees for these four contests was much less than for Mahalapye and Machaneng, and the outcome demonstrated the organisation that was required to make a contest successful.

ORGANIZING THE CONTESTS

BACKGROUND

The purpose of the contests are to:

(a). To promote quality row planting
(b). To entertain the audience while conveying a message

Techniques or options demonstrated during the contest:

(a). Speed of operations. Demonstrated by the points awarded for speed of work and by the comments given over the public address system.

(b). Quality of tillage preparation. Discussed by commentator, but not demonstrated as ploughing is no longer part of the competition.

(c). Quality of row planting for crop establishment. Demonstrated by the points awarded for row straightness, spacing and planting depth. Also discussed in detail by the commentator.

(d). Linking row planting with inter-row cultivation. Demonstrated by the ability of contestants to perform the cultivation operation after row planting, and by comments from the commentator.

(e). Careful handling and training of draught animals. Demonstrated by points awarded for draught team handling and through comments from the commentator.

(f). Equipment available under ALDEP. Demonstrated by points awarded for proper setting of equipment and by comments made by the commentator.

Participation in the contests should be viewed as a reward for farmers in extension areas who are practicing row planting. District "how contests can determine who of the best row

¹. Harrowing is useful when ploughing has produced a seedbed that is too rough for quality row planting. However, on-farm trial results (ATIP, 1985) show that harrowing is not necessary unless there are large clods. Even then, it may not be necessary if rains have soaked the land before planting. Not only has simple early ploughing yielded better than early ploughing with harrowing, excessive grass weed growth has sometimes been observed following narrowing.
planting farmers in the extension areas, is the district champion. Then when enough districts hold their own contests, district champions can compete with each other to determine who is the National Row Planting Champion for Botswana. This competition could be run every year.

When the Agricultural Show Committee draws up the programme, the contest should also be included as one of the activities. The contest should not take more than an hour otherwise it loses the attention of the audience. In the past, contests have been held immediately after the official opening (generally after ten o'clock). This time was proposed so as to allow important dignitaries the opportunity to observe the contest in progress as they pass through the different agricultural stalls. However, sometimes the official opening is delayed and by the time the operation starts, it is already too hot for the traction animals. In the future, it may be important to schedule the contest an hour before the official opening.

Organizing a row planting contest is not difficult if the relevant agencies of the Ministry of Agriculture collaborate. Each agency has a very important role to play. Ideally, an organizing committee should be formed to handle the details of the contest.

Two points about the Organising Committee are:

(a). **Composition:** Should represent all the agencies that have a common message to convey to the audience. At the previous Mahalapye and Machaneng shows, the following agencies have been represented on the organizing committee:

i. DAO
ii. RTC
iii. ALDEP
iv. ATIP
v. APRU

(b). **Selection:** The selection of the committee should be done well in advance to allow enough time to prepare for the activity.

The committee needs to allocate tasks according to the mandates of each participating agency. The following may be used as guidelines on how tasks may be allocated:

(a). **The DAO's Office And The Extension AD:** The ADs can publicize the event at the village level thereby attracting potential contestants and spectators. A list of participants is drawn up and presented to the organizing committee. Each participant is to be briefed on all aspects of the contest, and what is expected of them. Additionally, it is important to ensure that the contestants have the necessary equipment, animals and personnel in order to be able to participate. For example,

i. Does the farmer have the required traction?
ii. Does the farmer have a planter and cultivator?
iii. Does he/she have somebody to lead the animals?
iv. Check on harness and chains.
v. This list should be checked well in advance of the contest.

(b). **Rural Training Centre (RTC):** The RTC should provide food for all contestants. Where contests are held near a Rural Training Centre such a centre could be used as a source of accommodation for contestants. For other areas, it may be advisable for the District Extension office to organize the accommodation. The RTC may also be assigned the responsibility of holding a rehearsal with the participants. This rehearsal
should involve all the steps that the participants will be required to perform during the actual contest. Although participating farmers are supposed to be acquainted with row planting, there have been cases where farmers, who have just bought planters but never had the opportunity of using them, have showed great interest in competing, hence, a rehearsal was necessary.

Points to note for conducting a rehearsal are:

i. Ensure that farmers know how to select the correct seed plate. Guidelines on the correct selection are provided in an Agrifact (DAR, no date).
ii. Alert farmers to the depth of seed placement in relation to moisture.
iii. Alert them to planter adjustment.
iv. Explain to them the rules and regulations of the contest.

(c). ALDEP: Because the contest is linked to the equipment used, it provides excellent publicity for the ALDEP packages. It is also allows for the demonstration of feed, and any other items that are linked with row planting. Because of their involvement with supplying equipment to farmers, ALDEP has always been asked to donate prizes for the contest.

(d). Animal Production Research Unit (APRU): APRU may provide transportation of traction animals and direct construction of kraals, watering and feeding facilities at the show grounds.

(e). Agricultural Technology Improvement Project (ATIP): In previous contests, ATIP has played a leading role in the general organization of the event. However, in the future, the major responsibility will belong to the extension personnel within the respective region, with ATIP acting as backup only where it is absolutely necessary.

(f). Agricultural Information Service: This section of the Ministry of Agriculture plays a very important role in the publicity of the activity. The organising committee needs to invite officials of this section to assist in the commentary, and to keep the contest lively. The script on the procedures highlighting the event should be prepared by the contest committee and given to them well in advance to enable them time to study it.

CONTEST PREPARATIONS

A number of activities are required to prepare for the competition. They include the following:

(a). Plot Preparation: A plot of 10 meters by 30 meter is enough for one contesting team. The plot must be ploughed in advance while the ground is still moist. Late ploughing may result in having to wet the ground before ploughing, and this entails a great deal of water movement and work. The plot may need to be leveled a day before the contest. All plots should be marked with lime indicating boundaries so that each contestant is made aware of his/her off limits. The distance between plots should be at least two meters.

A barrier needs to be built around the contest area in order to distance the audience from the contesting teams. When this barrier is being constructed, enough room should be left at the headlands for easy turning of animals.

(b). Banners And Posters: Banners positioned around the contest area can attract
potential spectators and alert people to where the activities are going on. These banners could display who the participating agencies are, while the posters provide the audience with information related to the contest activity.

(c). **Flags**: Steel wire of about 50 centimeters lengths with a small peace of plastic stapled at one end makes a nice flag that can then be placed in each row during the contest (following row planting) to represent plants. These flags should be placed at about 50 centimeters intervals within a row. Crop strover may also be used to demarcate rows.

(d). **Animals, Kraals, Animal Feed and Water**:

i. **Animals**: Contestants should bring their own traction animals. These should be well-trained animals that will pull equipment with ease, and are used to being led. They should not have any sores or sign of ill-treatment.

ii. **Kraals**: The kraals need to be built near the contest area to enable the animals to be at hand whenever they are required.

iii. **Animal Feed And Water**: It is the organising committee’s responsibility to ensure that there is feed and plenty of water available for the animals. However, it may be necessary for the farmers to feed and water their own animals.

(e). **Judges**: Judges may include extension personnel and also other farmers. For efficient judging, it has been observed that a total of six judges operate effectively, but this will also depend on the number of teams contesting. Table 1 provides an example of a scoring system that the judges may use during the contest.

<table>
<thead>
<tr>
<th>TASK</th>
<th>POINTS POSSIBLE</th>
<th>POINTS OBTAINED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seed plate setting</td>
<td>0-10</td>
<td></td>
</tr>
<tr>
<td>Correct hitching</td>
<td>0-10</td>
<td></td>
</tr>
<tr>
<td>Speed of row planting</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Quality of row spacing</td>
<td>0-10</td>
<td></td>
</tr>
<tr>
<td>Straightness of rows</td>
<td>0-10</td>
<td></td>
</tr>
<tr>
<td>Seed placement</td>
<td>0-10</td>
<td></td>
</tr>
<tr>
<td>Inter-row cultivation speed</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Quality of inter-row cultivation</td>
<td>0-10</td>
<td></td>
</tr>
<tr>
<td>Handling of donkeys</td>
<td>0-10</td>
<td></td>
</tr>
<tr>
<td>General knowledge on row planting</td>
<td>0-10</td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL POINTS</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**GUIDELINES FOR PARTICIPANTS**

The following guidelines were given to participants at the 1989 Mahalapye contests.

(a). The purpose of the contest is to have fun and to promote quality row planting and inter-row cultivation. To further this purpose, it is important that all participants including contestants, ADs, show committee members and so forth, be cooperative and helpful at all times.

(b). The AD, together with a selection sub-committee from the organising
committee, will select one farmer contestant to represent his/her extension area. Six extension areas will be represented. Contestants are to be chosen on the basis of the quality of their own row planting during the past cropping season. Each AD should accompany his/her participating farmer to the show and support the farmer in preparing for the contest. ADs will not, however, be participating in the contest.

(c). Each contestant will provide the following: A team of two donkeys for row planting and inter-row cultivating; the row planter used during the past planting season; different seed plates appropriate for planting sorghum, maize and cowpeas; harnesses, a bar and chains for hitching two donkeys abreast to a single row planter; and two people, one for leading animals and one for handling the planter and cultivator. Each contestant is also requested to bring a bar and chains to hitch two donkeys in a one-two series pattern for inter-row cultivation.

(d). The organising committee will provide each contestant with a cultivator.

(e). Contestants must report to the Mahalapye Rural Training Centre on the morning of the contest, with their teams, to review contest procedures.

(f). Contestants will be lodged at the Rural Training Centre hostel during their stay in Mahalapye. Transportation to and from the show grounds will be provided.

(g). Donkey teams will be kept in specially constructed kraals at the show grounds. Water and feed will be provided by the organising committee. Contestants are responsible for harnessing and hitching their own teams for the contest.

(h). Each contestant will row plant and inter-row cultivate a plot that measures 12 metres by 30 metres. Approximately 3 metres separate adjoining plots.

CONTEST PROCEDURES

The following procedures have been used during previous contests at Mahalapye and Machaneng.

(a). Contestants must bring their donkey teams, hitched to planters, to the starting point of the respective plots. The length of the hitch should already be correctly set, by the contestant, for pulling the planter.

(b). Seed will be assigned to each contestant who must then correctly set or select the seeding plate of his/her planter. Seed will be placed in the planter and planted during the contest operation.

(c). On the signal, all contestants will begin row planting. This is the point from which the timing of the row planting operation will be started. The first row will be planted one row spacing width from the edge of the plot. Contestants will target for 15 equally spaced width in a 12 metre wide plot.

(d). After finishing the row planting, judges will check the setting of each planter and hitch.
(e). Contestants must then switch the hitch to place the donkeys front and back for pulling a cultivator. The cultivator will be waiting at the headland of the plot.

(f). While the judge’s are checking how well donkeys have been hitched been hitched for cultivation, agricultural staff will place flags at 50cm spacing along each of the planted rows.

(g). On the signal, all contestants will begin cultivating. This is the point from which the timing of the inter-row cultivation operation will be started.

(h). When cultivation has been completed, judges will evaluate planting and cultivating in the plots, and ask questions of the contestants. These questions can be on any issue related to row planting.

CREATING COMMENTARY FOR USE DURING THE CONTEST

In the past, commentators have been representatives of the Agricultural Information Service and selected members of the local Ministry of Agriculture staff.

A script of the commentary to be used during the contest needs to be developed well in advance.

Points about the commentary include:

(a). Before The Start Of Planting And Repeated During The Contest: The commentator may explain:

   i. Criteria for farmer selection. For example, each contestant has been selected to compete in this contest because of the quality of row planting accomplished on his/her own field during the past season.

   ii. Resources farmers are expected to bring with them. For example, each contestant has been advised to bring his/her own planting unit to compete in the contest. This unit includes the planter, donkeys, harnesses, and so forth that were used during the season. The organising committee is only to provide the cultivator that will be used by the contestants.

   iii. How the judges will adjudicate. For example, judging is not done on the basis of how new or costly the equipment brought by the contestant is, but it is on the basis of how well the work is carried out.

   iv. What the theme of the contest is. For example, the event is focused strictly a basic theme: Quality Row Planting and Inter-row Cultivation, with particular emphasis on "quality".

   v. Other items that are on demonstration but linked to the theme. For example, at the Mahalapye contest there were numerous side demonstrations such as, a tractor mounted plough-planter (supplied by FMDU) and a hand operated Rotary Injection Planter (from FMDU and ATIP).

(b). Profile Of Contestants: This is an important part of the commentary. It provides the audience with the historical background of each contestant. This needs to be
repeated for each contestant. Contents of a contestant’s profile may include:

i. Name of farmer (contestant)
ii. Name of village
iii. Name of AD for extension area
iv. Number of years experience with farming
v. Number of years experience with row planting
vi. Other interesting comments about the contestant, etc.

(c). *Immediately Before Beginning Of Row Planting.* The commentator can explain:

i. What the contestants are expected to do. For example, each team will be lined up ready to begin and will be given seed to be planted. It is then up to the contestant and his/her helper to correctly set the planter for that seed.

ii. What the judges will be concerned with, e.g., how the planter is hitched to the donkeys, and an explanation of the scoring procedure, e.g., the first team to finish the planting will be given 10 points, the second 5 points, and the third 3 points.

(d). *During Row Planting.* The commentator can indicate what the judges are looking for in this part of the contest. For example, he/she can indicate that the judges are looking for how straight are the rows. The audience is told that the farmers can use whatever method they normally use on their own farm to achieve straight rows, and that the judges will award from 0 to 10 points for straightness. Other commentary could include information about how the judges will evaluate the depth of planting, the row spacing, and how they will be interested in the steadiness of the planting operation, and the handling of the donkeys.

(e). *During The Switch From A Planting Hitch To A Cultivating Hitch.* The commentary can explain that on completing the row planting, the judges will evaluate each planter (e.g., was the correct seeding plate used?) and row planted plot, and ask each contestant some basic questions (e.g., how do you control planting depth, what seed placement depth is best when the surface is dry but, moisture is at 10 cm. depth, etc.). After answering the questions, the contestant will switch from a planting hitch to a cultivating hitch.

(f). *During Inter-row Cultivation.* The commentator can explain what the teams are expected to perform, and what scoring system will be used. For example, the commentator may explain that for inter-row cultivation, a one-two hitching pattern is used because this permits efficient use of two donkey’s power without damaging the crop plants. With both donkeys and the cultivator working only between two rows at a time, cultivation can be done when the crop is above knee high.

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