



COVAMS



Working Paper

No. 10

The result of contour ridging practice in 2010 planting season

October 2011

Mr. J.J. Chigwiya Field Management Officer (Monitoring)
Mr. H. Kanazawa Rural development Advisor

**The project for Community Vitalization and Afforestation in Middle Shire
(COVAMS)**

Forestry department / Japan International Cooperation Agency

Contents

1	SUMMARY	1
2	SURVEY METHOD ON AREA SURVEY.....	2
3	PERIOD OF CONDUCTING THE AREA SURVEY	2
4	THE RESULT OF PRACTICE.....	3
4.1	NUMBER OF PRACTICING FARMERS	3
4.2	AREA CONSERVED WITH CONTOUR RIDGING	3
5	CONCLUSION	5

1 SUMMARY

The total area of conserved field in 2010 planting season had been aggregated around 950ha with 5,700 farmers, according to the report from Lead Farmers (LF) in each village. It was three times more than the area in 2009 planting season that of 300ha with 1,600 farmers. It is almost in direct proportion to the increased number of villages, i.e. 50 villages in 2009 to 169 villages in 2010. The average area of a household whose area survey data was collected calculated as 0.186ha and 0.145 in TA Kapeni and TA Kuntaja respectively. As the result of the area with contour ridging, it was estimated that 7,980m³ ~11,970m³ of soil was protected from erosion in the maize planting season of 2010 / 2011.

LFs of 68 villages out of 85 and 50 villages out of 84 of TA Kapeni and TA Kuntaja respectively conducted area survey from March to July 2011, and number of practicing farmers' data was collected from November 2010 to February 2011. Both surveys were conducted by LFs. The area data were collected with two methods either pacing or quantity of used maize seeds for the conserved field. The area for those villages which did not submit the data was estimated by multiplying the respective TAs' average area of a household to a number of practicing farmers. Additionally, there were several villages which did not report on the number of practicing farmers of 2010, and the area which was conserved previous year was added assuming it was still cultivated as conserved field.

The method of area survey was not uniformed in this area survey, but the project accepted as significant data. Both pacing and quantity of maize seeds would not give accurate figures; however, we believe that the figures will be able to give us a rough picture of conserved area in the target villages.

The data for number of practicing farmers indicated that there was insignificant increase of conserved field in the villages of 2009 (50 villages) against the project expectations. About 500ha or a little less was conserved by about 3600 farmers in the 2010 new villages (119villages). This result supports that it is more efficient, in terms of cost-effectiveness, to expand target area rather than repeating training for the same target villages.

2 SURVEY METHOD ON AREA SURVEY

After some trial of pacing method for area survey by some LFs, CCOs found some problem that it is difficult for the LFs to identify the shape of the gardens because maize had already grown and gardens were covered. With this situation, the project management had no choice but change the method to a method which identifies the size of the garden with a quantity of maize seeds.

When the area survey was planned to conduct, the survey method which the project management intended was “pacing” by LFs. Some of CCOs had trained some of LFs on how to conduct area survey with pacing in order to see how they understood the method. As a result, many of them did not grasp the important elements of the pacing method, especially where to measure. Some of them measured the middle of the garden no matter what the garden’s shape was. At the same time, when the area survey was about conducted, maize in their gardens were grown covering the entire gardens, so it became very difficult to measure with this method.

With this situation, the project management had to change the strategy to conduct the survey and with some debate, it was agreed to use a method which can somehow identify the size of a garden with a quantity of maize seeds used. It would not be very accurate but it could give us a rough picture of the total area which was conserved.

The project requested LFs to capture all the areas practiced with contour ridging in the planting season of year 2010 / 2011, no matter what the practice was done in the season or previously. However, in some villages although it seemed very minor number, did not report all but on just newly practicing farmers’ information. In this sense, it must be honest that some practiced area was not captured. But since it was very minor one, the result of this survey can still indicate the area conserved.

3 PERIOD OF CONDUCTING THE AREA SURVEY

The data of number of practicing farmers was collected from December 2010 to February 2011, while the area survey was conducted from February to July, 2011. Within this period of area survey, LFs of 118 out of 169 villages were able to give the project management the data of area survey.

The initial plan of conducting the area survey was in the month of February and March

2011. However, very few LFs responded at the end of March; hence the period was extended to indefinite month. In August, as it came to be very few LFs submitted the report, the management made a decision that this data collection for the year 2010 should be ended.

4 THE RESULT OF PRACTICE

4.1 NUMBER OF PRACTICING FARMERS

It was observed that the number of practicing farmers is going to increase in a direct proportion to the increase of number of villages. The Total number of farmers who practiced contour ridging in 2010 planting season was aggregated to 3,944. Out of this, 355 were of the 2008 and 2009 villages and 3,589 were of the 2010 villages. It is almost three times more than previous year's. Hence, it can be said that the approach the project puts in place would be able to secure at least 25% of practicing ratio in the first year. However, when it comes to the cost effectiveness in intervention for the same villages in second year was resulted in not encouraging one.

LFs of TA Kapeni reported that 1,794 farmers practiced contour ridging in 2010 planting season. Among the farmers, 250 farmers were from 14 villages of 2009 and 2008 villages out of 33 villages. On the other hand, TA Kuntaja's LFs reported that 2,172 farmers practiced contour ridging in 2010. Out of this, 105 farmers were of the village of 2008 and 2009 from 14 villages out of 17 villages.

The project found that there are 15,400 households in 119 of 2010 villages. The ratio of practicing farmers in these target villages became about 24%, while that of previous year was 32%. The drop of the ratio could be attributed to an inadequate monitoring by CCOs because of increase of number of villages per CCO.

On the other hand, there was no significant increase of the number in the 2009 villages. The 250 farmers of TA Kapeni counts only 6.6% of entire households(3,739H/H) of year 2009, while 105 farmers of TA Kuntaja counts only 8.5% of 1226 households of the same year. The number of villages which farmers practiced in 2010 was 14 villages in both TAs, which counts only 50% of entire number of village in 2009.

4.2 AREA CONSERVED WITH CONTOUR RIDGING

The total area of conserved gardens in 2010 was roughly estimated as 900 ha with about

5,700 households out of 20,000 households, which counts about 28.5% to the total number of households in both TA Kepeni and TA Kuntaja.

The total conserved area was aggregated 691ha with collected data from 68 and 50 villages of TA Kepeni and TA Kuntaja respectively. There were villages which reported only the number of households who practiced contour ridging. Applying respective average of conserved area of a household for each TA, 32 ha and 92 ha could be added to the above total area. Therefore it will be 815 ha. Additionally, 16 villages' LFs did not reply at all for this survey and some farmers not reported in the survey report, although about 816 households conserved in previous year, which counted about 134 ha. Assuming those 816 households were still cultivating the conserved fields, it would be about 950 ha of conserved area in 2010.

There were 2,388 households that reported as practicing farmer with a total area of 445 ha in TA Kepeni. The average area of a household is therefore 0.186 ha. On the other hand, TA Kuntaja resulted as 1,698 households with 246 ha, whose average is 0.145 ha. The villages which did not respond to the area survey were 7 and 28 villages in TA Kepeni and TA Kuntaja respectively. In seven villages of TA Kepeni, there were 172 households which reported as practicing farmers, and in 28 villages of TA Kuntaja had 634 households. Therefore, an estimation of the area in those villages can be estimated by multiplying each average area to the reported number of households, which gives 32 ha in TA Kepeni and 92 ha in TA Kuntaja.

16 villages did not reply to the area survey at all, although 630 households had conserved in the previous year. With the households, 104ha were conserved last year by applying the average of both TAs' average area of a household. Moreover, 186 farmers of 2009 were left out from the survey and their conserved area was estimated as 30ha. So the project decided to count these households and their areas conserved last year to this year's conserved area. There seemed to be some cases that some of the farmers did not repeat the conservation even though they used the same garden, but the project assumed such case would be not common.

Meanwhile, the 2010 villages' total practiced area was estimated as 575ha with 3,600 households, and 2009 villages' practiced area was estimated as 375ha with around 2,100 households.

5 CONCLUSION

It looks that the impact of COVAMS approach comes out in the first year and inflationary expansion from the second year should not be expected in terms of number of contour ridging practitioners. It means that it would be more cost effective to expand the target areas rather than concentrating on the same target villages for several years.

The project was expecting in the second year to have more practicing farmers than the first year because thought that better harvest of those who practice contour ridging would encourage none practiced farmers to follow them. However, the following tendency was observed; 30% of the total households who practiced contour ridging in 2009 villages (50 villages), while the ratio of the same villages sharply dropped to only 7% in average in the second year. On the other hand, new villages of 2010 (119 villages) achieved about 24% as the first year. This indicates that the most impact will occur in the first year and cost effectiveness will be met in expansion of target villages rather than sticking to the same villages for more than two years.

The 950ha of contour ridging practiced garden would prevented soil erosion with volume of 7,980m³ to 11,970m³ for the planting season of 2010 and 2011, according to the result of the observation at the project demonstration plot set in two villages.

During the planting season, the area had quite heavy rain falls sometimes, and it caused soil erosion even from the plot with contour ridging despite there was very little erosion was observed in the previous year. In Chiwalo demonstration plot had 33.4m³ of erosion from the contour ridged plot while 41.8m³ from the control plot, with difference of 8.4m³. In Chuma demonstration result was 83.6m³ and 96.2m³ from contour ridged plot and control plot respectively, with the difference of 12.6m³.

