FOBIA auditing report

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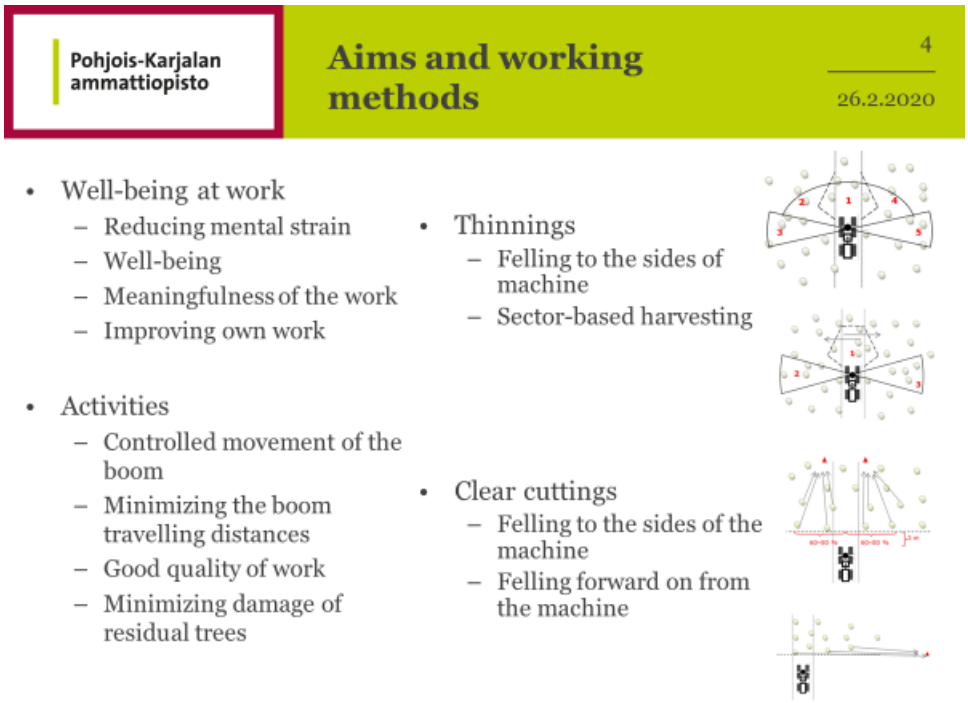
Riveria forestry vocational college in Northern Karelia is taking part of Fobia project. Riveria's task was to be responsible for conducting a survey of the skills of forest machine operators. In addition, operators were trained during the auditing sessions. Also, forest machine operators were trained in new working methods if deficiencies were identified. Working method training has been developed to work as part of the well-being of operators. Working method training seeks to provide operators with work patterns that enable them to perform their job as a machine operator better.



The project carried out audits of forest machine operators in Finland, Scotland and Ireland. In Finland, audits were carried out at Company A (*due to anonymity the real company names are excluded in the public report*) and Company B. In Scotland, audits were carried out at Company C and in Ireland audits were carried out at Company D.

Two harvester operators audited in Company A’s competence survey. Company B was audited for two harvester operators and for forwarder two operators. In Scotland, two Company C harvester operators participated in the audit. In Ireland, two harvester operators and one forwarder operator who also drives harvester participated in the audit from Company D. An attempt was also made to find a forest machine company in Sweden but it didn't happen.

During the auditing sessions, the operators were interviewed and videotaped their working for. The report was compiled and the videos analyzed with a Workseed program. The operators were sent a link to the Workseed program where they could see their own report and videos.

Mostly, the operators in different countries were very attentive to the auditing sessions. Working method training is well suited to Finland, but Ireland and Scotland have different conditions and operating models in forestry.

In Scotland and Ireland the forestry cycle is considerably faster than in Finland and they make thinning in their own style. Thinning is done by removing a certain percentage of trees from the forest at three times. The working method developed in Finland was not suitable for the Irish thinning style. In Scotland operators were doing only clearcuttings and sidefelling because of wet soil and peatland they were also cowering logging roads by wood and branches (Image 1).

Image 1. Logging in Scotland soft soil covering logging road by dry wood and branches.

The auditing sessions mapped out operators skills and also taught a little work method training. Report was sent to operator and advices for future with the report. One day training is not enough to give you enough guidance to master the new working method comprehensively. Originally, it was

thought, that the audit day would be at first and the later training day would be another for teaching new working method.

Through these auditing sessions, we discovered that there is a great need for such operator training in Finland. The forest machine contractor should invest in the well-being of the operators to improve operators' working conditions and performance. A good working method will achieve better results for the forest machine operator. When an employee is well-versed and knows how to work, the machine also achieves higher productivity. Also we found out that forest machine operators who are having high skills of driving harvester or forwarder are needed everywhere.

Feedback from the audits in Fobia project: Case Finland

In order to find out the level of adoption of the teachings in operator audit during the FOBIA project, Luke and Riveria conducted a telephone survey among the Finnish harvester and forwarder operators who participated in the audits during the project. The audits were also carried out in Ireland and Scotland but these harvester operators were excluded from the survey due to the fact that their working methods and environment were such different from the typical Finnish tree harvesting situation.

The main focus of the survey was to find out long-term effects of the audits to the harvesting work. The survey was carried out in January 2020 whereas the audits were conducted during approximately one to one and half years earlier.

The total number of interviewed persons was seven in Companies A and B (five operators, two entrepreneurs). Missing operators were not available for the interviews due to varying reasons such as retirement or not answering to telephone calls.

In the survey, the respondents were asked to summarize the general evaluation that was received from the instructors during and after the audits. Majority of the general evaluations had concentrated on the working techniques such as tree selection in thinnings and the loading/unloading of mixed assortment loads. All interviewees noted that the feedback from the instructors was useful in order to develop the working methods. All answers also indicated that the both the productivity and the quality of work improved due to the audits. In addition to the phone survey, information received from follow-up in company B indicated that the fuel consumption had decreased after the auditions.

The respondents were asked to make an assessment of some focal points of the audits. The assessment was done by answering with Likert scale from 1 to 5, where 1 represents the lowest and 5 the highest effect and 3 equals to no effect at all. Interviewed operators estimated that the immediate effect of the audit into controlling the work was on average 4.4, whereas the long term effect was estimated to be 4.0. The results indicate that the most powerful effect was experienced directly after the audit, whereas after longer time period the effect of teaching had lowered.

Results also indicated that the audit had a 4.2 average effect on improving the personal working methods, whereas the audit was seen to improve working activities as one part of the chain on average by 4.17. The respondents also noted that the audit events recreated a considerable personal interest in focusing on the more or less systematical self-improvement during the daily work.

The interviewees were also asked to give their own feedback and points of improvements to the auditing organization. Three persons raised a suggestion about extending the duration of the audits in such ways that the recognition of the changes in working methods would be reviewed e.g. one month after the audit event. This way the deeper adoption of the education would be observed in more reliable ways. Additionally, one person suggested that the participating operators would benefit more if they would receive more information about the contents and expectations of the audits prior to the first meeting in forest.

Finally, the results from the operator interviews indicate that the audits were generally found to be useful from both entrepreneur and operator viewpoints. The audits were estimated to be most fruitful when targeted to machine operators whose working skills are neither the lowest (e.g. fresh out of forestry school) nor the highest (very experienced and trained operator). Furthermore, direct comments indicated that the personal motivation towards improving working capabilities was the most important driving force in accepting and adapting the suggested points of improvement. This concluding finding correlates well with the initial idea of supporting the forest machine operators' in such ways that they will be more productive and their well-being increases.