OCCUPATIONAL DRUDGERY IN TRACTOR OPERATION

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ABSTRACT
A study was carried out during 1995-97 and observations pertaining to occupational drudgery occurring in tractor operations were collected by having interaction with 100 drivers employed on tea gardens in Assam. The study revealed that workers of 21-40 years of age preferred tractor driving. The subsoiling needed maximum concentration and alertness. The headache felt by elderly tractor drivers could be minimized by using eye lenses. The study also revealed that tractor driving should not be performed with empty stomach. The duration of continuous operation of different practices by tractor was not significantly influenced by age of drivers.

In north east India tea gardens were established about 100 years ago and tractors were imported in beginning itself. The workers were brought by contractors from neighbouring states i.e. Bihar, Bengal and Madhya Pradesh. Now they have settled and living in colonies of tea estates. The tractor drivers are from this group of people and they have acquired experience in operation of tractors. The bush uprooting, subsoiling, harrowing, land levelling, carrying tea leaves from various sections of plantation to factory and miscellaneous jobs (cutting grasses, carrying firewood, etc.) were performed with tractors on tea gardens. Liljedahl (1997) found that tractor driving might have caused considerable ill affect on health of operator. This was due to vibration of components of tractor continuously acting upon body and unhealthy posture of driver for long period. Yadav and Syamal (1998) found that tractor noise and vibration of various parts adversely affected and drivers had headache after operating tractors continuously for 4-5 hours. Yadav (1998) found that accident by elderly operators (above 45 years of age) could have been minimized by use of eye lenses as some mishappenings took place due to poor eye sight.

However, very little work has been done in this area and therefore, present study was undertaken. It would be useful in improving their occupational condition. Hence, present study was carried out during 1995-97 on tea gardens located in North Lakhimpur, Sonitpur and Darrang districts of Assam. A questionnaire was used for collecting observations related to occupational drudgery causing to tractor drivers such as duration of continuous operation, type of drudgery caused to them, physique of operators, condition of their health etc. For this study, 100 tractor drivers, selected at random were contacted. They were categorized into 3 age groups 21-30 years, 31-40 years and 41-50 years. It was found during study that 53 per cent of them were in age group of 21-30 years, which was highest, followed by tractor drivers coming in age group of 31-40 years (36 per cent). Only eleven per cent of them were found to be 41-50 years old. The tractor drivers above 50 years of age were not available in study area. It was found during study that preference given by younger workers was more for tractor driving than older workers. The elderly workers preferred to perform other farm practices such as pruning tea bushes, weeding tea field, clearing drains, etc. which were performed with manually operated hand tools.

The concentration and alertness towards job was found to be main cause of fatigue and it was classified as low, medium and high for various practices of gardens. The
subsoiling needed maximum concentration and alertness (opined by 97 per cent of tractor drivers). It was followed by bush uprooting, carrying tea leaves and miscellaneous jobs (chopping grasses, carrying firewood, etc.) as opined by 94 per cent, 91 per cent, 90 per cent of tractor drivers respectively. The need of concentration and alertness was low for harrowing, land levelling and inverting green manure crop, as opined by 93 per cent, 91 per cent and 90 per cent of tractor drivers, respectively. It was found during study that subsoiling was performed slowly with 2.0 kmph speed, to open subsoil and bring up roots of tea bushes. The care was taken to pass through rows of tea bushes. The steering of tractor was found to be tough for this operation and due to that reason tractor drivers felt arm pain, after continuous driving for 4 hours. The bush uprooting needed medium concentration. The harrowing, land levelling and inverting green manure crop were carried out with 3.5 - 4.00 kmph speed and these operations needed low concentration. It was found during study that obstruction, while performing these practices was lesser than remaining practices.

The tractor drivers of 21-30 years of age felt little stomach and muscular pain in evening after operating tractors, while tractor drivers falling in age group of 31-40 years felt headache and pain in legs in addition to drudgery felt by younger age group. The elderly tractor drivers (41-50 years old) felt arm and body pain too. While interacting with them it was found that all those who felt stomach pain, had empty stomach and this pain was due to movement of tractor on rough road which caused pain to their body. The headache was felt by tractor drivers above 31 years of age. Some tractor drivers 45-50 years of age had eye lens and they did not feel such fatigue. Ten tractor drivers from each group were selected at random and data pertaining to duration of their continuous operation were analysed and critical difference (C.D.) was calculated. The mean value of duration of continuous operation of tractor drivers, falling in age group of 21-30 years for bush uprooting, subsoiling, land levelling and miscellaneous jobs was higher than that of other two categories of tractor drivers. However, it was not significant at 5 per cent level. The same mean value for elderly tractor drivers (31-50 years of age) was found to be equal for various operations. Similarly, mean value of duration of continuous operation of 21-30 years of age, for harrowing and carrying tea leaves was also more than other two categories. However, it was also not significant at 5 per cent level, which revealed that above age had no significant effect on duration of continuous operation.

REFERENCES