Biomechanics analysis in coffee harvesting activity in Colombia [

2021

text (article)

Analítica

During this case study, the risks of posture, strength and repetition associated with the activity of manual coffee harvesting were evaluated. The sample studied was 26 volunteers who participated in the completion of a Nordic questionnaire, 10 of these were evaluated using observational, and postural tools and 8 people participated in the biomechanical evaluation of postural and muscular load using electromyography and inertial. Seven muscles and two body segments of the upper limbs were evaluated. The goal was to assess the working conditions of coffee manual harvesting considering ergonomics. The results of the discomforts were manifested in the Nordic questionnaire where it was evident that throughout a workday harvesting coffee, the discomfort focuses on the back, lower back, hands, and feet. In the muscle load evaluation was identified that the muscles with the highest activity were the Extensor, Flexor Carpi Ulnar and the trapezius. On average, their muscular activity was 20% of their maximum volunteer contraction when performing the statistical analysis. -Tics showed a greater correlation in muscle activation between the Carpi Radial Extender and the trapezius. In the postural evaluation of the body segments from the coffee harvesters evaluated, it was identified that they only maintain between 10% and 20% in neutral ranges, so they are always in risky conditions. In conclusion, it is necessary to carry out interventions in the Colombian coffee sector not only because of these evaluated conditions but also for the conditions in their work environment
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