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Research Paper

Bayesian multiple deferred sampling plan BMDS (0,1) with weighted poisson model using Golub's minimum risks method

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ABSTRACT : Acceptance sampling plans by attributes involve sampling from the weighted poisson distribution and the non-conforming process of average fraction, following a gamma distribution are considered in this article. Our work presents a new procedure for the selection of bayesian multiple deferred state sampling plan (BMDSP) through average probability of acceptance (APA) with weighted poisson distribution (WPD) as a base line distribution and reduced risk. In constructing sample plan, we propose a procedure for constructing a bayesian MDSP using WPD and developed a technique to determine the parameters of the plan by ensuring a specific required protection to both producers and consumers. The performance power of the weighted poisson BMDSP is also discussed by determining the operating characteristic (OC) curve. which are developing under the producer's and consumer's risk for specified acceptable and limiting quality levels, a gamma prior distribution is baseline distribution. The procedure is given for BMDSP with the weighted poisson distribution for given $(\mu_1, 1-\alpha)$ and (μ_2, β) .

KEY WORDS: Bayesian MDS-1 (0, 1), Weighted poisson distribution, Minimum risks plan, Acceptable quality level (AQL), Limiting quality level (LQL)

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