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Enhancing the Value Chain of Poultry Production by Using Solar Energy in Ethiopia

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Abstract

The world poultry population has been estimated to be about 16.2 billion, with 71.6 % in developing countries, producing 67,718,544 metric tons of chicken meat and 57,861,747 metric tons of hen eggs. Chicken production system is an appropriate and locally available resource in livestock populations. In Africa, village poultry contributes over 70 % of poultry products and 20 % of animal protein intake. Ethiopian indigenous chicken population is estimated to be 40.6 million and producing about 78 million of eggs per year. In Ethiopia, the average flock size under rural chicken production system ranges from 7 – 10 birds in each house hold consisting of 2 – 4 adult hens, one cock and some growers of different age groups. The egg production is estimated to be 40 to 60 eggs per birds per year with an average egg weight of 40 grams. The main problem of poultry production is electricity, market linkage, high production cost and poor management practices. Today, it is widely recognised that electricity is needed for society mobility. Electricity is not able to address supply in rural areas but solar power is one of the solutions for those problems concerning environmental impact and emissions. So by using Solar power in rural areas it will increase chicken production. The major inputs and auxiliary raw materials required are day old chickens, commercial formula feed, and high quality vaccines which have to be imported. The mean goal of this project is enhancing the value chain of poultry production by using solar energy in Ethiopia. Specifically to get economic profit which will help to expand the capacity of farm, create employment opportunity for town residents, by using solar energy to enhancing poultry production, to use manure/ excrement of poultry to biogas energy, to enhance biogas slurry used to fertiliser and to provide products to consumer at reasonable price.

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