Raising goats as adaptation process to prolonged drought incidence at the Coastal Zone of Western Desert in Egypt

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The Costal Zone of Western Desert (CZWD) is a hot dry area of < 150 mm annual rainfall, the area had faced 14 successive years of drought from 1995-2011. Field survey has been carried out with the Bedouins in the area, to assess the effect of such prolonged drought incidence on their socioeconomic vulnerability and livestock production systems. The study covered 182 breeders in the area, extended from Alexandria East (new reclaimed lands) to Libyan border West (rain-fed area), and Siwa (desert oasis), during the summer of 2011. The Bedouins had adopted different processes to cope with the long drought period, based mainly on the diversification of their farming system. The habitants of the rain-fed area (West) and the oasis whome affected more by the incidence of drought, had to take some radical means on their flocks, one of which is reducing their flock size by 37% (from 248 heads in 1995 to 155 in 2011). The other mean was to rely more on raising goats than sheep. Goats / sheep ratio has raised from 50% in 1995 to 76% in 2011 in the oasis and from 0.27 to 0.29 in the rain-fed area, over the same period. Twenty percent of the breeders in the oasis raised only goats. However, in the new reclaimed lands, with the availability of the green fodder and crop residues, the breeders increased their flocks from 152 heads in 1995 to 214 in 2011, mostly with sheep. Thirty nine percent of the breeders there raised only sheep. Annual household income from goats represented 17.4% of the total flock income in the rain-fed area in 2011, mainly from selling mature does. While it was 9.3% in the new reclaimed land; fattening lambs were the major source of family income. The annual income from goats in the Oasis was up to 40.1% of the total flock income. Furthermore, goats contribute significantly to the nutritional status of the householders in the rain-fed area. Family (of 21 members) consumed, in average 3.4 heads of goats annually, plus 4.3kg of milk daily in 2011 vs. 0.68 head of goat, in the new reclaimed area. Siwa Oasis rely, on goats for their meat consumption, (4.1 heads / family of 16 members) and 3.8 kg of milk/daily. Goats raising seems to be an effective adaptation process to cope with the prolonged drought incidence in the studied hot dry conditions.