ZIMBABWE LIVESTOCK DEVELOPMENT PROGRAM
BEEF-DAIRY MODEL

INTRODUCTION
Capital investment in dairy breeds is a prohibitive barrier to dairy farming for many smallholder farmers in Zimbabwe. The average cost of procuring improved dairy breeds is $1,800 per cow, an unfeasible expense for smallholders living on less than $1.90 a day. To address this barrier, the Feed the Future Zimbabwe Livestock Development program introduced a beef-dairy model as a low-cost springboard into commercial dairying. This inexpensive learning curve and gradual transition into dairying allows smallholder livestock farmers to unlock new sources of income, access nutrient-rich dairy products (35 percent of milk produced is set aside for home consumption), and strengthen business relationships with formal dairy markets.

MANAGEMENT PRACTICES
Farmers require low- to no-cost investments as entryway into the beef-dairy model. The program encourages farmers to adopt improved practices for cattle nutrition and health, breeding, and general herd management. These practices increase milk production in beef cows to first meet household nutritional needs and then for sale to markets. By viewing production with an eye toward potential sales, farmers cultivate a commercial mindset toward dairy farming. Without program interventions, beef cattle produce between 1-3 liters of milk per cow per day; with adequate watering, nutrition, and care, this amount increases to 10 liters per cow. Having realized this income, farmers are investing in quality dairy genetics to improve their herds.

VILLAGE AGGREGATION
When smallholders begin to produce milk for formal markets, volumes are typically too low from a commercial standpoint. The village aggregation model allows entrepreneurial village-based smallholders to aggregate milk from surrounding farmers before sending for sale to formal markets. The aggregator invests in a chiller, stores small amounts, and then delivers to market on specified days, creating a local cold chain. Farmers can deliver as little as half a liter to their aggregator, volume that would have been considered negligible before but now provides additional income for families. Since inception, the program has developed 10 village milk aggregators with a supplier base of 79 beneficiaries.

MARKETING
Access to formal markets is critical for the sustainability of the beef-dairy model, so the program prioritizes linking new beef-dairy farmers to local milk collection centers (MCCs) and small and large-scale processors.

IMPACT & SCALE
At baseline, gross margin per beef cattle was $18.80, compared to $119.49 per dairy cow. After four years, gross margins have increased to $28.66 for beef and $640.69 for dairy. Milk yields have increased from an average of 2.61 liters per cow per day to 6.3 liters per beef cow per day in FY2019. Since the beef-dairy model was introduced in program areas, more than 2,000 farmers have adopted the model and sold more than 2.28 million liters worth $2.18 million. In addition, the proportion of female dairy farmers has increased from 12 percent to 45 percent.