Dear ACME Executive Board,

On behalf of our team, I write to you about the results of our analysis regarding the potential for expansion into Ghana. Our findings suggest that there are certain factors that may contribute to the agricultural profits per acre in the country. At first, we tried to measure which factors were most significant, and came to the conclusion that three were most predictive of the agricultural income. In order of increasing significance, these factors are whether fields are irrigated, whether the household uses insecticides, and finally the household education rate. Also a significant predictor, but not as strong, is the presence of motor roads in the community.

The following graphs illustrate the influence of the aforementioned factors on the profit observed in Ghana. First, we can examine the influence that the presence of motor roads has in a community. As evidence by the bar graph below, the mean profit per acre was approximately 1.5 million in communities without roads, whereas it was less than half, or 666,228, in communities with roads. This suggests that motor roads may reduce the potential for profit, potentially because there is less acreage for agricultural purposes.

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Next, we can examine the effect that insecticide use has on the potential for agricultural profit. Here, we see that on average the communities which include insecticide use tend to profit more, at nearly double the amount of communities which do not utilize insecticides. This may be because communities that do use insecticides protect their crops from destruction by pests,

whereas in the absence of insecticide, it is possible that more crops are infested, meaning they cannot be sold.

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Finally, we come to the household education rate. The graph below shows the slight positive trend we observe in the profit per acre in relation to the overall household education rate. Our analysis suggests that this is a significant predictor, so we can hypothesize that as a household becomes increasingly educated, the chances for profit improve. This is fairly intuitive given that individuals with higher education levels may be better prepared to not only manage their farm, but also engage in business with relevant entities to obtain greater profits.

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