

*Biol. Farm*

The University of Chicago,  
December 3, 1903.

*Trusler*

*Original copy*  
My dear President Harper,

I desire to bring up again the matter of the Field and Farm; and this time to consider the probable expense to the University of administering ~~the farm~~ them say for the next four years. It is true, of course, that a great deal of money might be spent if it were available; I shall speak of the smallest amount that will enable us to maintain the Observation Field so that it can be used for study and kept free from harmful intrusion and, secondly, of the smallest amount that will yield results in experimental evolution and will, at the same time, supply animals for the medical work.

I am assuming that we have an observation tract on the shore of the lake, as planned, and a Farm of about 270 acres of which 100 acres are arable, the rest being pasture and wood-land. I assume also that we are assured of a fixed income of ~~about~~ not more than \$3,000 to which may be added from Departments receipts, in return for special services done them involving additional expense.

The only annual expense ~~that~~ I foresee in the Field is for a warden and for repair of fences--I assume immunity from road and other taxes. It so happens that a fisherman lives in a hut on the grounds. He would probably serve efficiently for \$100. Let us apply \$100 for the repair of fences, a total of \$200 annual expense for the Field.

The first expense on the Farm is an animal care-taker. I know two good men, either of whom could undoubtedly be got for \$600 and house rent free on the farm. Either of these men is a good carpenter who could make cages and repairs of various sorts. He should have a helper--a boy from a farm near by at an estimated cost, at first, of \$250. This would put the wages at \$850 the first year, rising to \$1000 by the fourth year. To assist in the scientific work we could undoubtedly obtain a man with a Carnegie assistantship, who



would be glad to render some service of a scientific sort in exchange for the opportunities that the Laboratory would afford. *All of the workers at the Laboratory would naturally assist in its scientific work.*

Food is, naturally, an important item of expense. Let 100 acres be cultivated "on shares" the cultivator supplying seed and labor and receiving half the crop, which, I am told, is a usual arrangement in Indiana. Fifty acres in the proportion of 2/5 hay, 2/5 corn and 1/5 oats would yield, on the average, (U.S. Department of Agriculture reports for Indiana) <sup>hay and</sup> grain worth \$450 and abundant <sup>stacks, fodder and</sup> bedding thrown in. Extracting \$50 for threshing, etc. leaves a balance of \$400 worth of <sup>hay</sup> grain, costing at least \$500 retail as we now buy it for the animal house. Using the experience of the animal house during the past year and remembering the grazing facilities that the farm would offer during six months of the year I estimate that the available food would sustain 400 guinea pigs, 200 rabbits, 300 mice, 300 rats, 15 goats, 15 ducks and geese, and, say, one or two horses and cows. Poultry raised for experimental studies in heredity, while perhaps not needed for the medical work, could be raised at a profit. The same is true of bees and certain other animals. Insofar as additional animals were demanded by the medical departments they could be furnished for the additional cost. On this basis all the food required for the animals can be supplied without annual expense to the University.

Purchase of animals. For the first year \$1000 will be needed for animals. Under the hygienic conditions offered by the farm and the Laboratory of Experimental Evolution the death rate should be small and the fertility large. It will be necessary, however, from time to time to bring in new blood and even occasionally to import a species from a foreign country. For new animals we should have \$250 each year after the first. Larger purchases will, of course be made by departments as needed.

Cages and Shelters. The barn now on the place will shelter eight or ten of the larger animals. The smaller animals would be sheltered in the Laboratory, runs being provided for rabbits and guinea pigs into the open air. Pens and cages would have to be built to meet the increasing stock of animals. This amount would vary between \$250 and \$500. We may take the higher figure. This would provide 100 double mouse cages, 100 double rat cages and 50 to 100 guinea pig stalls, each year; *with a balance for other lumber.*

The expenses of heating and lighting will naturally fluctuate with the price of fuel. \$150 for soft coal and \$75 for lighting with gasoline should suffice.

There will be many incidentals that cannot be readily foreseen: Express, ~~septics~~, antiseptics, certain instruments, supplies and expense. Perhaps a fair estimate would be \$50 a month, or \$600 for the year.

If, as has been suggested, workers should sleep in their laboratory workroom, as is the custom in many French laboratories, they should be charged such a fee as would cover the expense of care of the room.

SUMMARY OF ANNUAL EXPENSE *of Farm*

	1st year	4th year
Wages .....	\$850	1000
Purchase of animals.....	1000	250
Cages, shelters, and repairs.....	500	500
Heating and lighting.....	300	300
Incidentals.....	<u>600</u>	<u>600</u>
Total annual expense.....	\$3250 & sales	\$2650 & sales

This estimate is much increased over my earlier one (\$1500) partly because the needs of the medical departments have been represented to me as bigger than I first thought them. It is based on more accurate data derived from our experience at the animal barn.

The *budget* of \$2650 will be added to by sales of animals to the biological departments/and by charges for keeping special animals, such as horses for antitoxin. Only by making these receipts accrue directly to the farm



extra.  
can the matter of meeting ~~extra~~ expenses be made self-regulatory.

From the foregoing estimates for Field and Farm it is seen that for from \$2750 ~~to~~ (in the second year) to \$3450 (first year) annual expenditure the purposes fully set forth in earlier communications could be accomplished. I can assure the Trustees that, had I the direction of the Experimental Laboratory, I could ensure that valuable results, attainable in no other way, could be gained with this expenditure and no more.

Respectfully Submitted,  
Chas. D. Cooper.