Memorandum for President Gideonse:

Feb. 3, 1943.

In re Farm-Camp, Country Summer School Planning:

Note: This is designed as an information, progress report, together with a request for advice and help in certain phases.

A. Over-all Objectives and Picture:
1. Farm Labor now, with correlated educational measures designed for student benefit and for better camp management, etc.

B. Organizing for 1943.
1. Building a plan: A progressive process, concomitant with following:
   a. Employment Committee, plus growing 'staff' of volunteers: Gaede, Kennon, O'Neil, Waterman, Perkins, Mallory, Arensberg, Wolfson, Hintz, etc.
2. Selling the plan:
   a. 'Processing' through faculty committees, officers, Council.
   b. Enlisting Service staff, for spring and summer.
   d. Recruiting and orienting students: first committees; next squads.
   e. Selling the plan to localities, public agencies; negotiating specific sites and appropriate terms; contracts, etc.
3. Implementing the plan:
   a. To overlap preceding, especially all but perhaps "b".
   b. Information and public relations: (Perkins, Mallory, Kilcoyne, et al.)
      a. Through faculty committees, Gaede, Benedict, et al.
      b. Enlisting staff and students: Kennon, Barnard, O'Neil, et al.
      d. Curriculum and Orientation planning: Gaede, with Wolfson, Arensberg, Hintz, Waterman, Lipsky, Benedict (Mook, Valentine?)
      c. Camp site location and negotiation: Winslow, Waterman, Barnard, Benedict, et al. Procedure includes at least three methods: correspondence and conferences, State and Federal agencies. Correspondence and later conferences: specific localities. Scouting trips: Barnard is making one now through State; made one during Christmas recess. (More will be essential)

Note: This is an attempt to bring the whole process into focus, for perspective, and for attention to critical points. Our calendar calls for active work toward site negotiation this month, and next. One new line of enquiry has been suggested: The enlistment of individuals owning large private estates who might be willing to finance housing and planting if assured of labor force. We hope you can help on this line of enquiry.

A second immediate need is tied up with the way the planning has expanded, and the increasing urgency of keeping up to a time table. Some administrative help is necessary.

A third vital problem is concerned with getting the approval of committees and Council for certain specific points: new course in "Field Work in Rural Sociology", a detail; larger problem: blanket points for work of students who make good for respectable length of work.
Farm Biology is designed to present a term's work in biology using common animals and plants of the farm and the home, with a plan of study which can be carried on in connection with summer farm camp work for which Brooklyn College is making preparations. It is being offered first here in College with the idea of preparing a number of students ahead of time. It will be open to any student without pre-requisite. Its laboratory work will be presented without a compound microscope and will take up dissections, and experiments with common plants and animals of the farm, instead of those usually studied. During summer farm work, students in this course will be carrying on laboratory work every day in the fields, while helping to raise and harvest crop plants, or while helping take care of farm animals. Here in college as a substitute for farm acres and barns, we shall use the greenhouse and experimental plot, and the animal room. Cows are out, but chickens, a sheep, and pigs are scheduled, together with live and dead rabbits, guinea pigs, rats, pigeons, and plenty of common plants. Following are some of the topics which will be covered.

1. Poultry: The structure and behavior of a live chicken; simple anatomy and physiology. Simple internal anatomy; dissection as the farmer carries it on; How much of a chicken's weight is feathers? Blood, internal organs? Bones? The chicken as a bird; as a vertebrate, with various organs and systems. Etc.

2. Diet and nutrition of chickens. What does the poultry reiser use as food? How does this food compare with human food in composition? Do chickens need all the nutrients? Vitamins? Starting with a pen of newly hatched chicks, and using other animals as well, several nutrition experiments will be carried out.

3. How does whole, wheat bread compare with non-enriched white bread as animal food? First we shall need to make two kinds of bread, vitamin-deficient, white bread, and whole wheat bread designed to be a complete food. With bread and bread-making there are ties up many biological problems. Why do we use wheat so extensively, and not much of other grains which are generally cheaper, oats, barley, corn, rye? Is yeast necessary? Thoreau decided it was not. (See quotations below.)

4. From bread and the start of animal feeding experiments, the course will cover a study of the common grains and their differences; of their germination and growth, of soil, fertilizer, and moisture requirements; species, varieties, plant breeding, and genetics.

5. From bread-making also, it will be natural to study what yeast does, in bread and also here; fermentation and decay, moulds which spoil bread and other foods, fungi which cause plant diseases. Every agricultural crop plant is liable to be attacked by a number of different diseases, and the fight against these is more difficult than the fight against crop-destroying insects.

6. Milk, milk production, and cattle. Beef, other kinds of meat, and the animals from which we get the meat. A live sheep and live pigs will give the basis for external study and knowledge of feeding needs. Rabbits, rats, and guinea pigs will supply mammals for dissection and study of internal structure, organs, tissues. Students in Farm Biology in College will have a chance to find out what the farmer means by "chores".

7. Species and varieties of Farm animals; life histories and reproduction. Breeding, inheritance, and genetics all these can be experimentally studied within the span of a term by using some of the smaller laboratory animals, some of which have clear-cut, inheritable characteristics.
8. The grass family, with wheat and other cereals, hay and pasture grasses, and others, is the most important to man of all plant families, both for human food and for the feeding of domestic animals. Next in importance comes the legume family, with beans, peas, peanuts, soy beans, and others. In farm biology in college, we can start with greenhouse culture, and raise some of these legumes all the way to seed production.

9. Farm work, and everyday living, call for acquaintance with other common, useful plants: cabbages, tomatoes, potatoes, sweet corn, strawberries, cherries, apples, to mention only a few which city students are to work with next summer. During the spring, beginning in greenhouse work, the class can carry some of these well along.

10. Weeding as a farm job makes for a close acquaintance with these common competitors of crop plants. The "man with the hoe" is armed for weeds, as well as for accomplishing some useful stirring of the soil. We can get a head start by setting up some pots of soil dug out of doors, and watching for the growth of plants that do not have to be planted. In this connection, other reasons why soil has to be cultivated can be experimentally studied; weeds are only one reason. The U. S. Dept. of Agriculture recommends that prospective farm workers acquire a little "toughening" experience ahead of time; digging and hoeing out doors will supply some of this. We are hoping that the class can have at least one weekend with two days work under actual farming conditions at a nearby agricultural school.

Note: The chief difficulty with a course like Farm Biology is that there is so much real biology crowding for attention - anatomy, physiology, embryology, classification, et al. - that a term's duration will be all too short. In the college course we shall keep in mind the conditions under which the work must be studied in the summer; practically no special equipment, perhaps a hand lens, but no compound microscope. For textbooks there are hundreds of government publications, obtainable free or for a few cents apiece. You can get the following free by sending a postcard with only the bulletin numbers to Office of Publications, N. Y. State College of Agriculture, Ithaca, N. Y. (E25, E30, E36, E123, E45, E205, E404, E206, E37, E341.) From the Superintendent of Documents, Washington, D. C. (send coins, checks, or money orders, not stamps) "Farm poultry raising (5 cents). Diseases and parasites of poultry (15). Practical nutritive requirements of poultry (10). Standard breeds and varieties of chickens #1 & #2 (5 cents each). These are just a few samples. Write for list of publications on Plants, on Animals, for wider selections.

"Yet I find it not to be an essential ingredient (yeast), and after going without it for a year am still in the land of the living; and I am glad to escape the trivialness of carrying a bottleful in my pocket, which would sometimes pop and discharge its contents to my discomfort."

"Bread I at first made of pure Indian meal and salt, genuine hoe cakes which I baked before a fire out of doors on a shingle. I tried flour also; but at last found a mixture of rye and Indian meal most convenient and agreeable."

"It would seem that I made it according to the receipt which Marcus Porcius Cato gave two centuries before Christ. Make kneaded bread thus: Wash your hands and trough well. Put the meal in the trough, and water gradually, and knead thoroughly. When you have kneaded it well, mold it and bake it under a cover! that is, in a baking kettle. Not a word about leaven." Thoreau, Walden.