Statement of Work (SOW)

Project: Long Read DNA Sequencing of 24 *Daucus carota* samples for Vegetable Crops Research Unit

GENERAL INFORMATION

1.0 Scope of Work:
Provide long read DNA sequencing service for 24 *Daucus carota* genomic DNA samples.

2.0 Background:
The USDA-ARS will use this data to better understand the genetics and genomics of the *Daucus* taxon.

CONTRACTOR REQUIREMENTS

3.0 Technical Requirements/Tasks:

- Evaluate DNA for quality. Samples will be provided to the vendor by overnight shipment.
- Construct libraries from 24 *Daucus carota* genomic DNA samples. Each sample will be separately barcoded for identification after sequencing.
- Libraries will be size selected to insure minimum read length of 15,000-20,000 bases.
- Sequence each sample.

Results must include:

- Quality Control analysis of each sample.
- Minimum of 6×10^{10} bases (60 Gbases) of sequence data for each of the 24 samples.
- Average read length should be a minimum of 15,000 bases.
- Accuracy should provide a mean 90% of bases ≥Q30 and median read accuracy ≥Q30.

4.0 Deliverables / Schedule:
The product to be delivered is the sequence data and quality reports in electronic format. Delivery by October 30, 2023. Data will be delivered to the Vegetable Crops Research Unit in care of Douglas Senalik douglas.senalik@usda.gov by electronic file transfer, either by ftp, rsync, globus, or other standard protocols. Vendor also has the option to provide data on a hard drive shipped to Vegetable Crops Research Unit, in care of Douglas Senalik, 1575 Linden Dr., Madison WI 53706.

5.0 Security Requirements:
Vendor will coordinate with on-site IT for data delivery.