# KALIFORNIA GREEN AKRES CULTIVATION AND OPERATIONS MANUAL HUMBOLDT COUNTY, CALIFORNIA

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2024

Cultivation and Operations Manual For Kalifornia Green Akres APN 216-271-013

**Cannabis Cultivation Facilities** 

Kalifornia Green Akres 142 River Road Alderpoint, CA 95511



2024

# **OPERATIONS MANUAL**

#### KALIFORNIA GREEN AKRES

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# **1. PROJECT SUMMARY**

# **1.1. PROJECT OBJECTIVE**

KALIFORNIA GREEN AKRES is proposing to permit existing medical cannabis cultivation activities in accordance with the County of Humboldt's (County) *Commercial Medical Marijuana Land Use Ordinance* (CMMLUO). The project requires a Conditional Use Permit (CUP) for 26,500 sf of existing outdoor and 3,000 sf of existing mixed light cultivation. The project includes the permitting of existing and proposed facilities appurtenant to the cultivation, including greenhouses and a cultivation facility for drying, curing, and trimming of medical cannabis. The applicant aims to become fully compliant with State and Local cultivation regulations.

All outdoor full sun cultivation areas are proposed to be converted to outdoor light dep greenhouses.

# **1.2. SITE DESCRIPTION**

The Project is located at 142 River Road, Alderpoint, CA 95511, (APN 216-271-013). The subject parcel is approximately 7.13 acres in size (per the County of Humboldt's WebGIS), having varying topography with flats and slopes of up to 30% gradient. The western half of the property is primarily grassland and is developed with an existing single-family residence, approximately 1,000 sf in size, cultivation facility, and residential accessory structures. The eastern half of the property is characterized as forested. The existing 3,000 sf of mixed light cultivation is located within greenhouses.

### 1.3. LAND USE

The subject property has a General Plan designation of Rural Community Center (RCC) as identified by the Humboldt County General Plan and is zoned Forest Recreation (FR-B-5). The property contains no prime agricultural soil according to the Humboldt WebGIS. Land uses surrounding the parcel are comprised of residential and a railroad. The surrounding parcels are zoned Forest Recreation (FR).

### **1.4. STATE AND LOCAL COMPLIANCE**

### 1.4.1. STATE OF CALIFORNIA COMMERCIAL CANNABIS ACTIVITY LICENSE

KALIFORNIA GREEN AKRES has obtained two PROVISIONAL CANNABIS CULTIVATION LICENSES and will obtain an ANNUAL CANNABIS CULTIVATION LICENSE from the State of California: **CCL19-0001462, CCL19-0001632** 

### 1.4.2.STATE WATER RESOURCES CONTROL BOARD

Water for domestic use is provided by the Alderpoint Community Services District. Water for cultivation use is provided by a 100,000-gallon rain catchment pond and on-site well, as point of diversion to 12 x 5,000 gallon tanks, 4 x 1150 gallon tanks, 1 x 1100 gallon tanks, 5 x 500 gallon tanks.

### 1.4.3. NORTH COAST REGIONAL WATER QUALITY CONTROL BOARD

KALIFORNIA GREEN AKRES enrolled with the North Coast Regional Water Quality Control Board (NCRWQCB) for coverage under Tier 2 of Order No. 2015-0023 *Waiver of Waste Discharge Requirements and General Water Quality Certification for Discharges of Waste Resulting from Cannabis Cultivation and Associated Activities or Operations with Similar Environmental Effects in the North Coast Region* (WDID Number 1B16571CHUM). A Water Resources Protection Plan was developed for the project and has been implemented for activities associated with on-site cultivation since September 2016.

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#### 1.4.4.HUMBOLDTCOUNTYBUILDINGDEPARTMENT

All necessary building permits will be obtained from the Humboldt County Building Department for all existing and proposed structures and supporting infrastructure upon approval of the Conditional Use Permit.

#### 1.4.5.CALFIRE

The subject property is located within a State Responsibility Area (SRA) for fire protection. Several improvements are proposed in order to meet SRA requirements, including designating a fire turnaround and pull-out area for emergency vehicles, and management of trees and vegetation around existing structures to maintain the required 100-foot defensible space. All structures on the property meet the 30-foot SRA setback requirement from property lines.

The site is within the Alderpoint Community Services District.

#### 1.4.6.CALIFORNIADEPARTMENTOFFISHANDWILDLIFE

An LSAA has been submitted to CDFW. Several culverts are upon the property which handle drainage from seasonal runoff. An existing manmade pond is also present on the site. The pond is under the LSAA for diversion and subject to forbearance. An on-site 100,000 gallon well engineered by Fisch Drilling is used for cultivation. The well has a well completion report.

There is a Humboldt County Planning and Zoning approved 100-foot buffer between any potential wetland and the project.

#### 1.4.7.CULTURALRESOURCES

If buried archaeological or historical resources are encountered during construction or cultivation activities, the applicant or contractor shall call all work in the immediate area to halt temporarily, and a qualified archaeologist is to be contacted to evaluate the materials. Prehistoric materials may include obsidian or chert flakes, tools, locally darkened midden soils, ground stone artifacts, dietary bone, and human burials. If human burial is found during construction, state law requires that the County Coroner be contacted immediately. If the remains are found to be those of a Native American, the California Native American Heritage Commission will then be contacted by the Coroner to determine appropriate treatment of the remains. The applicant is ultimately responsible for ensuring compliance with this condition.

# 2. CULTIVATION AND PROCESSING

#### 2.1. PROPAGATION AND INITIAL TRANSPLANT

Juvenile plants are propagated on site from 'mother plants' that demonstrate the desired genetics for the specific cannabis strain. Mother plants remain in the vegetative stage solely for propagation. Cuttings are sampled from the mother plants and are rooted into a growing medium, typically oasis cubes, to produce 'clones.' The clones are placed into a greenhouse which acts as a nursery, and once fully rooted they are transplanted directly into one (1) gallon plastic containers (see Appendix A for nursery location). The juvenile plants are irrigated using hand watering methods. After 2-4 weeks the clones are then transplanted into 20-gallon smart pots with a soil and perlite medium, and moved into either a mixed light greenhouse or to an outdoor cultivation area where they continue their 'vegetative' cycle.

### 2.2. MIXED LIGHT & OUTDOOR CULTIVATION PLAN AND SCHEDULE

The mixed light cultivation occurs in an existing 3,000 square foot greenhouse. The greenhouses utilize a combination of artificial light and light deprivation to produce up to two (2) to three (3) flowering cycles per year. The monthly Cultivation Schedule in Appendix B details the cultivation activities associated with the mixed light cultivation operation for a typical two cycle year.

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Outdoor cultivation within light deprivation greenhouses will produce two (2) to three (3) cycles per year.

All full sun cultivation areas proposed to be converted to outdoor light dep greenhouses.

7800 mixed-light proposed to the County for a total of 10,800 sq-ft. Total cultivation 29,500 sq-ft.

# 2.3. IRRIGATION PLAN AND SCHEDULE

Irrigation and fertigation of plants occurs using top-feed hand watering methods. KALIFORNIA GREEN AKRES maintains that irrigation and fertigation is more efficiently managed via hand watering, allowing for daily inspection of each plant by the cultivator and tailored irrigation and nutrient application depending on the needs of each individual plant. The monthly Cultivation Schedule in Appendix C details the irrigation activities associated with all cultivation.

### 2.4. HARVESTING, DRYING, AND TRIMMING

Plants that are ready for harvest have their flowering branches removed and suspended in the drying facility which is equipped with ventilation fans. The drying process takes approximately one week.

The dried flowers are then bucked into manageable buds and fed into an automated trimming machine. The machine-trimmed buds receive a finishing trim by hand before being weighed, labeled, logged, and sealed.

The finished product is stored in the processed materials room before being transported to a licensed distribution facility. The waste product, or 'trim', from the machines is collected and placed into bins to be weighed, labeled, and sealed. Trim will be transferred to an offsite, licensed manufacturing facility.

# 2.5. PROCESSING FACILITY

All cannabis processing will occur on site at the existing 1,900 square foot processing facility which has been permitted as a commercial structure. The facility incorporates all aspects of processing including drying, curing, and trimming, and includes an ADA restroom for employees. The restroom includes a working flush toilet as well as a sink with cold and hot running water.

All cannabis processing will occur on site at the processing facility by KALIFORNIA GREEN AKRES and other principals of the firm. No employees will be involved in processing of medical cannabis.

### 2.6. EMPLOYEE PLAN

KALIFORNIA GREEN AKRES is an "agricultural employer" as defined in the Alatorre-Zenovich-Dunlap-Berman Agricultural Labor Relations Act of 1975 (Part 3.5 (commencing with Section 1140) of Division 2 of the Labor Code), and complies with all applicable federal, state and local laws and regulations governing California Agricultural Employers.

### 2.6.1.JOBDESCRIPTIONSANDEMPLOYEESUMMARY

- Agent in Charge: Responsible for business oversight and management of the KALIFORNIA GREEN AKRES. Responsibilities include, but are not limited to: inventory and tracking, personnel management, record keeping, budget, and liaison with State and County inspectors as needed. This is a full-time, year-round position.
- Lead Cultivator: Oversight and management of the day-to-day cultivation of medical cannabis. Responsibilities include but are not limited to: plant propagation and transplant, soil management, irrigation, fertilization, pesticide management, and harvest activities. This is a full-time, year-round position.
- Seasonal Laborer: Provides cultivation, harvesting, and processing support including trim machine operation and hand-finish trimming. This is a full-time, seasonal position.

### 2.6.2.STAFFINGREQUIREMENTS

In addition to the *Agent, Lead Cultivator,* up to two (2) full-time seasonal labor positions are employed. The number of seasonal laborers varies based on the needs of the farm during the cultivation, harvest

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and processing seasons. During the peak harvest and processing season, there are an estimated total of four (4) employees on site.

#### 2.6.3. EMPLOYEETRAININGANDSAFETY

On site cultivation, harvesting, drying, and trimming is performed by employees trained on each aspect of the procedure including: cultivation and harvesting techniques and use of pruning tools; proper application and storage of pesticides and fertilizers; trim machine use and cleaning; and correct hand trimming methods. All cultivation and processing staff are provided with proper hand, eye, body and respiratory Personal Protective Equipment (PPE). Access to the onsite cultivation, drying and processing facilities are limited to authorized and trained staff.

All employees are trained on proper safety procedure including fire safety; use of rubber gloves and respirators; proper hand washing guidelines; and protocol in the event of an emergency. Contact information for the local fire department, CAL FIRE, Humboldt County Sheriff and Poison Control as well as the Agent in Charge will be posted at the employee restroom. Each employee is provided with a written copy of emergency procedures and contact information. The material safety data sheets (MSDS) are kept on site and accessible to employees.

### 2.6.4. TOILETAND HAND WASHING FACILITIES

The existing drying and processing building will include one (1) ADA-compliant restroom, including a working flush toilet as well as a sink with hot and cold running water. Anti-bacterial Liquid Soap and paper hand towels will be made available. Employees will work at a distance typically no greater than 1300 feet from the restroom facility.

#### 2.6.5.ONSITEHOUSING

The existing 3 bedroom single family residence located on site is occupied by the property Agent in Charge, Lead Cultivator, and the seasonal laborers. No new residential structures are proposed as a part of this project.

### 2.7. SECURITY PLAN AND HOURS OF OPERATION

### 2.7.1.FACILITYSECURITY

An entry gate is located off Alderpoint Road. The entry gates remain locked at all times and access to the cultivation area is limited exclusively to employees. Restricted access signs are posted conspicuously at the entry gate. The processing facility area will have security cameras installed and will include an alarm system.

#### 2.7.2. HOURS OF OPERATION

Activities associated with cultivation in the greenhouses (watering, transplanting, and harvesting) generally occur during daylight hours. All other activities such as processing typically occur no earlier than 8 AM and extend no later than 8 PM.

# 3. ENVIRONMENT

# 3.1. WATER SOURCE AND PROJECTED WATER USE

Water for cultivation use is provided by a 100,000-gallon rain catchment pond and 100,000 on-site well, as

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point of diversion to 12 x 5,000 gallon tanks, 4 x 1150 gallon tanks, 1 x 1100 gallon tanks, 5 x 500 gallon tanks. Water for domestic use is provided by direct service connection to the Alderpoint Water District.

The table below outlines the estimated irrigation water usage for cultivation during a typical year. Variables such as weather conditions and specific cannabis strains will have a slight effect on water use. Water conservation is a priority, with hand watering and monitoring in effect.

Table 3.1: Estimated Annual Irrigation Water Usage (Gallons)											
Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec
500	500	500	500	30000	50000	50000	50000	30000	30000	500	500

#### **3.1.1.** IMPLEMENTATION OF DRIP TAPE IRRIGATION.

Kalifornia Green Akres plans to implement a Drip Tape irrigation system which will allow for; water conservation; precise water delivery and efficient nutrient uptake. Please see appendix D for further information.

#### **3.2. WATER STORAGE**

Water for cultivation use is provided by a 100,000 gallon rain catchment pond and 100,000 gallon on-site well, as point of diversion to 12 x 5,000 gallon tanks, 4 x 1150 gallon tanks, 1 x 1100 gallon tanks, 5 x 500 gallon tanks totaling 168,200 gallons.

### 3.3. SITE DRAINAGE, RUNOFF, AND EROSION CONTROL

Kalifornia Green Akres is enrolled with the North Coast Regional Water Quality Control Board (NCRWQCB) for Tier 2 coverage, and a Water Resources Protection Plan (WRPP) has been developed utilizing best management practices (BMP's) in accordance with the NCRWQCB's recommendations.

#### 3.3.1. SITE DRAINAGE AND RUNOFF

The site is mostly flat with surface flow in the wet season generally draining from the west to the east. Drainage flows offsite into Eel River 350' east of the property. The access road will be rocked and drainage from the road has been disconnected from the stream system. There are no stream crossings on the site. The existing and proposed greenhouses are located away from riparian zones. Fertilizers and pesticides are currently stored in a storage shed with secondary containment to prevent contamination with runoff.

Site investigation for the development of the Water Resources Protection Plan (WRPP) showed no evidence of surface runoff associated with the cultivation. Cultivation facilities will meet all required setbacks from the nearest water course, providing a sufficient buffer to prevent sediment and nutrient delivery. To further prevent runoff to riparian areas, water conservation and containment measures will be implemented including the use of hand irrigation to prevent excessive water use, and the maintenance of a stable, vegetated buffer between the cultivation area and riparian zone.

#### 3.3.2. EROSION CONTROL

The Water Resource Protection Plan (WRPP) includes erosion and sediment control BMP's designed to prevent, contain, and reduce sources of sediment. The WRPP also includes corrective actions to reduce sediment delivery, including: properly dispose of vegetation waste; maintain and pump the portable toilets; constructing a sediment basin to catch surface runoff; install fiber roll on perimeter of outdoor cultivation; install rolling dips; and inslope main access road. Additionally, the WRPP requires mulch piles and spoils from any grading to be stored in a designated location away from watercourse. See the WRPP section titled *Best Management Practices for Discharges of Waste Resulting from Cannabis Cultivation and Associated Activities* in Appendix E for complete BMP recommendations and specifications.

# 3.4. WATERSHED AND HABITAT PROTECTION

Adherence to the proposed best management practices ensures that the watershed and surrounding habitat are protected. The cultivation activities and associated structures meet all required setbacks from the nearest watercourse, providing a suitable buffer between the cultivation operation and habitat. Additionally, site development and maintenance activities utilize BMP's in accordance with the NCRWQCB's recommendations. Any grading and earthwork activities will be conducted by a licensed contractor in accordance with approved grading permits.

## **3.5.** MONITORING AND REPORTING

Monitoring will be conducted to confirm the effectiveness of corrected measures listed in the Water Resource Protection Plan (WRPP) and determine if the site meets all Standard Conditions. Inspections will include photographic documentation of any controllable sediment discharge sites as identified on the site map. Visual inspection will occur at those locations on the site where pollutants or wastes, if uncontained, could be transported into receiving waters, and those locations where runoff from roads or developed areas drains into or towards surface water. The inspection will also document the progress of any plan element subject to a time schedule, or in the process of being implemented. A monitoring plan is included in the WRPP with photo points identified on WRPP map.

Onsite monitoring shall occur:

- Before and after any significant alteration or upgrade to a given stream crossing, road segment, or other controllable sediment discharge site. Inspection should include photographic documentation, with photo records to be kept on site.
- Prior to October 15 and December 15 to evaluate site preparedness for storm events and stormwater runoff.
- Following any rainfall event with an intensity of 3 inches precipitation in 24 hours. Precipitation data can be obtained from the National Weather Service by entering the site zip code at <a href="http://www.srh.noaa.gov/forecast">http://www.srh.noaa.gov/forecast</a>.

A Monitoring and Reporting Form (Order No. 2015-0023 Appendix C) will be submitted upon initial enrollment in the Order (NOI) and then annually by March 31 to the Regional Water Board. The annual report will include data from the monitoring reports.

### 3.6. ENERGY AND GENERATOR USE

On-grid electricity is provided by PG&E for all cultivation and domestic uses. No generator is used on site.

### 3.7. Use and Storage of Regulated Products

### 3.7.1. BEST MANAGEMENT PRACTICES

Best Management Practices (BMP's) are employed when storing, handling, mixing, application and disposal of all fertilizers, pesticides and fungicides. All nutrients, pesticides and fungicides are located in a locked storage room, and contained within watertight, locked and labeled containers in accordance with manufactures instruction. Application rates will be tracked and reported with the end of the year monitoring report required in the Water Resources Protection Plan (WRPP). Employees responsible for application are trained to handle, mix, apply or dispose of pesticides/fungicides with proper hand, eye body and respiratory protection in accordance with the

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manufacturer's recommendations. See the WRPP for complete BMP specifications for the use and storage of regulated products.

### 3.7.2.FERTILIZERS

Nutrients and biological inoculants used for cultivation include:

Fox Farm Grow Big

Cal Mag Pure Blend

Fox Farm Big Bloom Overdrive

- Advanced Nutrients

See Appendix B - Regulated Products Resource List for product details.

# 3.7.3. PESTICIDESANDFUNGICIDES

Pesticides and fungicides used for cultivation include:

Venerate cg. Grandevo cg. Regalia cg.

See Appendix B - Regulated Products Resource List for product details.

# 3.7.4.FUELSANDOILS

No fuels and oils are stored on site.

### **3.8. WASTE MANAGEMENT PLAN**

### 3.8.1.SOLIDWASTEMANAGEMENT

Trash and recycling containers are located on a concrete pad underneath the processing building overhang. Solid waste and recycling is hauled off-site to the Alderpoint transfer station at least once per week by trailer.

### 3.8.2. CULTIVATION WASTE AND SOIL MANAGEMENT

Cultivation vegetative matter such as root balls, branches, and leaves are burned at a designated area (see WRPP map in Appendix E). Spent potting soil is hauled off site yearly. Used pots will be collected and stored in the processing building for the winter. All packaging from soil amendments and fertilizers will be collected and disposed of at an appropriate facility.

### 3.8.3. WASTEWATER MANAGEMENT

Hand watering methods minimize the over-irrigation of plants and subsequent runoff. Moreover, the greenhouse floors are gravel/dirt and will absorb any excess runoff.

A septic system is in place for the existing residence and processing facility.

# 4. PRODUCT MANAGEMENT

### 4.1. PRODUCT TESTING AND LABELING

Samples are selected from individual harvested cannabis strains and are tested by a licensed third-party lab in accordance with State and local standards. The finished product is labeled with the KALIFORNIA GREEN AKRES tracking ID's provided by the Statewide tracking system Metrc.

# 4.2. PRODUCT INVENTORY AND TRACKING

In accordance with California Department of Food & Agriculture, CalCannabis Licensing Division, California has selected Metrc as the state's track-and-trace system used to track commercial cannabis activity and movement across the distribution chain ("seed-to-sale".

Kalifornia Green Akres utilizes the regulatory cannabis system Metrc along with paid Metrc approved API software Flourish. Flourish software provides inventory reporting and management which Kalifornia Green Akres utilizes for inventory management as well as monthly reporting. All reporting is kept in the cloud.

# 4.3. TRANSPORTATION AND DISTRIBUTION

Transportation will be handled by a third-party, contracted, licensed transporter/distributer in accordance with State and Local regulations. All merchantable products will be distributed through licensed cannabis dispensaries. Prior to moving packages from the on-site holding facility to another physical location, a transport manifest will be created by the distributor/transporter in Metrc and will include:

- Product ID numbers and product weight
- Route to be traveled.
- Origin and destination addresses
- Time of departure
- Time of arrival

The Agent in Charge and the Processing Manager are responsible for performing a physical inventory of all packages being transported and ensuring that the physical inventory coincides with the transport manifest.

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# Appendix A: Site Plan

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# Appendix B: Cultivation Activities Schedule

# OPERACULTIVATION ACTIVITIES SCHEDULE

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Item	Description	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug		
Drainage, Runoff, and Erosion Control	Winterization (storage of pots/greenhouse covers)										
	Temporary Erosion Control BMP's (straw, seeding, fiber rolls, etc)										
	Road maintenance										
	Culvert and inboard ditch maintenance/inspection										
	Cultivation waste hauled off site										
	Cover soil beds and seed/straw with cover crop										
Irrigation Activities	Irrigation of juvenile plants /clones										
	Irrigation of flowering plants										
	Propogate cuttings from 'mother plant' stock										
Pre-	Transplant cuttings into 1 Gallon pots										
cultivation Activities	Transplant clones into beds										
	Amend soil in greenhouses										
	Import new cultivation soil										
Mixed Light/	Mixed Light/ Light Dep Cycle 1										
Light Dep Cultivation and Harvest Schedule	Mixed Light Cycle 2										
	Harvest activities										
	Light deprivation: Greenhouses are covered with blackout covers										
Outdoor Cultivation and Harvest	Outdoor Cultivation Cycle										
	Harvest activities										
Drying and Processing	Drying activities										
	Trimming activities										
Staffing Presence	Agent in Charge										
	Seasonal Laborors										

# Appendix C: References

- Bass, Ronald E., Kenneth M. Bogdan, and Terry Rivasplata. 2013. CEQA Desktop. Point Arena, CA; Solano Book Press. Page 44.
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# **Appendix D**

Drip tape irrigation implementation. Advantages

- Precise Water Delivery: Drip irrigation systems provide precise control over water delivery, delivering water directly to the root zone of plants. This targeted approach ensures that water reaches the plants' root systems where it is needed the most, reducing water loss through evaporation or runoff.
- Water Conservation: Drip irrigation significantly reduces water waste by avoiding unnecessary water dispersion. It conserves water by supplying it directly to the plants' roots, minimizing overspray or surface runoff that can occur with other irrigation methods.
- 3. Efficient Nutrient Uptake: Drip irrigation can be combined with fertigation, the process of applying nutrients through the irrigation system. This enables a precise and efficient delivery of nutrients directly to the root zone, maximizing nutrient uptake by cannabis plants.
- 4. Scalability: Drip irrigation systems can be easily scaled up or down to accommodate various garden sizes and layouts. Whether you have a small home garden or a large commercial operation, drip irrigation can be customized to meet your specific needs.

### Efficiency and water conservation

To maximize efficiency and conserve water with drip irrigation the following strategies will be implemented:

- Mulching: By using Mulch and adding Char around the base of the plants to minimize evaporation, regulate soil temperature, and reduce weed growth. This helps retain moisture in the root zone, reducing the frequency of irrigation.
- Watering Schedule: We will establish an appropriate watering schedule based on the specific needs of our Cannabis plants. These factors include: plant size, growth stage, weather conditions, and humidity levels when determining the frequency and duration of irrigation cycles.
- 3. Watering Time: Watering during the cooler parts of the day, such as early morning or late evening, reduces evaporation and allows plants to efficiently utilize water.
- 4. Zone-based Irrigation: The greenhouses will be divided up into zones based on plant water requirements. This allows us to customize the irrigation schedule and water application based on the specific needs of different areas.