



Land and Water Suitability Analysis Policy

Data Package for New Agricultural Projects

1.0 Objective:

This Land and Water Suitability Analysis Policy (this “Policy”) requires a pre-feasibility analysis (“Feasibility Analysis”) of any land and water resources proposed for new agricultural development based on solid technical studies to ensure the success of the project. This Policy enumerates the material risk assessment that must be evaluated by the local operation before submitting a request for capital investment for a proposed new agricultural development.

2.0 Scope:

This Policy applies to the Fresh Del Monte Produce global group of companies and the terms “Fresh Del Monte Produce,” “Company” “we” “our” or “us” refer to Fresh Del Monte companies, in general, when no useful purpose is served by identifying any particular Fresh Del Monte entity, each of which has its own separate entity.

3.0 Policy:

The Feasibility Analysis must be conducted and approved before a CAR is submitted for any land purchase, land lease, or arrangement where Company resources will be invested to develop an agricultural project equal to or larger than 50 hectares or worth US \$100,000 or more. The Feasibility Analysis, and any subsequent CAR deriving from it, requires the review and approval of the Vice President, Corporate Research & Development and Agricultural Operations. This provision applies also to any land that was previously leased/acquired and did not go through this approval process as well as incremental purchases of land that are less than 50 hectares but form part of a project that exceeds 50 hectares or worth equal or greater than US \$100,000. Fresh Del Monte Produce will generate the required studies using qualified specialists and recognized laboratories. Operation should seek funds to carry out these studies through an Exploratory CAR as indicated in the revised Financial Policy. If the survey results are positive, and an investment project is approved, part or all of these exploration funds will become part of the larger investment.

1. Weather

Demonstrate the prospective site is within the acceptable range of weather parameters for the intended project.



- a. Prevalent conditions: data of at least 5 years, including coordinates of weather station located nearest to the project
- b. Temperature
 1. Daily average
 2. Daily maximum and minimum
- c. Rainfall (daily)
- d. Evaporation (daily tank)
- e. Sunlight hours/radiation
- f. Wind speed

2. Location and size

Provide enough data to accurately identify the site, and its topographical characteristics:

- a. Latitude and longitude coordinates of the potential development site
- b. Elevation (above sea level)
- c. Map indicating size of land prospected (preferably using aerial/satellite photography, that includes relevant landmarks)
- d. Type of predominant topography
- e. Current ownership

3. Water & watershed

Ensure there is enough water, and of the required quality for the proposed agricultural project in the present and foreseeable future:

- a. Source(s): name river and watershed relevant to the proposed farming operation
- b. Distance of water sources from the farm
- c. Proposed irrigation system
- d. Volume requirements for farm development (including any expansion being considered)
- e. Quality:
 - a. pH, salinity, electrical conductivity
 - b. Absence of plant pathogens of concern for the crop (Ex: Panama disease TR4 for bananas)
 - c. Presence of human pathogens.
- f. Quantity (**evaluated during low water period: mid to end of dry season**): it must be clearly demonstrated that water availability will cover all the requirements of the project.
 - i. If underground water will be used, then a deep well pumping test should be conducted to ensure the capacity of the well to supply the water requirements **sustainably over time.**



- ii. These evaluations must be performed by a recognized expert in the field, but typically entail tests that look at water flow rate over at least (but not limited to) 24 hours, and measure the capacity of the well to recover from water extraction.
- g. Include considerations for other users and stakeholders of the same resource (both downstream and upstream). Including access risk, regulatory risk, or potential for upstream degradation of water quality.
 - i. Request from the appropriate governmental agency about the conditions of the watershed in the area the project is intended. In the absence of a relevant study, use WRI Aqueduct tool (a qualitative analysis is sufficient): <http://www.wri.org/our-work/project/aqueduct>

4. Soil

Obtain information to demonstrate the soil is suitable for the intended agricultural project, such that the crop will yield at competitive levels given foreseeable market conditions. Execute a soil suitability analysis including at least a semi-detailed soil analysis (as a reference, use one observation per 10 hectares for bananas):

- a. Texture and structure
- b. Fertility
- c. Profile description
- d. Effective depth
- e. Current land use, and land use history (evaluate presence of hard pan, and risk of undesirable soil contaminants such as heavy metals)
- f. Drainage:
 - i. Describe the main limitations in drainage: water table depth, presence of layers of soil that limit surface drainage, topographic issues that limit drainage of the land under study.
 - ii. Specifically describe the feasibility to build the main outlet canal(s) to evacuate excess water by gravity.
 - iii. Indicate if main outlet canals need to pass through third party's properties.
 - iv. Otherwise, indicate if a bilge station is required and where the pumped water will be disposed to.
 - v. A contour map should be prepared previous to any land development and submitted to R&D.
 - vi. A drainage design should be developed based on isohypses, isobaths and flow lines, and presented to R&D with the Capital Acquisition Request's documentation (**Apply only to projects in the Tropics**).
- g. Make at least a semi-detailed soil map with the soil classification

5. Pests and plant health



Properly identify the risk associated with the presence of any major disease and pest that can hinder the success of the project. Examples of major diseases include Panama disease (TR4) in bananas, Fusarium in pineapples, or certain viral diseases in melons:

Special Note for banana projects on Black Sigatoka disease control:

- i. Indicate if fungicide applications will be done with aircraft or terrestrial equipment.*
- ii. If by aircraft, indicate availability of service suppliers, type of equipment and the distance between the prospected farm and the nearest airport with the fungicide mixing station.*
- iii. Otherwise, indicate if equipment, roads or airstrip, and mixing facilities, will be constructed as part of the project.*

6. Potential yields and fruit quality: Based on the soil studies, weather pattern and other parameters described above develop a preliminary estimate of yield /ha:

- a. Tons/ha (or boxes of premium class fruit per hectare)
- b. Brix (or grade where appropriate)
- c. Pack out (box stem ratio, or any other measure of conversion parameter)

7. Risk of natural disasters (intensity and frequency)

Demonstrate the proposed site has absence of major risks, or they are manageable. If so, clearly state how the new operation intends to manage that risk:

- a. Risk of natural disasters such as flooding, hurricanes, tornadoes, freezing, hail, etc. and known frequency.
If there is a risk of flooding:
 - i. Describe the main causes associated with such risk.
 - ii. The type infrastructure that needs to be constructed to mitigate it.
 - iii. Provide a preliminary estimate of associated cost of such infrastructure.
 - iv. Specify if additional studies are required to properly evaluate flooding hydrology of the basin.
- b. In the absence of accurate and reliable information to judge the risk of flooding, an expert should be hired to execute a hydrological study of the river basin including peak flows and hydraulic component of such river flow.
- c. Risk associated with high environmental impact like draught and if no local data is available, use web-based tools such as WRI Aqueduct:

<http://www.wri.org/our-work/project/aqueduct>

8. Ecosystem Conservation

- a. No agricultural projects will be developed in lands covered with mature forest or in areas with a high risk of directly impacting wetlands.



- b. A satellite or drone image should be submitted to show the type of vegetation existing on the land under assessment and its immediate surroundings.

9. Other considerations that can have an impact on the success of the project

- a. Distance to ports
- b. Access roads and quality of roads
- c. Power availability
- d. Supply of agrichemicals and packaging materials
- e. Work force availability, and how prone the area is to belligerent and/or aggressive work forces
- f. Political and social stability of the site

10. Filing and referencing Land Suitability Studies:

As these land suitability studies are used to support CAR's, we recommend a filing system that helps a quick reference and identification of such studies. A simple system such as the following can be used:

LSSGTBA2017-01

LSSGTME2017-02

LSSGTTO2017-03

Where:

LSS: Land Suitability Study

GT: Two first letters of the country the study belongs to (GT : Guatemala)

BA, ME, PI, TO: First two letters of the crop involved (BA: bananas, ME: melons, PI: pineapple, TO: tomato, and so on).

Then the **respective year** and a **consecutive number** regardless the crop involved.

All LSS conducted in 2017 should be filed following the above system and resent to Corporate R&D and Corporate Finance. Any new LSS should follow this filing system.

Any CAR submitted for approval must have a reference to the specific LSS according to the filing nomenclature described above.

11. Prior to project execution:

- a. A timeline describing the different steps of project execution should be developed and presented to Vice-President of Corporate R&D and Agriculture Operations for approval at the same time the CAR documentation is submitted.
- b. No project can be initiated without a complete drainage and irrigation network design and a flood protection infrastructure design according to the needs identified in the land feasibility study. These designs should be submitted to Corporate R&D for approval.
- c. The same applies for runways or roads designs, spraying equipment and mixing stations for banana projects requiring these investments.



Check list for Land Suitability Studies (LSS) completion (Mark with an ✓ if the corresponding section was completed)	
1. Weather	
a. Coordinates and altitude (masl) of weather stations used to provide the data	
b. Temperature	
Daily Average	
Daily Maximum and Minimum	
c. Rainfall (daily)	
d. Evaporation (daily tank)	
e. Sunlight hours/ radiation	
f. Wind Speed	
2. Location and size	
a. Latitude and longitude coordinates of the potential development site	
b. Elevation (above sea level)	
c. Map indicating size of land prospected (preferably using aerial/satellite photography, that includes relevant landmarks)	
d. Type of predominant topography	
e. Current ownership	
3. Water and Watershed	
a. Sources identified	
b. Distance of water sources from the farm	
c. Proposed irrigation system	
d. Volume requirements for farm development (including any expansion being considered)	
e. Quality	
pH, salinity, electrical conductivity	
Presence of human pathogens	
f. Quantity (evaluated during low waters period: mid to end of summer)	
g. Analysis of other stakeholders / users in the watershed	
4. Soil (soil is suitable study for the intended project)	
a. Texture and structure	
b. Fertility	
c. Profile description	
d. Effective depth	
e. Current land used and past used	
f. Drainage (points a through f completed)	
g. Map of semi-detailed soil study	
5. Pests and plant health	
a. Risk associated with the presence of any major disease and pest that can hinder the success of the project (for example: Fusarium wilt TR4 in bananas)	
b. Need of infrastructure identified for pest and disease control	
6. Potential yields and fruit quality	
a. Tons/ha (or boxes of premium class fruit per hectare)	



	b. Brix (or grade where appropriate)	
	c. Packout (box steam ratio, or any other measure of conversion parameter)	
7. Risk of natural disasters such as flooding, hurricanes, tornadoes, freezing, hail, etc. and known frequency		
	a. Describe the main causes associated with such risk	
	b. The type of infrastructure that needs to be constructed to mitigate it	
	c. Specify if additional studies are required to properly evaluate flooding hydrology of the basin	
	d. Water Management expert hired to execute a hydrological study of the river basin (mark with an X)	YES
		NO
8. Ecosystem Conservation		
	a. No lands proposed covered with mature forest or in areas with a high risk of directly impacting wetlands.	
	b. A satellite or drone image showing the type of vegetation existing on the land under assessment and its surroundings.	
9. Other Considerations		
	a. Distance to ports	
	b. Access roads and quality of roads	
	c. Power availability	
	d. Supply of agrichemicals and packaging materials	
	e. Work force availability, and how prone the area is o belligerent and/or aggressive work forces	
	f. Political and social stability of the site.	



QUESTIONS

If you have any questions about this Policy, please contact the following individual in Company's Research and Development Department.

Department: Research and Development

Contact Name: Ronald Romero

Title: Assistant Vice President, Research & Development

Email: RRomero4@freshdelmonte.com

VIOLATIONS

If you are or become aware of any violations of this Policy, please report them to Company, using the contact information set forth above.

RIGHT TO MODIFY POLICY

The Company reserves the right to amend this Policy at any time. In the event of a dispute as to the interpretation of this Policy, Company's interpretation shall be final.

Effective date: August 17, 2020