

5. SEED PRODUCTION RESEARCH



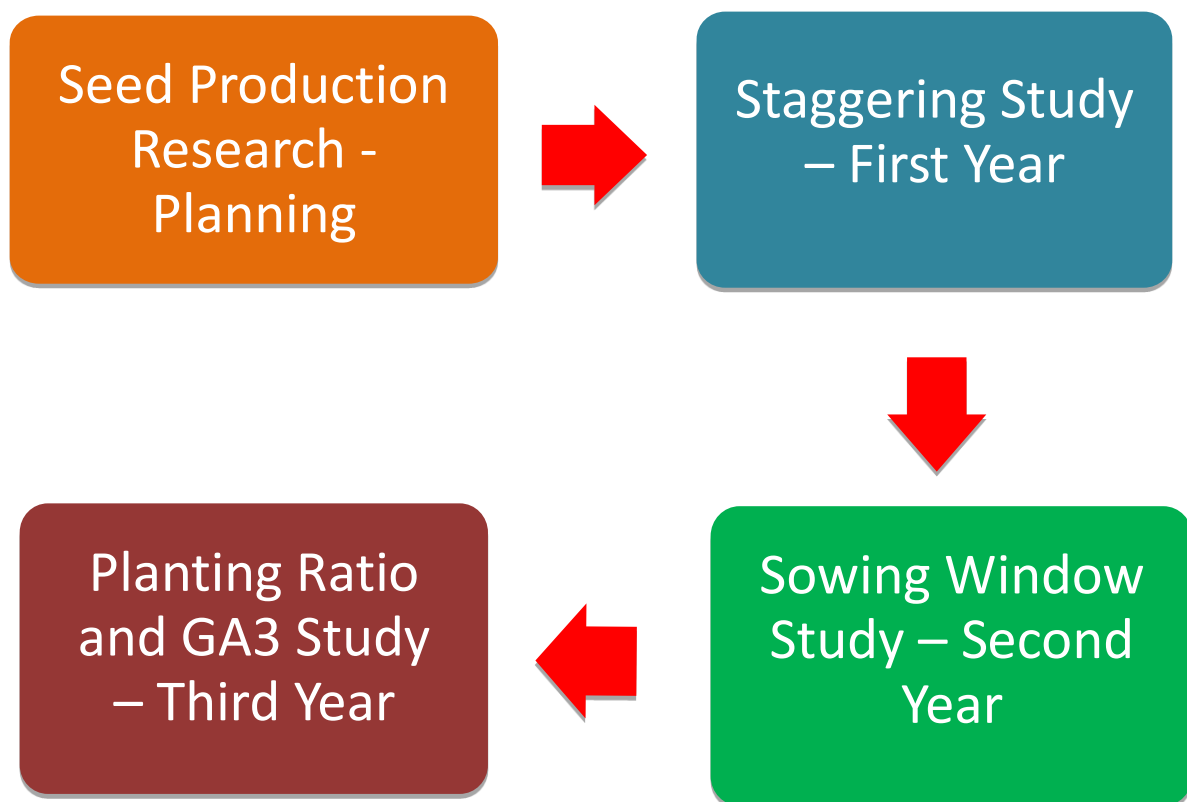
5. SEED PRODUCTION RESEARCH

PROCESS SUMMARY

Objective:

- To study the producability of new hybrid variety seeds
- To provide suggestion for production to get optimum yield

Process Overview:



Process beginning:

- Receipt of finalized hybrid parents from breeder

Process ending:

- Submitting Seed production research report to respective authorities

Key Inputs

Particulars	From	Document Reference
Finalized hybrid parents	Breeder	PDD/COM/009
Morphological characters	Breeder	-
Staggering inputs	Breeder	-

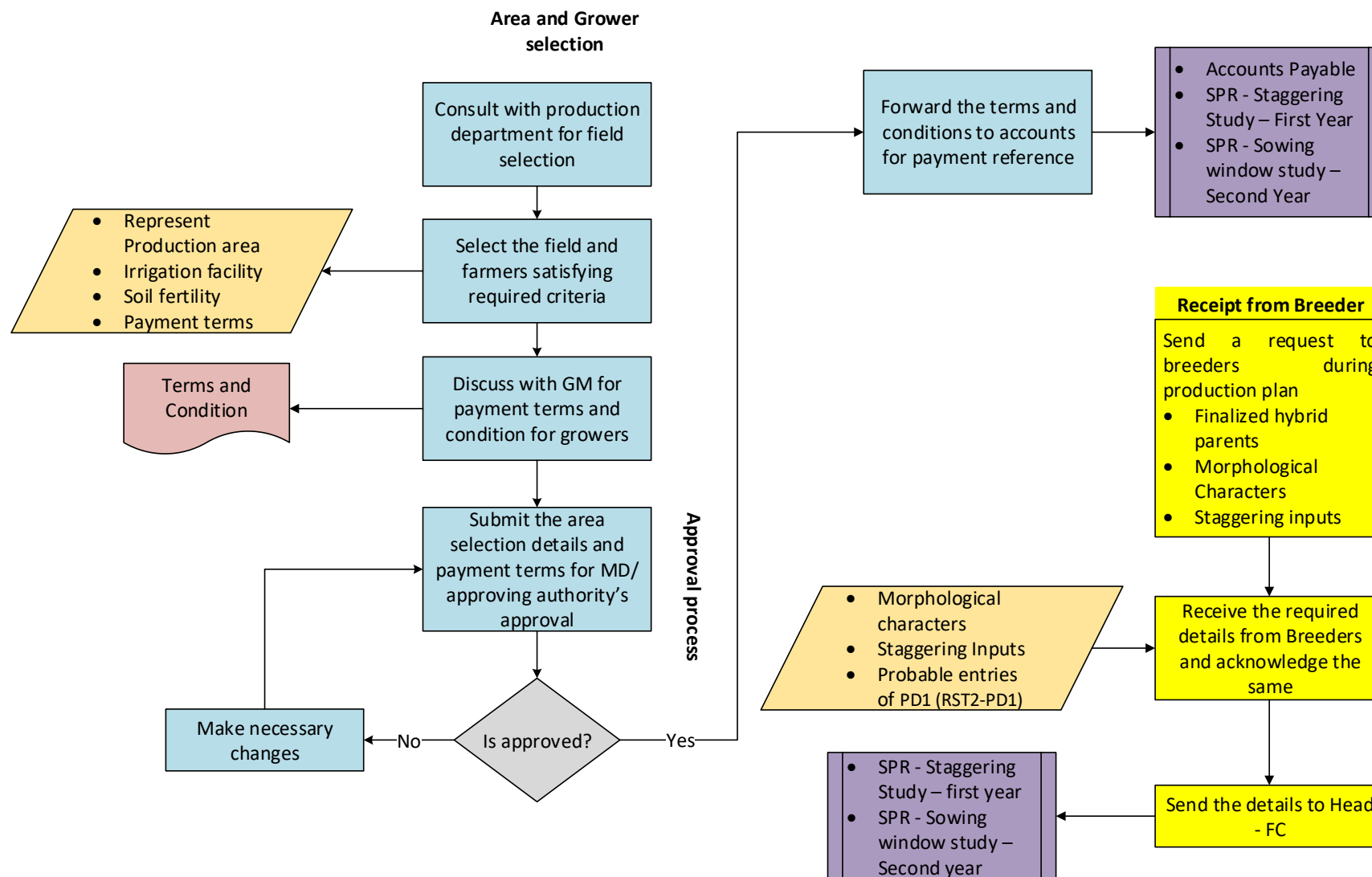
Key Outputs

Particulars	To	Document Reference
Staggering study report	Reporting authority, Breeder & Production Head	SPR/FCD/008
Sowing window study report	Reporting authority, Breeder & Production Head	SPR/FCD/006
Planting ratio and GA3 study report	Reporting authority, Breeder & Production Head	SPR/FCD/003

Key Documents / Register / Files

S no	Document / Register Name	Document Format	Document Reference
1	GA3 Dosage/Data Sheet	Excel	SPR/FCD/001
2	Male and female flowering data	Excel	SPR/FCD/002
3	Planting ratio and GA3 study report	Word	SPR/FCD/003
4	Seeds receipt acknowledgement form	Pre-printed form	SPR/FCD/004
5	Sowing Report – SPR	Pre-printed form	SPR/FCD/005
6	Sowing window report	Word	SPR/FCD/006
7	SPR – Grower Terms and condition	Excel	SPR/FCD/007
8	Staggering study report	Word	SPR/FCD/008
9	Yield report	Excel	SPR/FCD/009
10	Parent Seed indent	Excel	GEN/COM/032
11	Seed Dispatch Note for Field Run Seed	Pre-printed form	GEN/COM/020
12	Stock Transfer Shipment	Software form	GEN/COM/009

5.1 SEED PRODUCTION RESEARCH – PLANNING



Sub-process Owner:

Seed production research - Manager

Departments Involved:

Seed production research

Breeder

Production

Key activities:

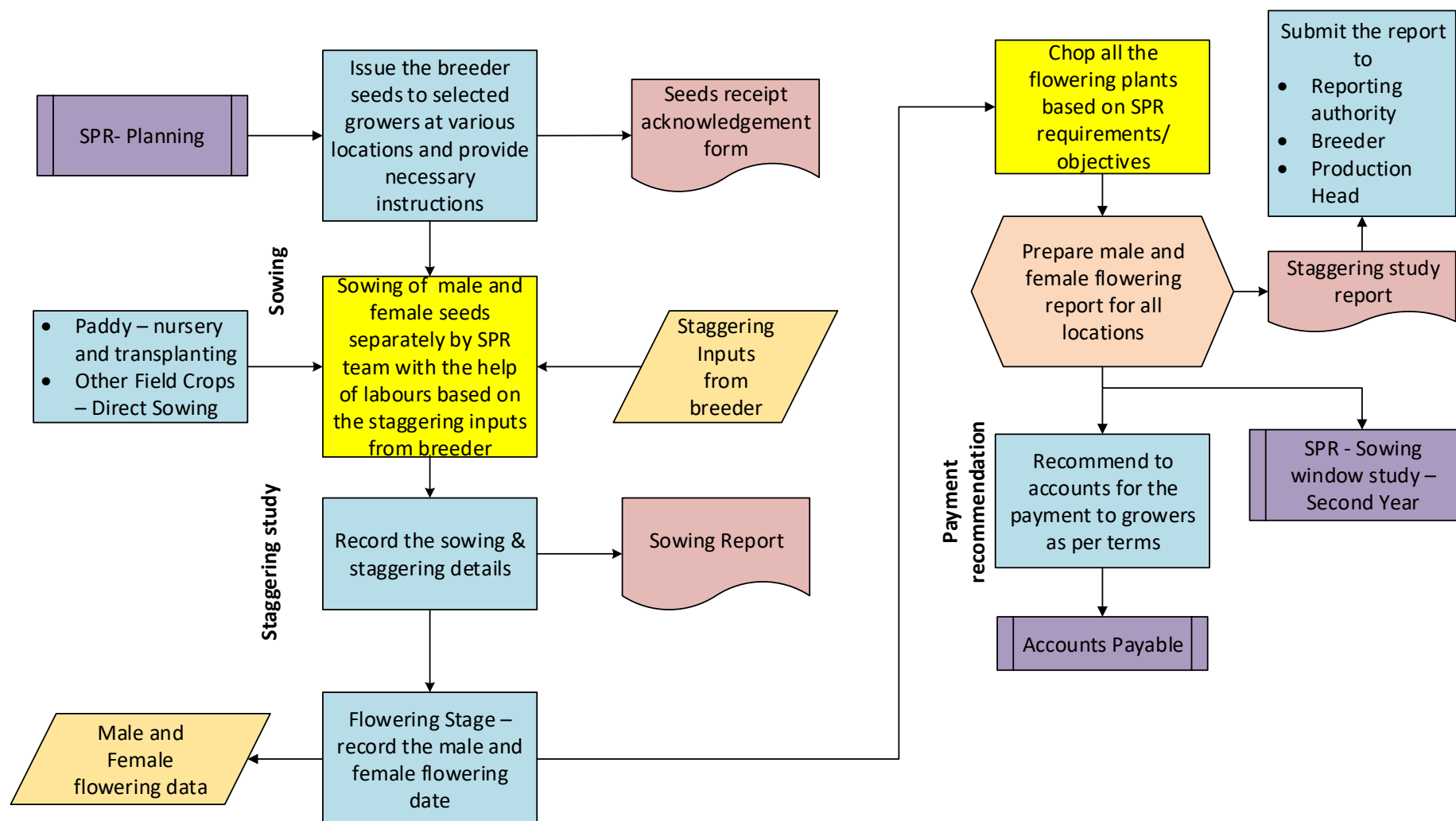
5.1.1 Area and grower selection

5.1.2 Receipt from breeder

Process	Maker	Checker	Approver
5.1.1 Area and grower selection			
1) Consult with production department for field selection as per farmers requirement <ul style="list-style-type: none"> Represent production area Irrigation facility Soil fertility Payment terms 	SPR - Manager	Crop Manager	
2) Commence area survey and grower canvassing (for existing growers) <ul style="list-style-type: none"> Farmer willingness and capacity Area measurement – Manual Isolation distance Shadow effect (trees) Drainage facility (low level land) Irrigation facility Labour source Neighborhood field – crop, distance, etc. 	Field Assistants/Field supervisors	Production Officers	
3) Consolidate the details of area survey and grower canvassing and submit to SPR - Manager	SPR - Executive	SPR – Manager	
4) Select the growers and fields meeting the required criteria	SPR - Manager	Head – FC	
5) Discuss with GM for payment terms and condition for growers	SPR - Manager	Head – FC Senior GM – MFG	
6) Submit the area selection details and payment terms to MD/Approving authority for approval and forward the terms and conditions to accounts for payment reference <ul style="list-style-type: none"> Accounts payable SPR – Staggering Study – First year SPR – Sowing window study – Second year 	SPR - Manager	Head – FC Senior GM – MFG	Managing Director
7) In case of no approval, rework the plan and submit for approval	SPR - Manager	Head – FC Senior GM – MFG	Managing Director

Process	Maker	Checker	Approver
5.1.2 Receipt from breeder			
1) Send a request to breeder during the production planning period for the following, <ul style="list-style-type: none"> Finalized hybrid parents Morphological characters Staggering inputs Probable entries of PD1 (RST2-PD1) 	SPR - Manager	Head – FC	
2) Receive the above data from breeders and acknowledge the same	SPR - Executive	SPR Manager -	
3) Send the details in mail to Head - FC	SPR - Executive	SPR Manager -	

5.2 SEED PRODUCTION RESEARCH – STAGGERING STUDY – FIRST YEAR



Sub-process Owner:

Seed production research - Manager

Departments Involved:

Seed production research

Production

Accounts

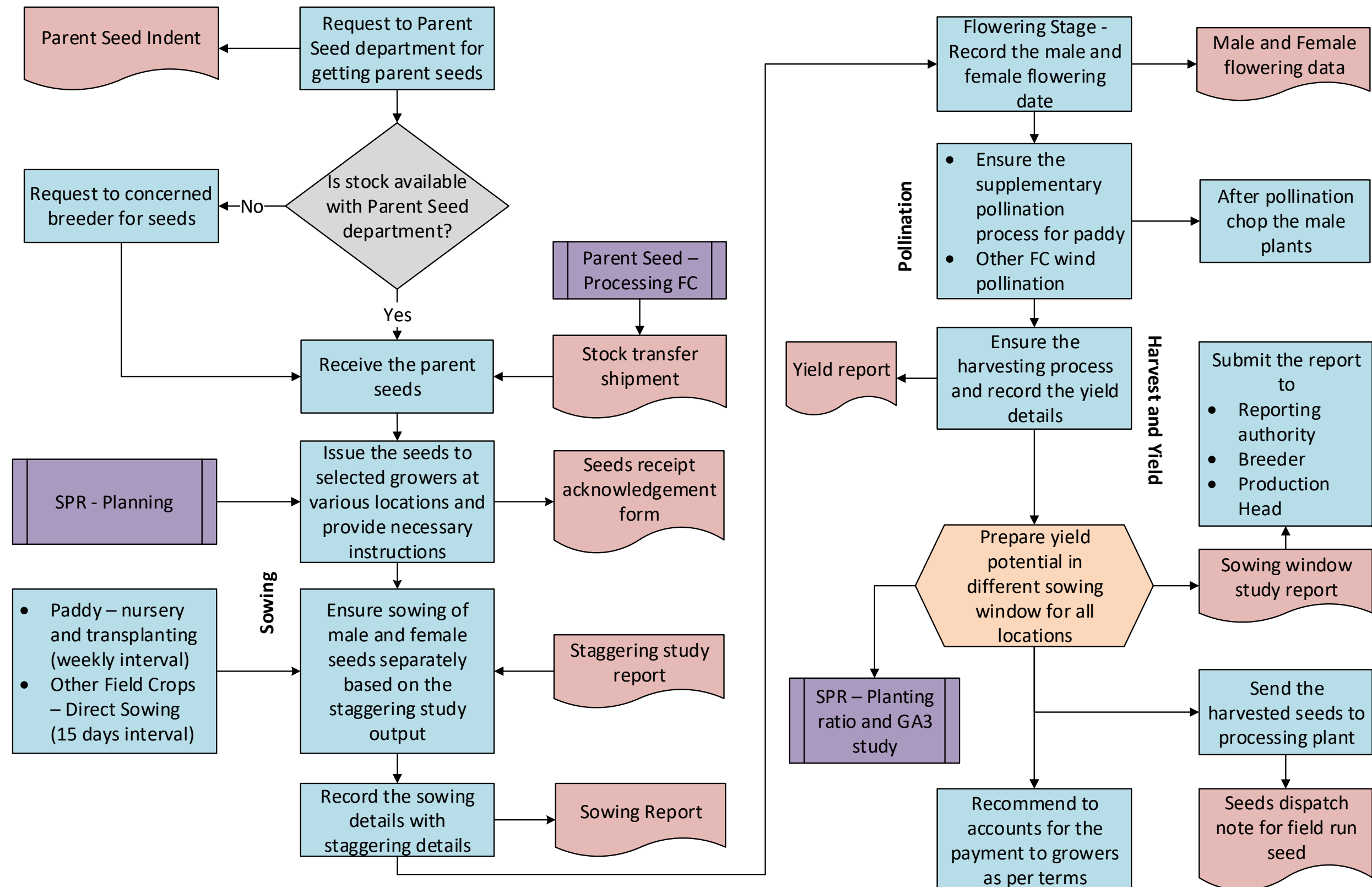
Breeder

Key activities:

5.2.1 Staggering study

Process	Maker	Checker	Approver
5.2.1 Staggering study			
1) Issue the breeder seeds to selected growers at various locations and provide necessary instructions and document the seed receipt acknowledgement form	Field Supervisors/Field Assistants	SPR Manager –	
2) Sow the male and female seeds separately with the help of labours based on the staggering inputs from breeder data <ul style="list-style-type: none"> Paddy – nursery and transplanting Other field crops – Direct sowing 	SPR team	Production Officers/SPR - Manager	
3) Record the sowing and staggering details in the sowing report	Field Supervisors/Field Assistants	SPR Manager –	
4) Record the male and female flowering date during Flowering stage and chopping of all flowering plants based on SPR requirements/objectives	Field Supervisors/Field Assistants	SPR Manager –	
5) Prepare male and female flowering report for all locations as per the staggering study report	SPR – Manager		
6) Submit the staggering study report to, <ul style="list-style-type: none"> Reporting authority Breeder Production Head 	SPR – Manager	Breeder, Production Head, Managing Director	
7) Recommend to payment to accounts for the payment to growers as per terms	SPR – Manager		

5.3 SEED PRODUCTION RESEARCH – SOWING WINDOW STUDY – II YEAR



Sub-process Owner:

Seed production research - Manager

Departments Involved:

Seed production research

Parent Seed

Production

Accounts

Breeder

Key activities:

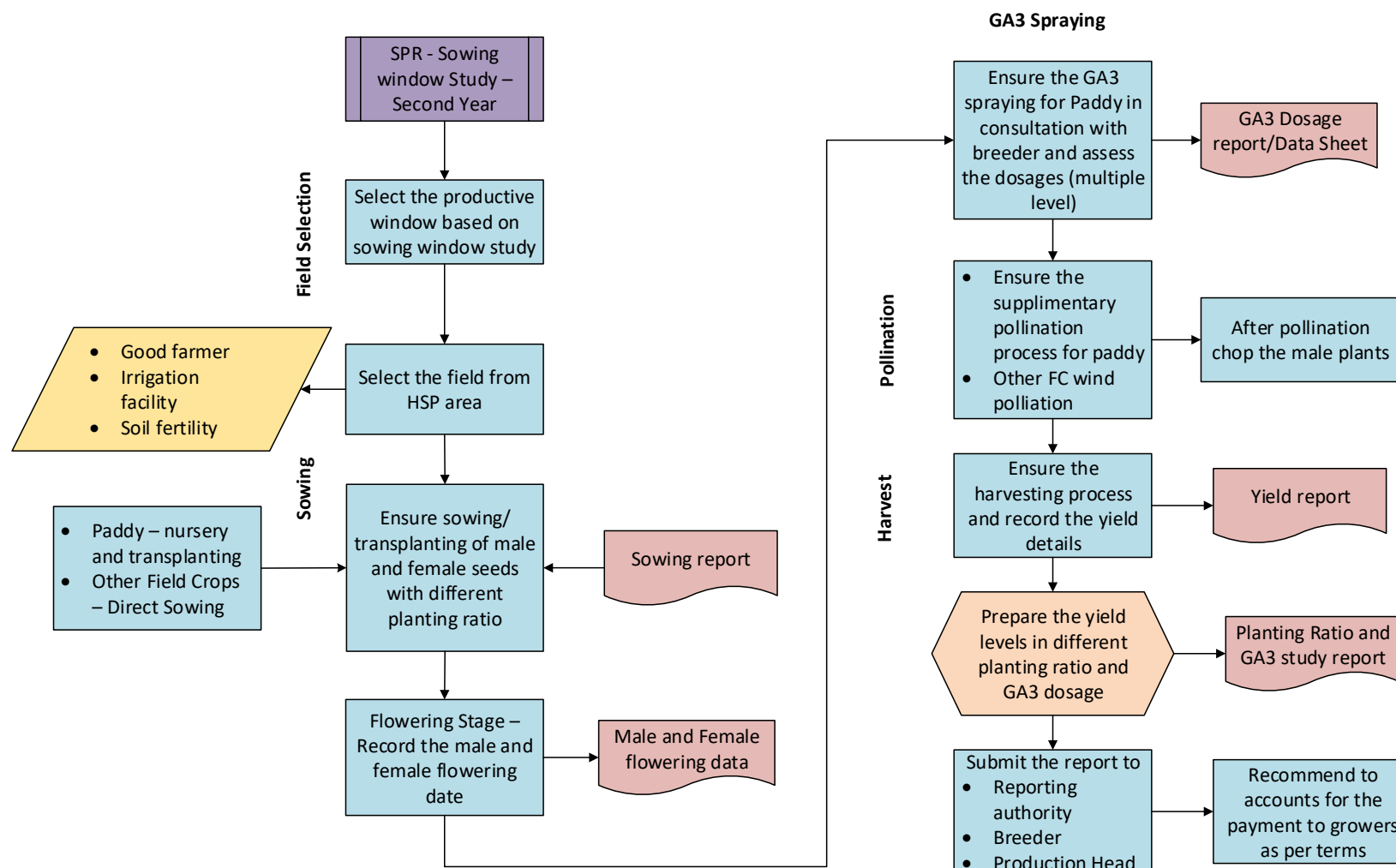
5.3.1 Parent seed receipt and sowing

5.3.2 Sowing window study

Process	Maker	Checker	Approver
5.3.1 Parent seed receipt and sowing			
1) Request to parent seed department for getting parent seeds and ensure if the stock is available	SPR – Manager		
2) Request to the concern breeder for seeds if the stock is not available and receive the parent seed through stock transfer shipment	SPR – Manager		
3) Issue the seeds to selected growers at various locations and provide necessary instructions and document the same in seeds receipt acknowledgement form	Field Supervisors/Field Assistants	SPR Manager –	
4) Ensure sowing of male and female seeds separately based on the staggering inputs from breeder data <ul style="list-style-type: none"> • Paddy – nursery and transplanting on weekly interval • Other field crops – Direct sowing on 15 days interval 	Field Supervisors/Field Assistants	SPR Manager –	
5.3.2 Sowing window study			
1) Record the sowing and staggering details in the sowing report	Field Supervisors/Field Assistants	SPR Manager –	
2) Record the male and female flowering date during flowering stage	Field Supervisors/Field Assistants	SPR Manager –	
3) Check the pollination based on the following and chop the male plants after pollination <ul style="list-style-type: none"> • The supplementary pollination process for paddy • FC wind pollination 	Field Supervisors/Field Assistants	SPR Manager –	
4) Ensure the harvesting process and record the yield details in the yield report	Field Supervisors/Field Assistants	SPR Manager –	
5) Prepare yield potential in different sowing window for all locations	SPR – Manager	GM Production –	

Process	Maker	Checker	Approver
6) Document the sowing window study report and submit the report to, <ul style="list-style-type: none"> Reporting authority Breeder Production head 	SPR – Manager	Breeder, Production Head, Managing Director	
7) Send the harvest seeds to processing plants and record the same through seeds dispatch note for field run seed	SPR – Manager		
8) Recommend to accounts for the payment to growers as per terms	SPR – Manager		

5.4 SPR– PLANTING RATIO AND GA3 APPLICATION – THIRD YEAR



Sub-process Owner:

Seed production research - Manager

Departments Involved:

Seed production research

Production

Accounts

Breeder

Key activities:

5.4.1 Field selection and sowing

5.4.2 Planting ratio and GA3 application

Process	Maker	Checker	Approver
5.4.1 Field selection and sowing			
1) Select the productive window based on sowing window study for field selection	SPR – Manager		
2) Select the field from HSP area based on <ul style="list-style-type: none"> Good farmer Irrigation facility Soil fertility 	SPR – Manager	Crop Manager	
3) Ensure sowing of male and female seeds with different planting ratio and update in the sowing report <ul style="list-style-type: none"> Paddy – nursery and transplanting Other field crops – Direct sowing 	Field Supervisors/Field Assistants	SPR Manager –	
5.4.2 Planting Ratio and GA3 application			
1) Record the male and female flowering date during flowering stage	Field Supervisors/Field Assistants	SPR Manager –	
2) Ensure the GA3 spraying for paddy in consultation with breeder and assess the dosages (multiple level) and update in GA3 dosage report/Data sheet	Field Supervisors/Field Assistants	SPR Manager –	
3) Check the pollination based on the following, <ul style="list-style-type: none"> The supplementary pollination process for paddy FC wind pollination 	Field Supervisors/Field Assistants	SPR Manager –	
4) Chop the male plants after pollination	Field Supervisors/Field Assistants	SPR Manager –	
5) Ensure the harvesting process and record the yield details in the yield report	Field Supervisors/Field Assistants	SPR Manager –	
6) Prepare yield level in different planting ratio and GA3 dosage and document the same in planting ratio and GA3 study report	SPR – Manager		

Process	Maker	Checker	Approver
7) Submit the planting ratio and GA3 study report to, <ul style="list-style-type: none"> • Reporting authority • Breeder • Production Head 	SPR – Manager	Breeder, Production Head, Managing Director	
8) Recommend to accounts for payment as per grower's terms and conditions	SPR – Manager		