Products Management within the Rice in Asia Platform

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SP3 Leader and Product Manager

Generation

"The essence of knowledge is, having it, to apply it…"

(Confucius)

Generation

Products Management in the GCP

- products defined as “complete or almost complete project components that can be passed on to another researcher outside the project and outside the GCP”

- products can be: reference sets of germplasm, validated molecular markers, new screening protocols, training materials, etc..

- identification and description (template, repertoire of products), transfer and validation (SP3 commissioned projects), dissemination (SP5)

Identification and description

- Repertoire of products: provides a list of products delivered by the different GCP projects with information about quality control and availability
- Templates: list the expected products to be generated by each project with timeline (actualization with reports)
- facilitate follow-up, help to anticipate the type of products to be generated and identify those products that might need validation

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Repertoire of products

- the Repertoire of Products is established by collecting the information provided in the technical reports

- this repertoire provides a list of products delivered by the different GCP projects (classified in 6 categories, i.e., genetic resources, genomic resources, markers for breeding, new tools and methodologies, training material, and publications)

- the repertoire offers information on the project having generated the product: title, PI contact details, start date, end date, status, funding, and a short description of activities

- information concerning a given product includes date of release, type of quality control applied (within the project) and availability

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Repertoire of products

- in the case of germplasm, the repertoire stipulates if seeds have been multiplied and their available quantity
- the repertoire also indicates whether the product has been validated and used by another project (within or outside the GCP)
- if the information concerning the development or description of a new product has been published, the reference of the publication is provided
- the repertoire will link to Axapta, the project database used by the Project Officer to monitor reporting and manage the disbursements of funds (connect the administrative and scientific information and will facilitate the evaluation of “return on investment” per project)

Templates

- with new projects, the task is streamlined by requesting PIs to list the expected products at the time of their proposal
- in 2006, templates were designed to help in the identification/description of products to be generated by each project
- actualized version is provided with each report

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Appendix A. Activities, Quantifiable Outputs, and Key Products

Project Title: Marker Development and Marker Assisted Selection for Drought Tolerance and Striga Resistance in Cowpea	
Principal Investigator/Institute:	
Objective 1: Marker assisted selection for Striga resistance in cowpea	
• **Activities**	**Quantifiable Outputs**
1. Develop molecular markers linked to race specific Striga resistance genes	1. One SCAR marker developed for resistance to Striga races SG1 and SG3 2. One marker mapped for Striga race SG5
2. Screen cowpea genotypes in Striga "hotspots" in West Africa	3. 47 cowpea cultivars evaluated
3. Test markers and develop of MAS protocols	4. One Striga resistance marker validated for resistance to Striga races SG1 and SG3 5. Five populations developed and evaluated for races SG1, SG2 & SG4z
Objective 2:	
• **Activities**	**Quantifiable Outputs**
1.	8. 9.
2.	10. 11. 12
3.	13. 14.
Objective 3:	
• **Activities**	**Quantifiable Outputs**
1.	15. 16.
2.	17. 18. 19.
3.	20. 21.

Key Products Developed by the Project (those that you think have the biggest potential impact Please limit to 5):

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Appendix B. Timeline

Please place your Quantifiable Outputs along this timeline.
Every Output should appear on the Timeline.

		Year 1												Year 2												Year 3											
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
Objective 1	Activity 1												1									2															
	Activity 2									3																											
	Activity 3																					4												5			
Objective 2	Activity 1																																				
	Activity 2																																				
	Activity 3																																				
Objective 3	Activity 1																																				
	Activity 2																																				
	Activity 3																																				

Quantifiable Outputs (cut and paste from Appendix A):

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Transfer and validation

- confirm the accuracy and potential value of a product in a given environment

- SP3 commissioned projects:
  - link between SP3 activities *per se* and products management activities
  - focus on priority crops and regions (Strategic Framework, capacities and facilities)

Validation

Development and validation of markers for QTLs *Saltol* and *Pup1* (IRRI, Comp SP2) (1)

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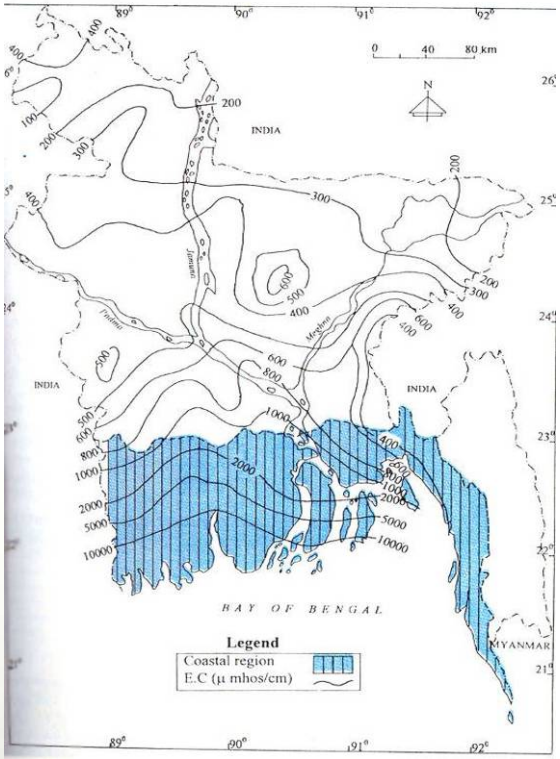
Validation

introgress salinity tolerance gene into well-accepted varieties in Bangladesh

Figure 2.10: Salinity in Ground Water Table



Target: Bangladesh

- saline waters penetrate in the SW
- 60% of arable land is affected by salinity of the country during March-April
- diversion of water from the Ganges (Farakka)
- area highly impacted by climatic change

introgress P deficiency tolerance gene into well-accepted varieties in acid soils in Indonesia

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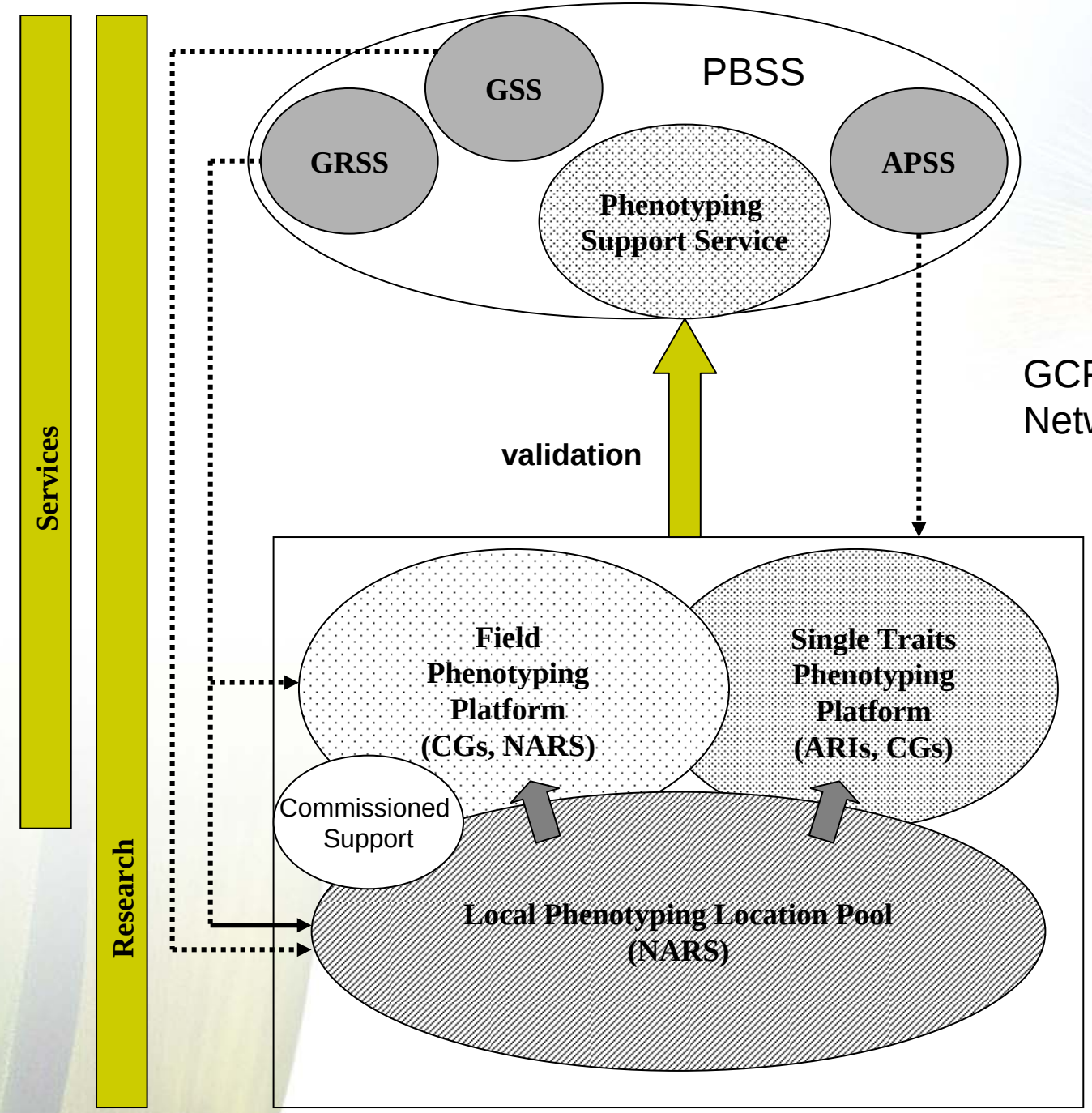
Crop Platforms

- crop basis
- stimulate contacts and exchanges between projects/scientists
- identify bottlenecks
- ensure a better continuum in the delivery chain of products
- generate additional (synergetic) ouputs
- NERICA

- ✓ meetings
- ✓ joint projects (SP3)
- ✓ communities of Practice (SP5)
- ✓ training and CB (SP5)
- ✓ GSS (SP5)
- ✓ phenotyping platform (SP3)

Generation



GCP Phenotyping Network

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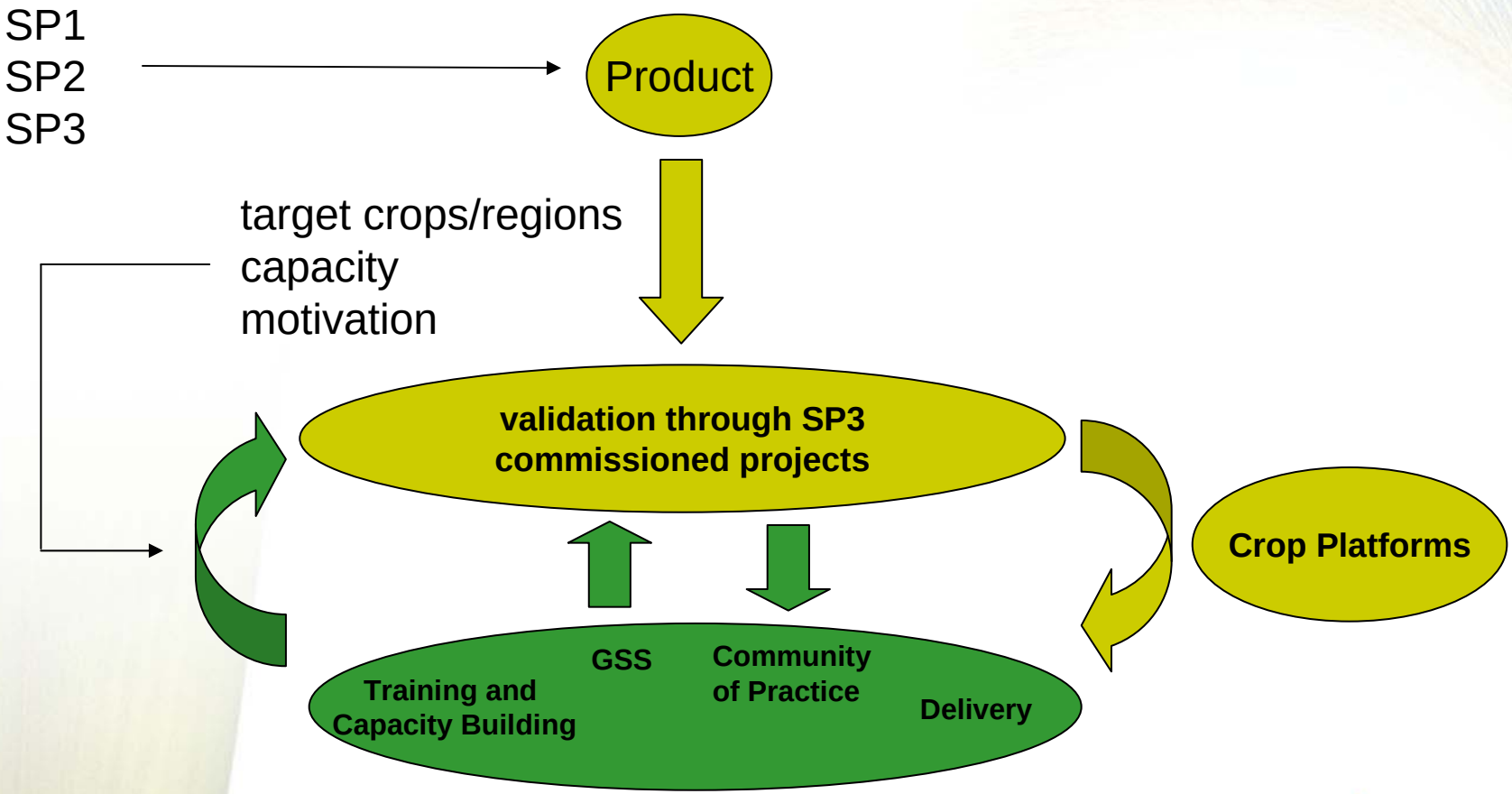
Relationships between SP3 and SP5 activities



Rice in Asia

- Cambodia: 2 million ha (90% agricultural area)
- India: staple food of 65% of the population,
  income and employment for 50 million households
- Indonesia: 11.5 million hectares, 50 million t
- Philippines: 41% of total caloric intake, 31% of total protein intake
- Thailand: 27 million t, 1st exporter (>2 million USD per year)
- Vietnam: second exporter since the mid-90s

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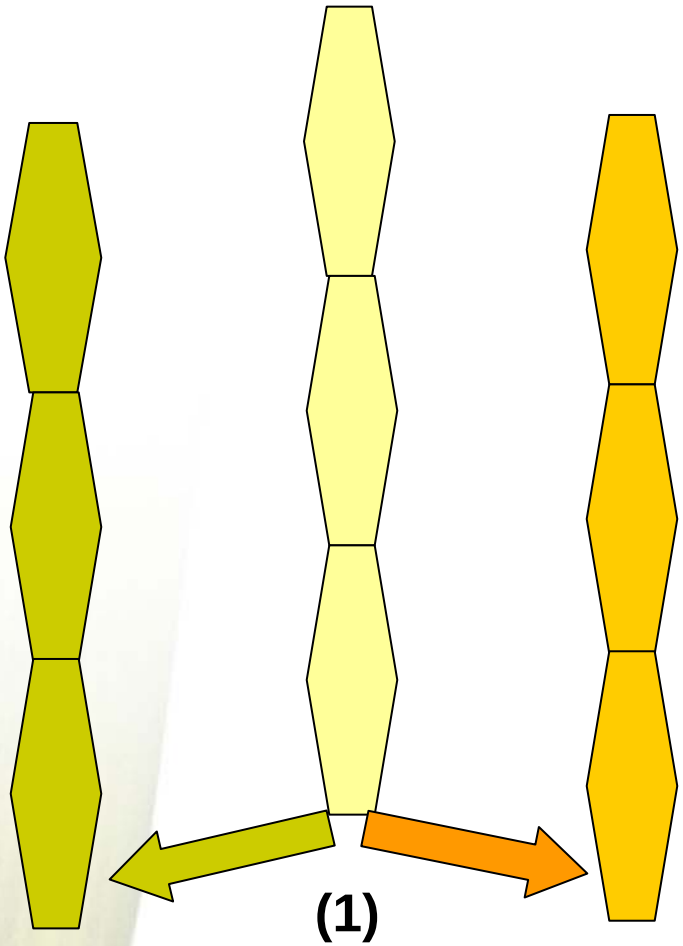
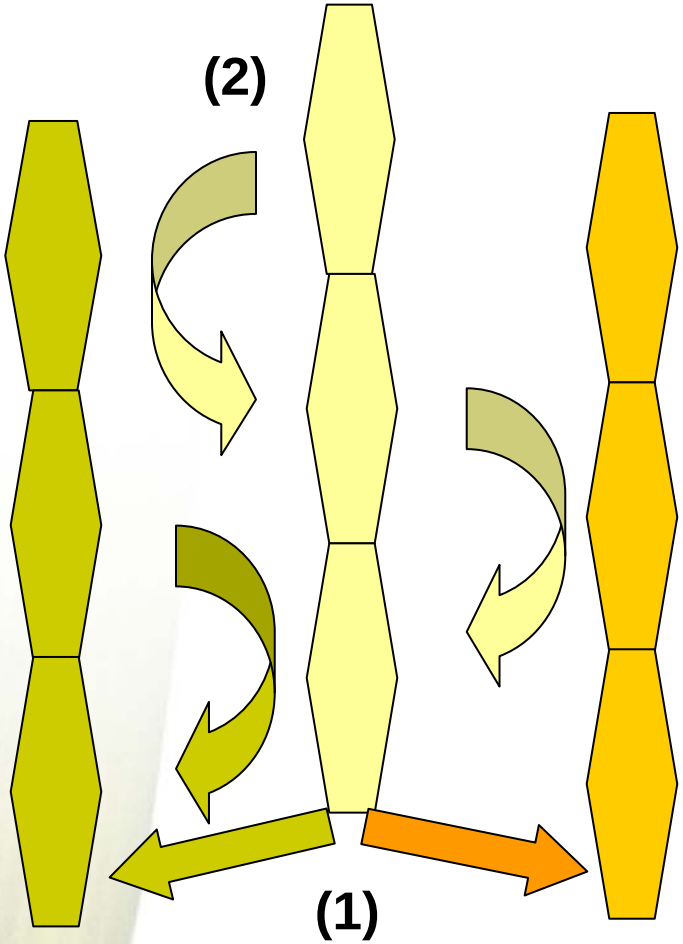
Rice in Asia

- Drought: 50% rainfed in Cambodia, 10% in Indonesia, 67% in Thailand
- Salinity: Bangladesh, Myanmar
- Acidity: Indonesia
- Nutrient deficiency (N, P)
- Biotic stresses: bacterial leaf light, neck blast, brown planthopper
- Quality: long grain white, amylose content, gelatinization temperature, aroma
- Adapted/adopted germplasm: CAR3, Phkar Rum Duol (Cambodia), Thadokkham1 (Laos), Manawthukha (Myanmar), Chainat 1, IR57514, KDML105, RD6 (Thailand)

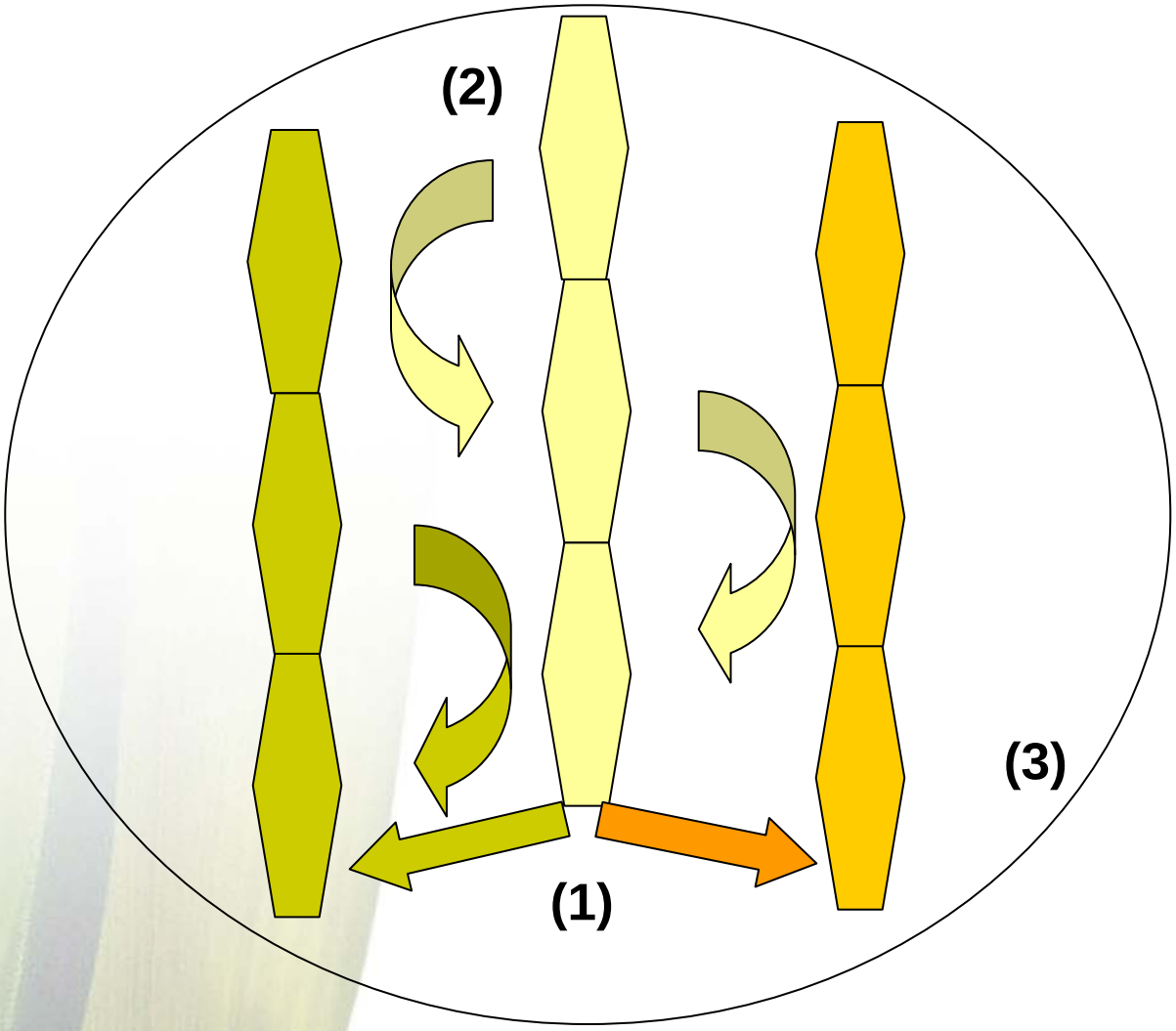
Bottlenecks and comparative advantages



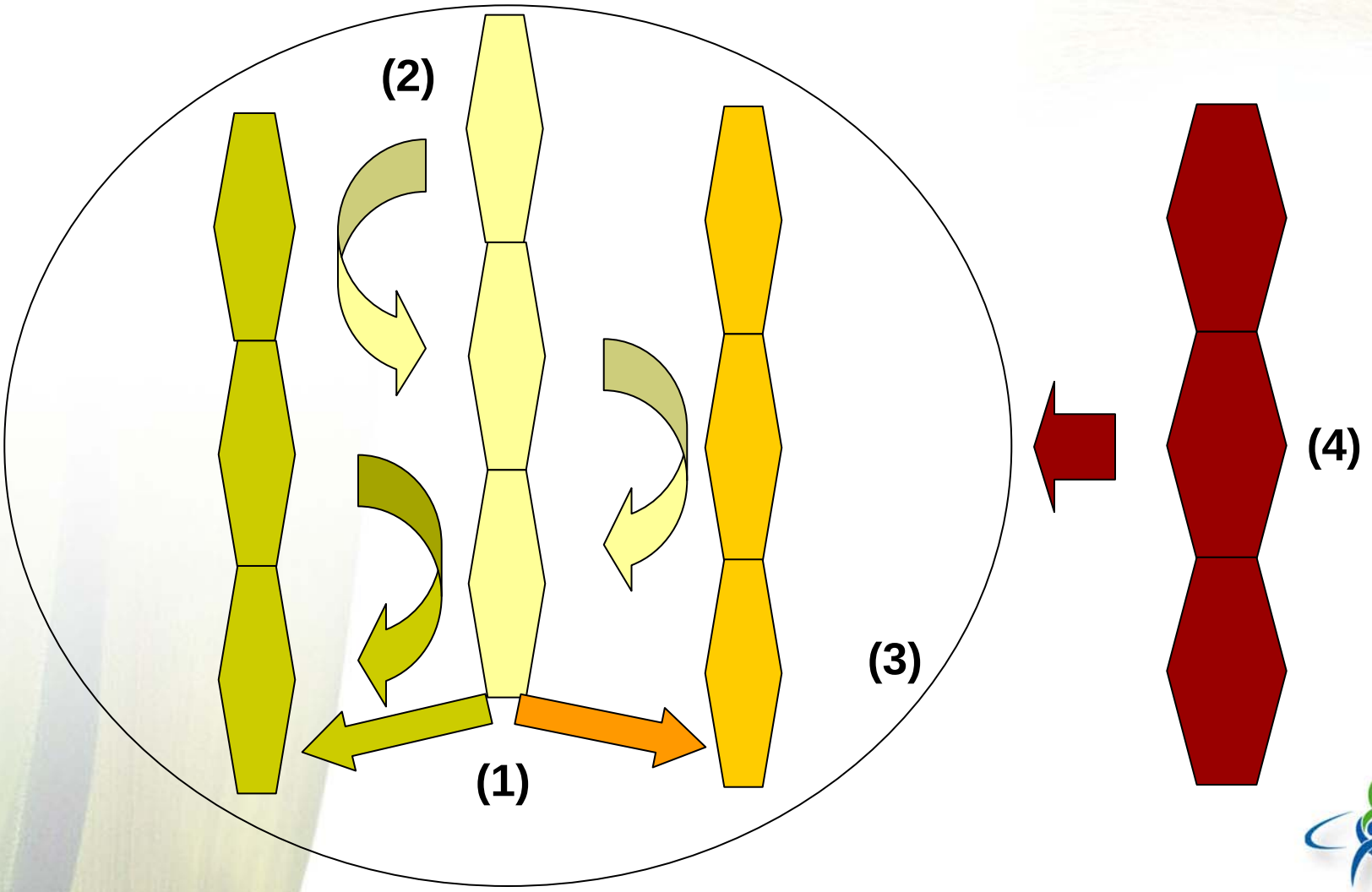
Bottlenecks and comparative advantages



Bottlenecks and comparative advantages



Bottlenecks and comparative advantages



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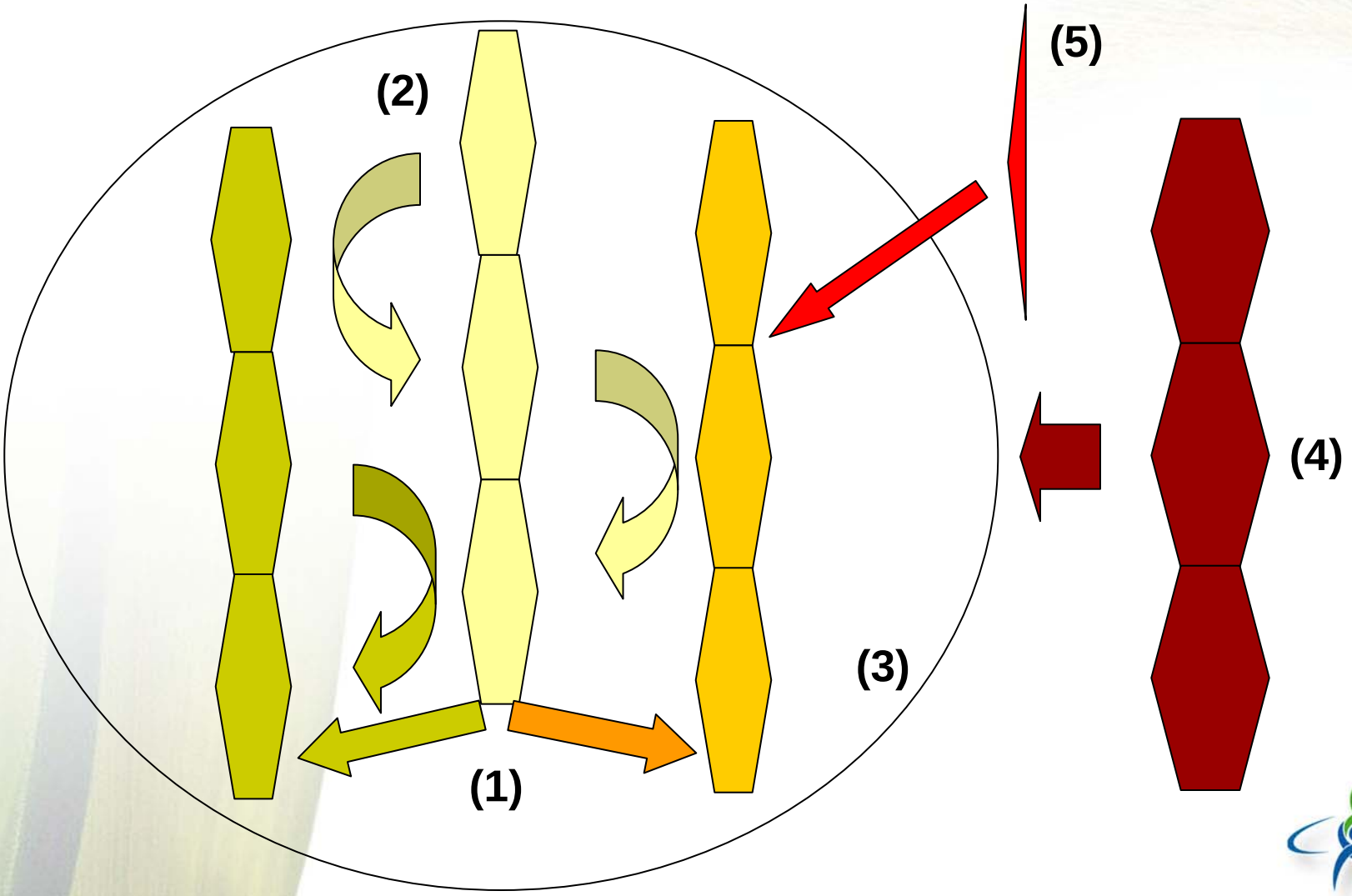
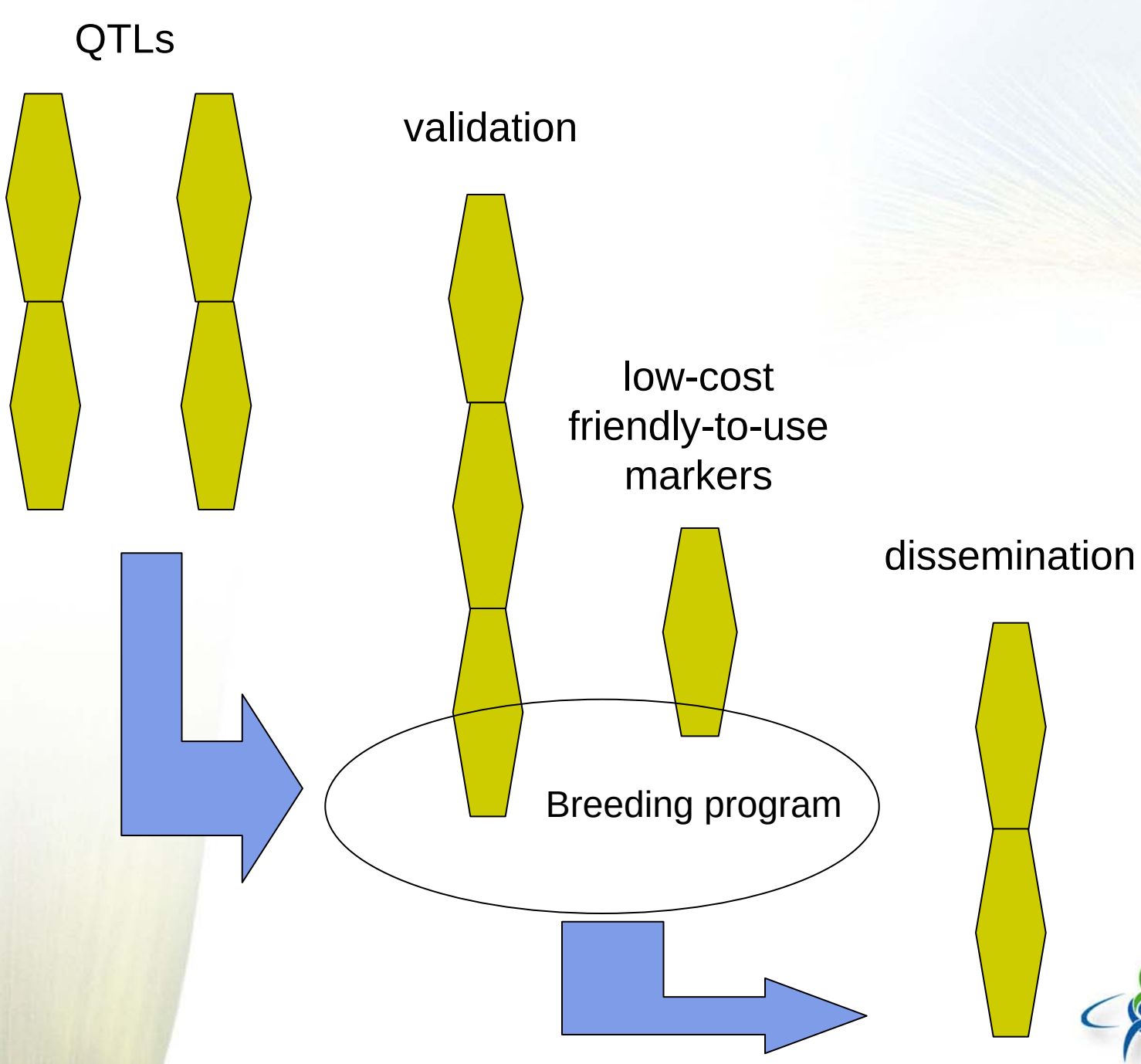
Bottlenecks and comparative advantages



Generation


QTLs
validation
low-cost
friendly-to-use
markers
dissemination
Breeding program


End
and thanks for your attention……