Development of action plan

36th International Vegetable Training Course -

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SRI LANKA

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GEOGRAPHY











• Land area

- : 65610 km²
- Population : 21.2 million (World bank, 2016)
- Agro ecological regions : 24
- Main crops
- **1.** Plantation crops
- 2. Minor export crops
- 3. Agricultural crops







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Three most important topics from the module I

- 1. Basic applied aspects of vegetable breeding & seed production
- 2. Plant Genetic Resources Conservation
- 3. Vegetable grafting



Production of interspecific tomato crosses between cultivated tomato and selected wild relatives

(A pre-breeding research programe to develop high quality tomato variety/ies)









Problem Justification

➤ Tomato (*Solanum lycopersicon*) is one of the major vegetable crops in Sri Lanka in a area of around 8000 ha/year.

> Consumed by all social strata & all ethnic groups

> Rich source in vitamins, minerals & anti oxidants

>More than 90% of the seed requirement is supplied from imported seed

> Bacterial wilt, virus complex, bacterial canker, high temperature/heat stress are major constraints at present.

> Need extensive research to develop high yielding new varieties with resistance/tolerance to one or more above constraints



> Objective

 Produce pre breeding materials which can be used to develop new tomato varieties with bacterial wilt resistance and other desirable quality characteristics



>Beneficiaries of the targeted research

- Researchers
- Farmers
- Market traders
- Consumers



	ACTIVITY	TIME PERIOD
1	Request seeds of selected bacterial wilt resistant tomato wild relatives from AVRDC	NOVEMBER 2017
2	Evaluate performance of these wild relatives in Sri Lanka by characterization (Green house)	JANUARY – APRIL 2018
3	Inoculate the wild types with Sri Lankan pathovars of <i>Ralstonia</i> <i>solanacearum (In pathology lab)</i>	APRIL 2018
4	Repeat activity 2 for 2 nd season & multiply seeds from selected, vigorous, true to type plants	MAY – AUGUST 2018
5	Consult statistician & select suitable, simple statistical modal for pre- breeding programe	AUGUST 2018



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	ACTIVITY	TIME PERIOD
6	Establish crossing programe with selected cultivated tomato lines vs. selected wild relative types	SEPTEMBER - 2018
7	Emasculation & Hand pollination, covering, tagging	OCTOBER - NOVEMBER 2018
8	Extract seed from succeeded crosses	DECEMBER 2018 - JANUARY 2019
9	Process, test germination %	JANUARY - FEBRUARY 2019
10	Evaluate & characterize the performance of interspecific cross combinations	MARCH – JUNE 2019
11	Select crosses with desirable characteristics in the objective	JUNE 2019



Who will be involved?

- Breeders
- Pathologists
- Entomologists
- Statisticians
- Biotechnologists
- Research Assistants
- Skilled laborers

What resources are needed ?

- Financial resources
- Seed material
- Human resources



Potential Challenges...

- Acquiring financial allocation in time
- Climate
- Pest & disease



Thank you for your attention....!

Kop Kun Kaap....!

Sthoothi....!



