Chemigress to 100

Advancing to our 100th birthday in 2020

Industry Interaction on Conclave
Indian Agrochemical Industry
Registration System of India & Japan

NISSO CHEMICAL INDIA LLP

HIROYUKI KANAMORI

NIPPON SODA CO., LTD.

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- H.Q.: Tokyo, Japan

- Year of Foundation: Feb, 1920
- T/O(Mar'20): J.Yen 144,739M(US$1,378M @105)

- No. of Employee(Mar'20): 1,313
- Line of Business

Agri-Business, Pharmaceuticals, Specialty Chemicals, Eco & Consumer Chemicals, Chlor-Alkali, etc.

Manufacturing sites in Japan

Takaoka Plant (1934 -)

Nihongi Plant (1920 -)

Mizushima Plant (1969 -)

Chiba Plant (1969 -)

R&D centers in Japan

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Bandai FRS

Chiba RC

Nihongi Lab

Takaoka Lab

Haibara FRC

Odawara RC

Global Network

Main products

TOPSIN-M®

Thiophanate methyl
Broad spectrum fungicide

Mospilan®

Acetamiprid
Safest among other neonicotinoids

NISSORUN®

Hexythiazox
Acaricide with residual effect

Bellkute®

Iminoctadine
Unique contact fungicide

Romdan®

Tebufenozide
IGR with different mode of action

Cyflamid®

Cyflufenamid
Specialty against P.mildew fungi

New products under development

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■ NF-171 (Picarbtrazox)

Novel fungicide against Oomycetes fungi

■ NA-89 (Acynonapyr)

Novel acaricide against all stages (egg to adult)

■ NF-180 (Ipflufenoquin)

Novel fungicide with broad spectrum including Rice Blast

Evolution of products development

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1970 1980 1990 2000 2010 2020

(I) 

Nissorun Mospilan Romdan **NA-89 (Acynonapyr)**

(F) 

Topsin-M Trifmine Cyflamid **NF-171 (Picarbutrazox)**

Bellkute **NF-180 (Influfenoquin)**

(H) 

Nabu

New products

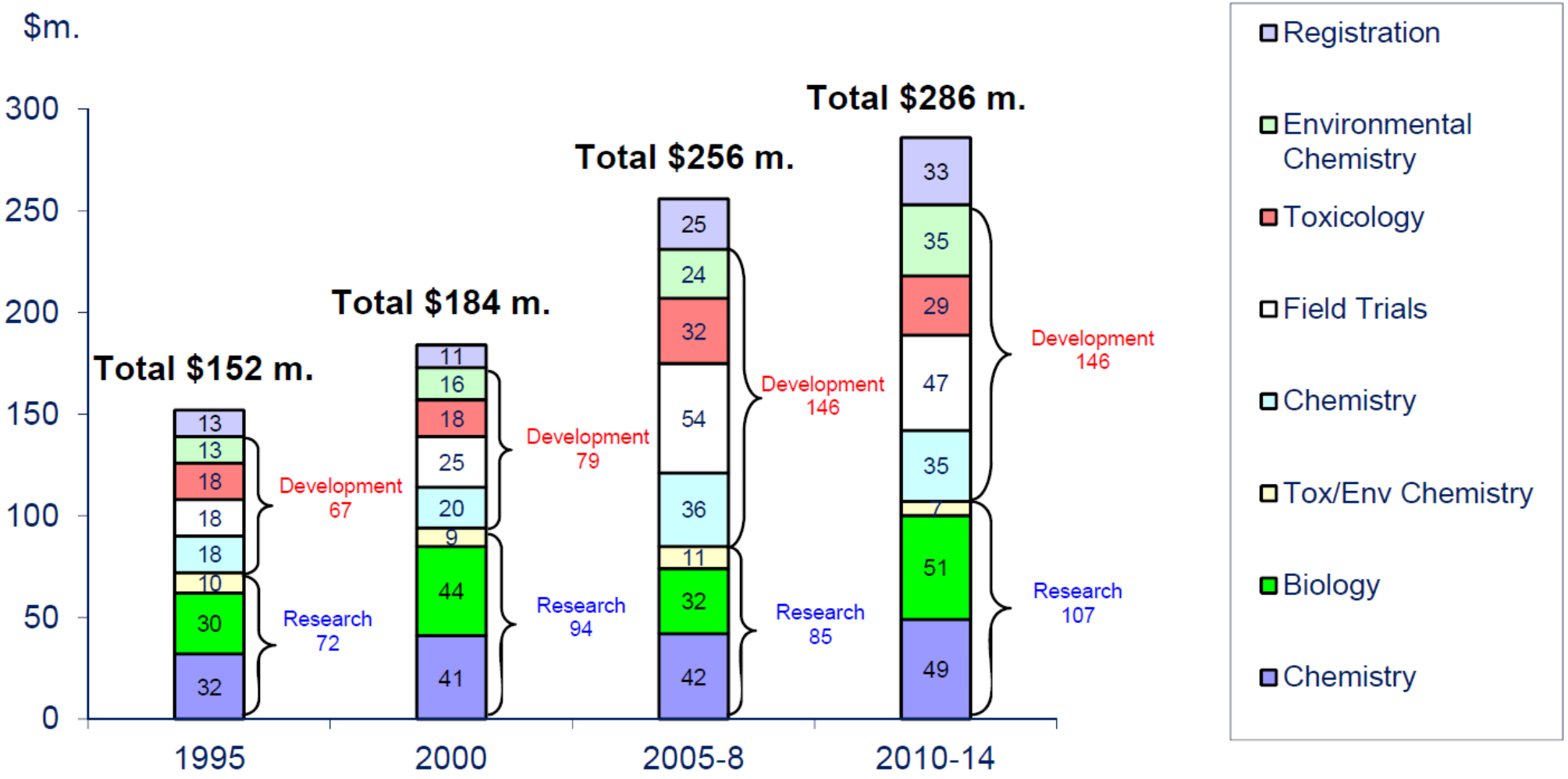
Other new products in pipeline and coming out 2020 onward.....

New insecticide, Acaricide, Herbicide coming up

Major difference in registration System between India & Japan

	India	Japan
Scope of registration	TG/FG	FG only
Mixture between Insecticide+Fungicide, Herbicides	Rare	Common (3-4 ways)
Data protection system	Non	15 years

Discovery and Development Costs of a New Crop Protection Product



The overall costs of discovery and development of a new crop protection product increased by 21.1% from $152 m. (€115m.) in 1995, to reach $184 m. (€140m.) in 2000. From 2000 to the 2005-8 period, costs increased by 39.1% to $256 m. (€189 million). From 2005-8 to the 2010-14 period, costs increased by 11.7% to $286 m. (€215 million)

Phillips McDougall (2017)

Number of Products Processed leading to a Successful Product launch

		1995	2000	2005-8	2010-14
Research	Synthesis	52500	139429	140000	159574
Development		4	2	1.3	1.5
Registration		1	1	1	1

Crop Protection Product Discovery and Development Lead Time

	1995	2000	2005-8	2010-14
Number of years between the first synthesis and the first sale of the product	8.3	9.1	9.8	11.3

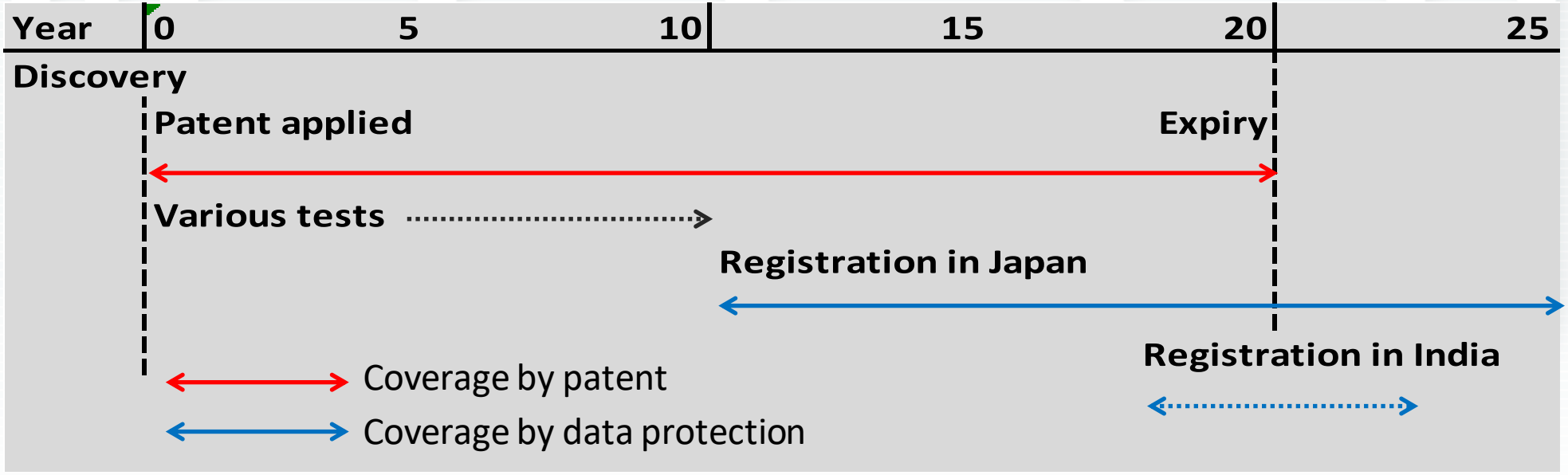
Phillips McDougall (2017)

Data protection system

In general, pesticide is patentable in the scope of invention chemistry for a certain period as per patent law in a country or treaty across nations.

Pesticide must undergo various tests to ensure safety against human health and environment in addition to efficacy to protect crop from pest damage and obtain registration in respective country. It takes long years of time and immense amount of development cost.

Usually patent will remain for only a few years or have already expired till grant of registration and commercialization.



Data protection system…cont.

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Therefore, data protection system, a provision incorporated in pesticide management law is introduced to protect the right of exclusive use of developed data generated by inventor for their legitimate sales and recovery of development cost during the protection period, while preventing others from registering the same without own data.

If no data protection system was provided, others could get the registration in much shorter time at much lower cost and cause unhealthy competition which would discourage inventor to capitalize on long-term business in such a place.

	Japan	US	EU	Brazil
Patent	20 years	20 years	20 years	20 years
Data protection (Post grant of registration)	15 years	10 years	10 years	10 years

Merits by data protection

Motivation in Japanese agrochemical companies	Benefits to Indian farm society and/or agrochemical Industry
Increase development of new pesticide at early stage even before registration in origin Country	Provide farm society with more choice of pesticide to improve quality and value of crop along with yield and at the end increase farmer's income
Shift manufacturing site to India to deal with increased market demand and save manufacturing cost	Provide agrochemical industry with more business opportunity for contract manufacturing in addition to sales and distribution.

Introduction of data protection will make win-win situation and Indian farmer/industry happy with access to innovative technologies.

Nisso will contribute to Indian society by providing innovative technologies.

Thank you for your attention !