International Seed Federation
Seed is Life

Plant Breeding Innovation: Communication Toolkit to support local regulatory efforts & public acceptance

Michael Keller, Secretary General ISF

SAA Congress – Plant Breeding Innovation Communication

Colombia, Cartagena, 5 September 2017

Communication is crucial

Policy

- Concept paper – “Consistent Criteria for the scope of regulatory oversight for products developed through the latest plant breeding methods. ”
- Note – “Procedures for determining regulatory status of plant breeding innovations”
- Country Level Assessment
- Workshops, Round tables
- National engagement
- Regional strategy
- International Organisations: FAO, OECD, WTO, G20, APEC

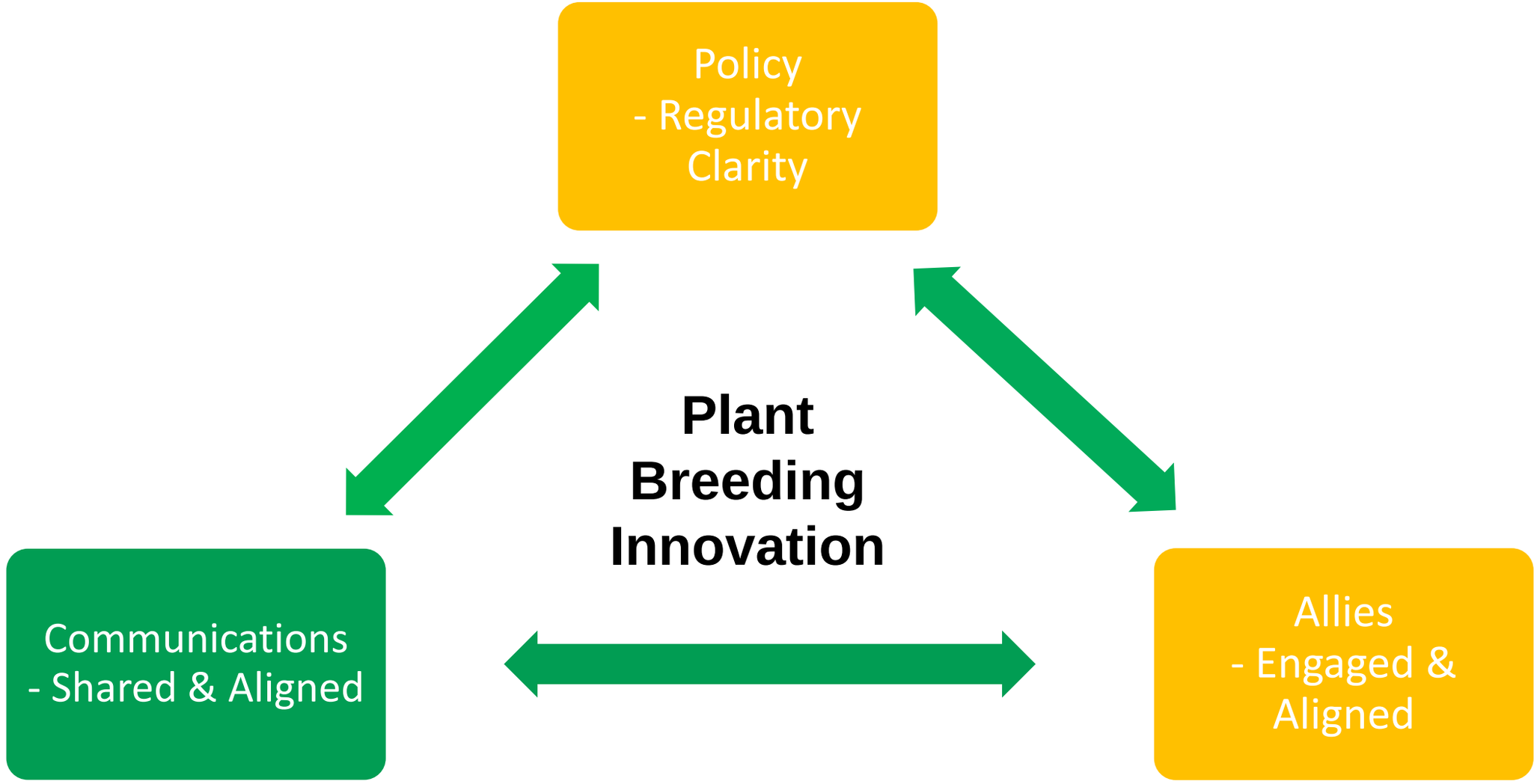
Communications

- FAQs
- Discussion Guide
- PowerPoint slides
- Infographics – Milestones & Challenges
- Media training
- Social media: #PlantBreeding
- #EmbracingNature (ESA)
- #JustGrowIt (ASTA)
- Information flow

Allies

- Crop Life International (CLI)
- International Grain Trade Coalition (IGTC)
- CGIAR, IRRI, Cimmyt, Ciat
- World Farmers Organisation (WFO)
- Value Chain
- Academia
- Foundations

Communication is crucial



ISF – Role in Communication

- ✓ Globalized business
- ✓ Innovation is at the heart of our industry
- ✓ Sustainable Agriculture – supports food security

International level :

- ➢ Alignment on key positions
- ➢ Consistency of key terminology
- ➢ Amplification of key messages

Communication toolkit

- ✓ FAQs – published on ISF website
- ✓ Discussion Guide – circulated to ISF members/partners
- ✓ PowerPoint
- ✓ Infographics

Members Area: September 2017

- ➢ Resource Centre
- ➢ Events Calendar

Discussion Guide

- Internal document for ISF members/partners
- Guidance + talking points = confidence, clarity & consistency
- Global framework to personalize with local examples.

Core content:

1. **Benefits**
2. **Methods**
3. **Public Policy**

Stakeholder groups

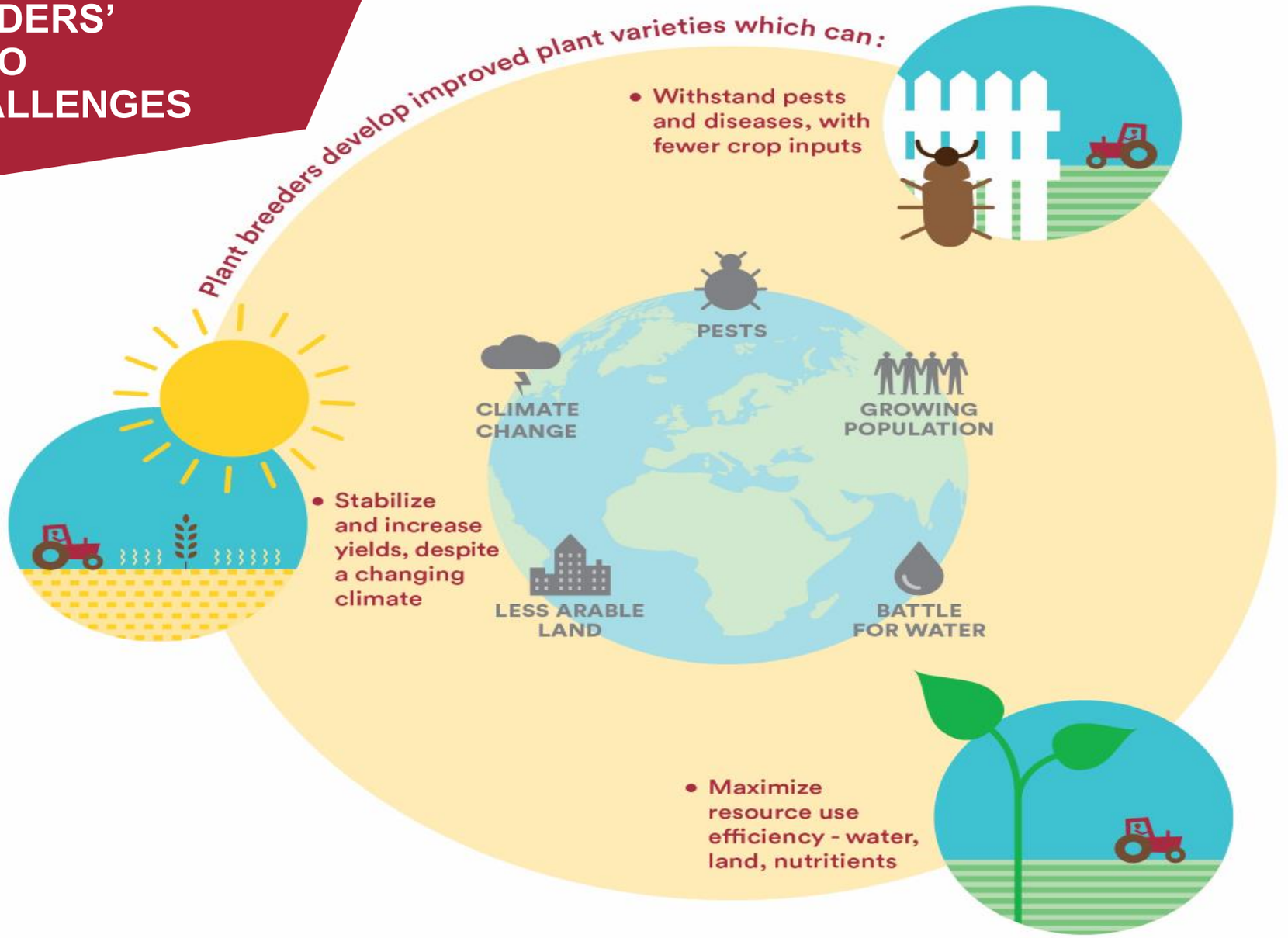
	Level of detail	Communication tool
• General public • Most politicians	General info on breeding & PBI	Infographics
• Farmers /Famers' orgs • Policy makers in ministries	Mid-level detail on PBI, its benefits and applications	PPT, infographics
• Breeders/Breeders' orgs • Traders	More detail on PBI, its benefits, applications & possible regulation	PPT, infographics
• Advanced politicians	Mid-level detail on PBI, its benefits and applications	PPT, infographics
• Academia • Food safety experts	Mid-high level detail on possible regulation	PPT, infographics

Infographics

1. **Milestones:**
   The evolution of plant breeding innovation methods.

2. **Challenges:**
   The global challenges we are facing and how plant breeders have responded to overcoming them.

PLANT BREEDERS' RESPONSE TO GLOBAL CHALLENGES



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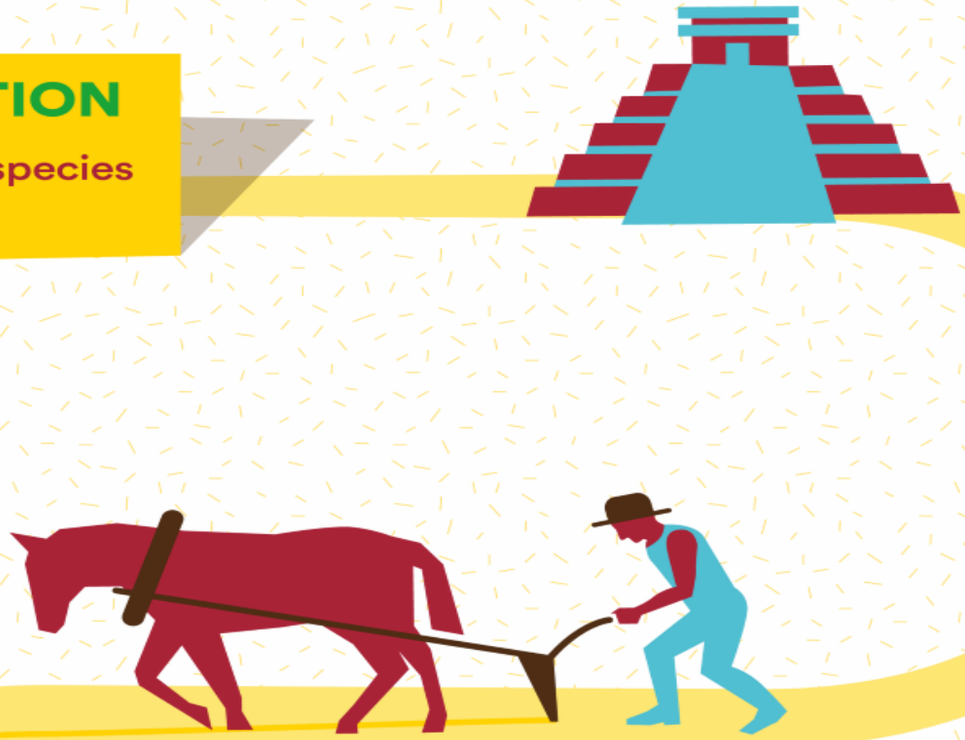
MILESTONES IN PLANT BREEDING

CROP DOMESTICATION

Farmers select the best wild species to create crops



10,000 BC

Domestication of wheat

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PLANT BREEDING BASED ON

CROSS BREEDING

Development of improved varieties by combining good characteristics from two parents

HYBRID BREEDING

More vigorous hybrid corn

1926

MUTAGENESIS

Blast-resistant rice

1940

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PLANT BREEDING BASED ON

GENETIC INFORMATION

Development of improved varieties by working directly with the DNA

GMO

Insect-resistant cotton

1994

MARKER-ASSISTED SELECTION

Barley resistant to yellow dwarf virus

2000

TARGETED BREEDING

Waxy corn

now

future

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MILESTONES IN PLANT BREEDING

CROP DOMESTICATION

Farmers select the best wild species to create crops

10,000 BC

Domestication of wheat

HYBRID BREEDING

Crossing two genetically different individuals to develop better performing hybrid

More vigorous hybrid corn

1926

PLANT BREEDING BASED ON CROSS BREEDING

Development of improved varieties by combining good characteristics from two parents

1940

MUTAGENESIS

Developing new genetic diversity by exposing crop plants to chemical agents or radiation

Blast-resistant rice

GMO

Introducing foreign genes into the DNA of a plant

Insect-resistant cotton

1994

MARKER-ASSISTED SELECTION

Locating desirable traits in a plant for efficient selection and breeding

Barley resistant to yellow dwarf virus

2000

TARGETED BREEDING

Using modern tools such as genome editing for more targeted breeding

Waxy corn

now

future

PLANT BREEDING BASED ON GENETIC INFORMATION

Development of improved varieties by working directly with the DNA

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PowerPoint Presentation

- Global set of slides developed for ISF members/partners:

  "The Story of Plant Breeding Innovation" + Speaker Notes
- Sub-sets of slides targeting different stakeholder groups – in the pipeline.
- To encourage proactive engagement across the value chain.

THE STORY OF PLANT BREEDING INNOVATION

CHALLENGES

BENEFITS

GOALS

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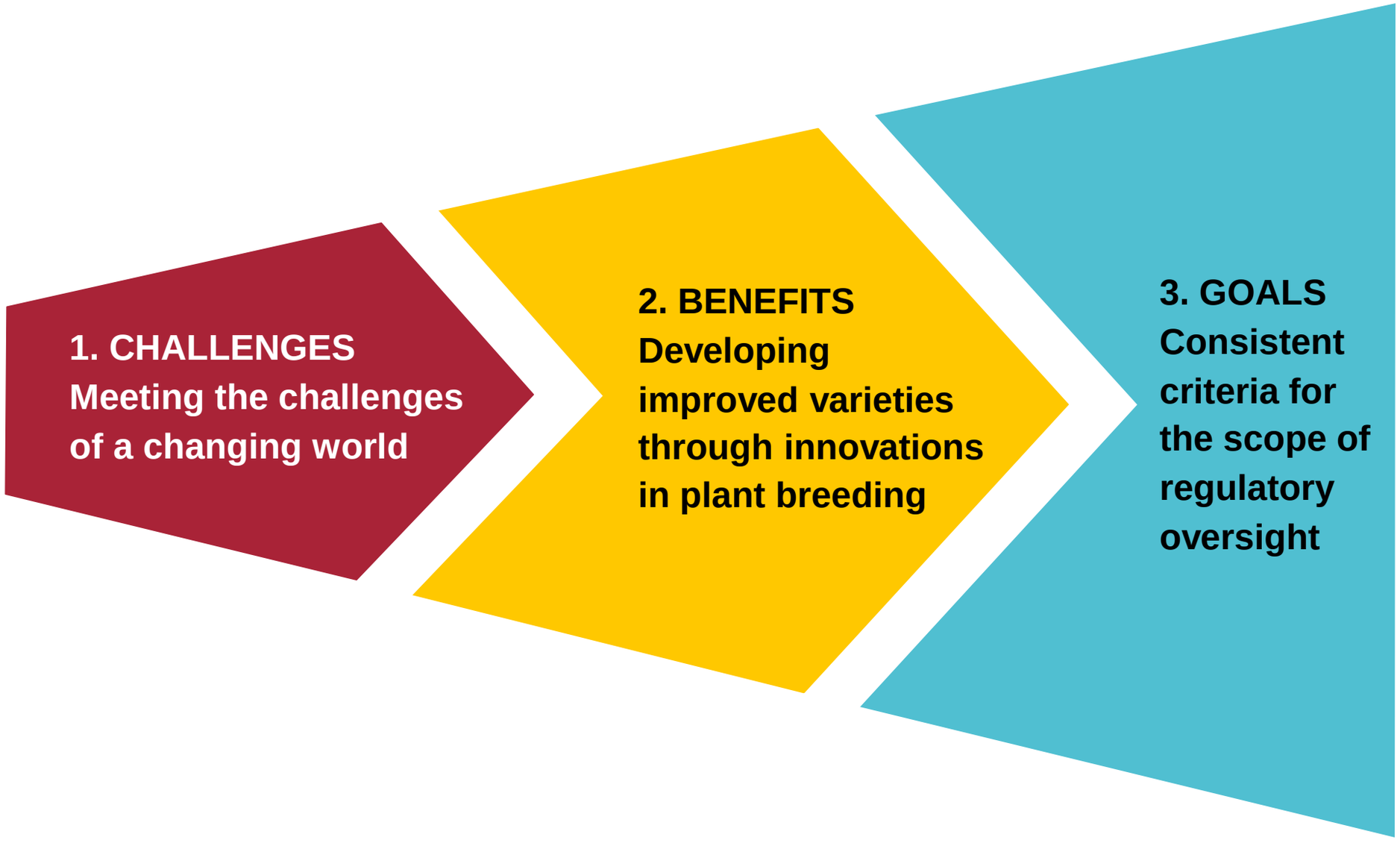
MAY 2017

ederation


1. CHALLENGES
Meeting the challenges of a changing world
2. BENEFITS
Developing improved varieties through innovations in plant breeding
3. GOALS
Consistent criteria for the scope of regulatory oversight

OUR ULTIMATE GOAL

Media Training for Regional & National Seed Associations

- "Building Effective Media Relations"

- Part 1: **Message mapping techniques**
  - News in a changing media landscape
  - Needs & wants
  - Message mapping: 3 key messages from *Discussion Guide*

- Part 2: **Interview skills**
  - Putting yourself in the journalist's shoes
  - Predicting tricky questions
  - Live filming & follow-up Media Booth

Social Media

- Global voice of the seed industry
- Thought leader on key topics
- Amplifier of key messages
- Visible; credible; engaged

Strategic Media Engagement

International Media and Publications:

- *UN Climate 2020* – September 2017
- 11,000 policymakers worldwide inc:
- UN ambassadors/agencies
- Heads of gov & ministries
- Dedicated website (+ISF logo)

INTERNATIONAL SEED FEDERATION

Crops for a changing climate

Plant breeders are already adapting crops to the world's changing climate, but the clock is ticking. To help us grow more and faster, we need a policy environment where innovation can flourish

Farmers around the world already suffer from the instability and uncertainty caused by climate change. Erratic and extreme weather conditions are wreaking havoc on harvests and livelihoods by increasing drought, soil salinity, plant pests and diseases.

Crop improvement is key to stabilising and increasing harvests in such challenging growing conditions. Yield stability is the basis of farmers' livelihoods and local food security. In pursuit of this, plant breeders are constantly seeking new ways to adapt crops to local climates. But we need to recognise that the lack of incentives for innovation in both the public and private sectors is compromising the world's ability to combat hunger.

Thanks to advances in plant science and breeding methods, today's breeders have developed climate-resilient varieties, such as drought-tolerant maize. They are developing crops with resistances to fungi, bacteria and insects whose detrimental impact can be exacerbated by climate change.

Resistances to rust in wheat, blast in rice and bacterial blight in barley can all be found when breeders can use a wide variety of natural genetic diversity.

Plant breeding takes time – up to 10 years, depending on the crop. However, with the current pace of climate change and rate of population growth, plant breeders are struggling to keep up with demand.

Clarity and reassurance needed

Better understanding of biological mechanisms in plants have brought us new tools that can significantly speed up the breeding process and target the necessary improvements more precisely.

However, not all tools are equally accepted everywhere in the world, which creates a patchwork of policy and regulatory environments for such plant breeding innovations, despite their relative accessibility and affordability.

This leads to uncertainty for the world's plant breeders who are developing crops

Investment in plant research can yield tools with great societal benefits

adapted to local conditions. Ultimately, this state of confusion can limit innovation.

Plant breeders, both in public institutes and private breeding companies, need more clarity about the national policies that govern access to genetic resources for food and agriculture, and reassurance about the acceptance and regulation of the breeding methods that can be used. Plant breeding has shown that investment in plant research can yield tools with great societal benefits – and public investment in research is badly needed. In order for farmers to benefit from these new developments, policies should be consistent and science-based across countries and regions.

Time is not on our side. Action needs to be taken now to provide an enabling policy environment that stimulates plant breeding to bring stability for farmers, product quality for consumers and food security for the world. Let's make sure that future generations will not ask why more was not done to deploy the full range of plant breeding tools available. ■

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