



IFPRI – STRUCTURE OF THE MEETING



IFPRI COMPETITION CAUTION

Participants shall not enter into any discussion, activity or conduct that may infringe any applicable competition law.

By way of example, participants shall not discuss, communicate or exchange any commercially sensitive information, including non-public information relating to proprietary equipment, processes and formulations.

This applies not only to discussions in formal meetings but also to informal discussions before, during and after meeting.

The recommendations coming out of this consortium are just that. Individual companies remain free to make independent, competitive decisions.

Any standards endorsed by this consortium are voluntary standards and any business practice recommendation developed are also voluntary.

	Sunday	Monday	Tuesday	Wednesday	Thursday	
am	Reviews and Presentation from current technical program 	Monday Breakout Room A Breakout Room B	Plenary Speakers Prospective member presentations Coffee Feedback	Refining Ideas for future Technical Program Briefs Scientific Screening	Rank order vote for next years new Technical Program. Selection of Project Briefs Workshops to progress	
		10:35 Erin K				Raj D
		10:50 Karen D				Claire G
		11:05 Prabu N				Kit
		11:20 Arno K				Rachel S.
		11:35				Coffee
		11:50 Raj D				Erin K
		12:05 Claire G				Karen D
		12:20 Kit				Prabu N
		12:35 Rachel S.				Arno K
pm	Sunday Breakout Room A Breakout Room B	Feedback and discussion 	Ideas session to generate new Project Briefs for Future Technical Program 	Non- IFPRI funded Poster Session Student Poster Prize	Members only business meeting Final Budget Decision Making	
	15:15 Mike D					Jan V
	15:30 Zoli N					Lillian
	15:45 Nasser A					Ken K.
	16:00 Maciej J					Csaba
	16:15					Coffee
	16:30 Jan V					Mike D
	16:45 Lillian					Zoli N
	17:00 Ken K.					Nasser A
	17:15 Csaba					Maciej J

Virtual Attendees – please send your vote to WHendrickson@aveka.com before Wednesday morning – Europe time!

PROJECT PHASING- 2021/2022

14 PROJECTS, 1 ROUND ROBIN, 1 COLLABORATION (16 SLOTS)

pe	No.	C	SR	F	D	W	SE	Project	Research Associate	Institution	Country	End	
Projects													
	1	X			X			Dry Powder Rheology	K. Daniels	NCSU	US	2022	
	2	X				X		Wetting and dispersion of Powders	C. Gaiani	U. Lorraine	France	2022	
	3	X		X		X		Characterization of Spray Nozzles at Industrial Conditions	N. Ashgriz	U. Toronto	Canada	2022	
	4	X				X		Slurry and Paste Rheology	E. Koos	U. Leuven	Belgium	2022	
	5	X	X	X			X	Model-Based Control of Crystallization	Z. Nagy	Purdue U.	US	2023	
	RR					X		X	DEM Roundrobin	J. Seville; K. Windows-Yule	U. Birmingham	UK	2023
	6			X	X				Powder adhesion to metal surfaces during compaction	C. Sinka	U. Leicester	UK	2023
	7	X		X			X		Model-based Design of Granular Products	R. Smith	U. Sheffield	UK	2023
	8	X					X		Simplified Industrial Formulations	J. Vermant	ETH	Switzerland	2023
	9	X	X		X			X	A Systems Engineering Approach to Dry-Milling with Grinding Aid Additives	A. Kwade	TU Braunschweig	Germany	2023
	10				X			X	Precision powder feeding	P. Nott	IISc Bangalore	India	2023
	11			X		X			Crystal Shape Prediction	M. Doherty	UCSB	US	2024
	12			X					Spray Drying Kinetics and Morphology	Maciej Jakulski	U. Lodz	Poland	2024
13				X				Selection of Flow Aids	Raj Dave	NJIT	US	2024	
14			X					Air-Induced Defect Formation During Compaction	Ken Kamrin	M.I.T.	US	2024	
Collab						X		Simplified Industrial Formulations Collaboration	L. Hsiao	NCSU	US	2022	
									J. Vermant	ETH	Switzerland		

5 or 6	Slurry Spray Characterisation	Nasser. Ashgriz	Toronto
	Wetting and Dispersion of Powders	Claire Gaiani	Lorraine
	Slurry and Paste Rheology	Erin Koos	Leuven
from	Aeration and Deaeration of Geldart Class C Powders	Olivier Pouliquen	Marseille
	Drying Wet Powders with Shear	Heather Emady	Arizona
		Alban Sauret	Santa Barbara
8	Spray Drying of Pastes	Volker Gaukel	KIT (Karlsruhe)
	Numerical Modelling of Spray Droplet Formation	Olivier Desjardins	Cornell
		Meng Wai Woo	Auckland
	Computational Modelling of Particle Suspensions		

Assumes Round Robin continues into 2023 but is paid in 2022

IMPACT OF SELECTING 6 PROJECTS IN 2023

2023 AGM

No.	C	SR	F	D	W	SE	Project	Research Associate	Institution	Country	End	1st or 2nd
1	X	X	X			X	Model-Based Control of Crystallization	Z. Nagy	Purdue U.	US	2023	2
2			X	X			Powder adhesion to metal surfaces during compaction	C. Sinka	U. Leicester	UK	2023	1
3	X		X			X	Model-based Design of Granular Products	R. Smith	U. Sheffield	UK	2023	1
4	X				X		Simplified Industrial Formulations	J. Vermant	ETH	Switzerland	2023	1
5	X	X		X		X	A Systems Engineering Approach to Dry-Milling with Grinding Aid Additives	A. Kwade	TU Braunschweig	Germany	2023	1
6				X		X	Precision powder feeding	P. Nott	IISc Bangalore	India	2023	1
7			X		X		Crystal Shape Prediction	M. Doherty	UCSB	US	2024	2
8			X				Spray Drying Kinetics and Morphology	Maciej Jakulski	U. Lodz	Poland	2024	1
9				X			Selection of Flow Aids	Raj Dave	NJIT	US	2024	1
10			X				Air-Induced Defect Formation During Compaction	Ken Kamrin	M.I.T.	US	2024	1
11	X		X		X		Renewal 1/ New Project 1				2025	2
12	X				X		Renewal 2/ New Project 2				2025	2
13							Renewal 3/ New Project 3				2025	2
14							New Project 1				2025	1
15							New Project 2				2025	1
16							New Project 3				2025	1
17							Collaboration - Nott & Daniels	K Daniels	NCSU	US	2023	2
18							Collaboration - Smith & Markl	D. Markl	Strathclyde	UK	2023	2
RR				X		X	DEM Round-robin	J. Seville; K. Windows-Yule	U. Birmingham	UK	2023	2

19 Project/Poster slots required

- An extra 45 min of poster viewing
- An extra 30 min of presentation time
- Extra Discussion Time...
- Vermont AGM we had 17 Project/Poster slots!

Assumptions:

- Both collaborators attend
- Round Robin is presenting

Projects	Academic	Ifpri rep 1	Ifpri Rep 2
Aeration & Deaeration of Geldert Class C Powders	Olivier Pouliquen	Simon G	
Drying of wet powders with shear to prevent agglomerate formation	Heather Emady	Jarrod	
	Alban Sauret		
Spray drying of pastes to improve sustainability	Volker Gaukel	Vincent	Chris R
Numerical modelling of spray droplet formation	Olivier Desjardins	Poom	
	Meng Wai Woo		
Computational modelling of suspensions	Roseanna Zia	John H	Scott B

PROJECT PHASING- 2022/2023 – 2 ENDING, 5 RENEWALS

	No.	C	SR	F	D	W	SE	Project	Research Associate	Institution	Country	End	
Projects	1	X		X		X							
	2	X			X								
	3	X				X							
	4	X		X		X							
	5	X				X							
	6	X	X	X				X	Model-Based Control of Crystallization	Z. Nagy	Purdue U.	US	2023
	7				X			X	DEM Roundrobin	J. Seville; K. Windows-Yule	U. Birmingham	UK	2023
	8			X	X				Powder adhesion to metal surfaces during compaction	C. Sinka	U. Leicester	UK	2023
	9	X		X				X	Model-based Design of Granular Products	R. Smith	U. Sheffield	UK	2023
	10	X				X			Simplified Industrial Formulations	J. Vermant	ETH	Switzerland	2023
	11	X	X		X			X	A Systems Engineering Approach to Dry-Milling with Grinding Aid Additives	A. Kwade	TU Braunschweig	Germany	2023
	12				X			X	Precision powder feeding	P. Nott	IISc Bangalore	India	2023
	13			X		X			Crystal Shape Prediction	M. Doherty	UCSB	US	2024
	14			X					Spray Drying Kinetics and Morphology	Maciej Jakulski	U. Lodz	Poland	2024
	15				X				Selection of Flow Aids	Raj Dave	NJIT	US	2024
	16			X					Air-Induced Defect Formation During Compaction	Ken Kamrin	M.I.T.	US	2024
Collab						X		Simplified Industrial Formulations Collaboration	L. Hsiao	NCSU	US	2022	
									J. Vermant	ETH	Switzerland		

IDEAS FOR NEW PROJECTS — TUESDAY P.M.

Potentially 6 projects ending in 2020 (3 renewals)!

I Think 17 projects has given sufficient scheduling challenge – would not want to increase by much more!

Need as a minimum 7 projects to choose from – (including renewals)

ie We need to select as a minimum 4 project briefs to put out for proposals

Target of 2 project briefs from 6 program areas (Dot voting for 4 from 12)

2021-2022 IFPRI Membership

Company	Full Member	Associate Member	Years as Member
AbbVie	x		12
Albemarle	x		4
Alkermes	x		4
AVEKA	x		14
Bepex		x	1
Chemours	x		6
Corbion	x		18
Corning	x		10
Corteva Agroscience	x		4
Danone	x		1
DFE Pharma	x		4
Dow	x		20
DSM	x		33
Ecolab	x		3
Elcon Precision		x	4
FMC	x		2
Freeman Technology		x	8
Granutools		x	6
Haldor Topsoe A/S	x		4
Hoffman La Roche	x		9
Horiba		x	8
Imerys	x		6
J. M. Canty		x	1
Johnson Matthey	x		10
Keurig Dr Pepper	x		6
Lincoln Electric	x		4
Merck	x		26
Nestle	x		14
Novartis	x		1
Novozymes	x		17
Paul O. Abbe		x	8
Pfizer	x		21
Proctor & Gamble	x		35
Process Systems Engineering		x	13
Sandia National Laboratories	x		6
Schenck Process		x	2
Sherwin Williams	x		1
Silanano Technology		x	1
Syngenta	x		21
Unilever	x		44
Vertex Pharmaceutical	x		5