

WOAH Collaborative Centre Reports Activities 2023

Activities in 2023

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Centre Information

Title of WOA Collaborating Centre	Animal Feed Safety and Analysis
Address of WOA Collaborating Centre	Food and Agricultural Materials Inspection Center (FAMIC) 2-1, Shintoshin, Chuo-ku, Saitama-shi, Saitama 330-9731, JAPAN
Tel.:	+81-(0)50-3797-1830
E-mail address:	feed_safety148@famic.go.jp
Website:	http://www.famic.go.jp/ffis/woah/indexe.html
Name Director of Institute (Responsible Official):	KIUCHI Takeshi
Name (including Title and Position) of Head of the Collaborating Centre (WOAH Contact Point):	KUNUGI Yutaka, Vice-president
Name of the writer:	ISHIBASHI Takayuki

TOR1 AND 2: SERVICES PROVIDED

1. Activities as a centre of research, expertise, standardisation and dissemination of techniques within the remit of the mandate given by WOA

Category	Title of activity	Scope
Training, capacity building (true)	FAMIC Virtual Training on Pesticides in Feed	A virtual training on pesticides in feed was conducted to the WOA members in Asia and the Pacific. It contained a lecture and a technical training on pesticides in feed as below. (online training) Lecture: How to establish Maximum Residue Limit of pesticides and current state of the surveillance of pesticides in feed. Technical Training: Training of analysis of glyphosate and glufosinate in feed by LC-MS/MS [Feb. 1st]
Feed safety (true)	Inspection and analysis of pesticide residues in feed	Inspection for pesticides with regulation values in Japan and surveillance of other pesticides in feed ingredients and formula feeds.
Training, capacity building (true)	2023 technical training on feed safety inspection	We provided the opportunity of training for feed inspectors in local authorities. Two seminars were conducted, containing lectures and technical training as below. Lecture: About Act on Safety Assurance and Quality Improvement of Feeds. Lecture: How to take a sample of feed. Technical Training: How to conduct feed analysis. [1st: Jul. 12th] [2nd: Nov. 6th-8th]

Training, capacity building (true)	Seminar of Good Manufacturing Practice(GMP) for feed	We conducted annual seminar for feed manufacturer as below. Knowledge about Good Manufacturing Practice (GMP) on feed manufacturing was provided. We uploaded some lecture videos for participants. (online training) [Jan. 23rd – Mar. 12th]
Training, capacity building (true)	Proficiency test on feed analysis for feed manufacture, analysis laboratory and prefecture laboratory	We conducted proficiency test for feed manufacturers, laboratories and prefectural laboratory in Japan, as below. In 2023, three feed samples were distributed, and 204 participants reported their results of analysis. We conducted statistical analysis of the results and provided comments to the participants to ensure accurate analysis.
Feed safety (true)	Inspection and analysis of mycotoxins in feed	Inspection for mycotoxins with regulation values in Japan and surveillance of other mycotoxins in feed ingredients and formula feeds
Feed safety (true)	Inspection of heavy metals in feed	Inspection for heavy metals with regulation values in Japan: cadmium, mercury, lead, and arsenic
Feed safety (true)	Inspection of microorganisms in feed	Inspection for Salmonella contamination in feed
Feed safety (true)	Inspection of animal-derived protein in feed	Inspection to ensure that prohibited animal-derived proteins are not mixed into feed to prevent occurrence of BSE
Feed safety (true)	Inspection of insoluble impurities in animal oil and fat	Inspection of animal oil and fat for Insoluble impurities to prevent the occurrence of BSE
Feed safety (true)	Inspection and official test assay of antimicrobial in feed and feed additives	Inspection of antimicrobial substance contents in formula feeds and feed additives in Japan, including official testing of specified feed additives
Feed safety (true)	Inspection of antioxidant	Inspection for antioxidants in formula feeds
Feed safety (true)	Development of analytical methods for animal feed	Development of official methods for feed analysis in Japan (9 research projects). 1. Development of Simultaneous Determination Method of Diquat and Paraquat in Feed by LC-MS/MS (Inter-laboratory study). 2. Development of Determination Method of Thiophanate in Feed by LC-MS/MS (Inter-laboratory study). 3. Validation study of Simultaneous Determination Method of Aflatoxins in Whole-crop Rice Silage and Ear Corn Silage by LC. 4. Study of Determination Method of Fumonisin in Silage by LC-MS/MS (Validation in a Single Laboratory). 5. Study of Simultaneous Determination Method of Cystine, Lysine, Methionine and Threonine in Formula Feed for Pigs by Automatic Amino Acid Analyzer

		(Validation in a Single Laboratory). 6. Study of Plastic Film Bags for Determination Method of Moisture Content in Wet Type Pet Foods. 7. Study of Detection Method of Fecal Coliforms for Pet Foods (Validation in a Single Laboratory). 8. Studies of Alternative Methods without Helium (Simultaneous Determination Method of Pesticides in Feed by LC-MS/MS / Determination Method without Helium for Inorganic Arsenic in Pet Food). 9. Monitoring Results of Antimicrobial resistance of Enterococci Isolated from Animal Feed.
Feed safety (true)	Publication of "Research Report of Animal Feed "	"Research Report of Animal Feed" are published on our website.(Latest volume:48(2023)) It contains development and improvement studies of analytical methods and inspection and surveillance results
Feed safety (true)	Information sharing of update on Laboratory network on Animal Feed Safety in Asia and the Pacific	We shared latest information of the laboratory network, which is about animal feed safety in Asia and Pacific, with WOAH members in Asia and the Pacific, in the presentation below. Presentation: Update on Laboratory network on Animal Feed Safety in Asia and the Pacific and other activities, in FAMIC Virtual Training on Pesticides in Feed. [Feb. 1st]

TOR3: HARMONISATION OF STANDARDS

2. Proposal or development of any procedure that will facilitate harmonisation of international regulations applicable to the main focus area for which you were designated

Proposal title	Scope/Content	Applicable area
Development of Simultaneous Determination Method of Bensulfuron-Methyl and Other 6 Pesticides	Development of simultaneous determination method of bensulfuron-methyl and other 6 pesticide ingredients in rice straw and whole-crop rice silage by LC-MS/MS was conducted and published on the FAMIC website.	Animal production
Development of Simultaneous Determination Method of Benfuracarb and Carbosulfan (Pesticide)	Development of simultaneous determination method of benfuracarb and carbosulfan in rice straw and whole-crop rice silage by LC-MS/MS was conducted and published on the FAMIC website.	Animal production
Development of Simultaneous Determination Method of Diquat and Paraquat (Pesticide)	Development of simultaneous determination method of diquat and paraquat in feed by LC-MS/MS was conducted and published on the FAMIC website.	Animal production
(Formula feed with reduced environmental impact) Study of Determination Method of Cystine, Lysine, Methionine and Threonine (Amino Acid)	Study of determination method of cystine, lysine, methionine and threonine in formula feed for pigs by automatic amino acid analyzer was conducted and published on the FAMIC website.	Animal production
Study of Determination Method of Aflatoxin, Sterigmatocystin and Zearalenone (mycotoxins) in Corn Dried Distillers Grains with Solubles	Study of determination method of aflatoxin, sterigmatocystin and zearalenone in corn dried distillers grains with solubles by LC-MS/MS was conducted and published on the FAMIC website.	Animal production
Validation Study for Addition of Wet Decomposition to Determination Method of Cadmium in Grass Hay and Rice Straw by Atomic Absorption Spectrometer	Validation study for addition of wet decomposition to determination method of cadmium in grass hay and rice straw by atomic absorption spectrometer was conducted and published on the FAMIC website.	Animal production

3. In exercising your activities, have you identified any regulatory research needs* relevant for WOA?H?

4. Did your Collaborating Centre maintain a network with other WOA?H Collaborating Centres (CC), Reference Laboratories (RL), or organisations designated for the same specialty, to coordinate scientific and technical studies?

Yes

Name of WOA?H CC/RL/other organisation(s)	Location	Region of networking Centre	Purpose
National Research Centre for Animal Nutrition (NRCAN)	BHUTAN	Asia and Pasific	(Laboratory Network on Animal Feed Safety in Asia and the Pacific):Exchange of information on animal feed safety in Asia and the Pacific and provide technical support for feed analysis
Veterinary Laboratory Services	Brunei Darussalam	Asia and Pasific	(Laboratory Network on Animal Feed Safety in Asia and the Pacific):Exchange of information on animal feed safety in Asia and Pacific and provide technical support for feed analysis
Iran Veterinary Organization (IVO)	Iran	Asia and Pasific	(Laboratory Network on Animal Feed Safety in Asia and the Pacific):Exchange of information on animal feed safety in Asia and Pacific and provide technical support for feed analysis
Ministry of Agriculture, Livestock and Irrigation (MoALI)	Myanmar	Asia and Pasific	(Laboratory Network on Animal Feed Safety in Asia and the Pacific):Exchange of information on animal feed safety in Asia and Pacific and provide technical support for feed analysis
National Animal Feed Livestock Quality Management Laboratory (NAFLQML)	Nepal	Asia and Pasific	(Laboratory Network on Animal Feed Safety in Asia and the Pacific):Exchange of information on animal feed safety in Asia and Pacific and provide technical support for feed analysis
Laboratory of New Caledonia	New Caledonia	Asia and Pasific	(Laboratory Network on Animal Feed Safety in Asia and the Pacific):Exchange of information on animal feed safety in Asia and Pacific and provide technical support for feed analysis
Singapore Food Agency (SFA)	Singapore	Asia and Pasific	(Laboratory Network on Animal Feed Safety in Asia and the Pacific):Exchange of information on animal feed safety in Asia and Pacific and

			provide technical support for feed analysis
Veterinary Research Institute	Sri Lanka	Asia and Pasific	(Laboratory Network on Animal Feed Safety in Asia and the Pacific):Exchange of information on animal feed safety in Asia and Pacific and provide technical support for feed analysis
Bureau of Quality Control of Livestock Product (BQCLP)	Thailand	Asia and Pasific	(Laboratory Network on Animal Feed Safety in Asia and the Pacific):Exchange of information on animal feed safety in Asia and Pacific and provide technical support for feed analysis
Division of Animal Quarantine and Inspection (AQID)	Vietnam	Asia and Pasific	(Laboratory Network on Animal Feed Safety in Asia and the Pacific):Exchange of information on animal feed safety in Asia and Pacific and provide technical support for feed analysis

TOR4 AND 5: NETWORKING AND COLLABORATION

5. Did your Collaborating Centre maintain a network with other WOAHA Collaborating Centres, Reference laboratories, or organisations in other disciplines, to coordinate scientific and technical studies?

Yes

Name of WOAHA CC/RL/other organisation(s)	Location	Region of networking Centre	Purpose
National Veterinary Assay Laboratory (WOAHA Collaborating Centre for Diagnosis and Control of Animal Diseases and Related Veterinary Product Assessment in Asia)	Tokyo, JAPAN	Asia and Pasific	JVARM (the Japanese Veterinary Antimicrobial Resistance Monitoring System) has been in place since 1999 in response to international concern about the impact of antimicrobial resistance on public health. In this system, FAMIC has a vital role in analyzing monitoring results for the presence of antimicrobial resistant bacteria in collaboration with the National Veterinary Assay Laboratory in Japan. FAMIC exchanges the feed safety informations in feed safety meeting that is held every year
National Institute of Animal Health, National Agriculture and Food Research Organization (WOAHA Collaborating Centre for Diagnosis and Control of Animal Diseases and	Ibaraki, Japan	Asia and Pasific	FAMIC exchanges the feed safety informations in meeting for feed safety that is held every year.

Related Veterinary Product Assessment in Asia)			
Institute of Food Research, National Agriculture and Food Research Organization	Ibaraki, Japan	Asia and Pasific	FAMIC exchanges the feed safety informations by stationing our staff in Institute of Food Research, National Agriculture and Food Research Organization.

TOR6: EXPERT CONSULTANTS

6. Did your Collaborating Centre place expert consultants at the disposal of WOA?H?

Yes

NAME OF EXPERT	KIND OF CONSULTANCY	SUBJECT
Mr. YAMATA Toshiaki	Risk management for feed safety	Systems for Risk Management of Substances Related to Feed Safety
Dr. AOYAMA Koji	Feed analysis	Analytical methods for mycotoxins, pesticides, heavy metals, etc.
Mr. ISHIBASHI Takayuki	Feed analysis	Analysis for feed safety using bio-chemical methods such as PCR, ELISA and bioassay.

TOR7: SCIENTIFIC AND TECHNICAL TRAINING

7. Did your Collaborating Centre provide advice/services to requests from Members in your main focus area?

Yes

Enter comment

We provided technical workshop on pesticide in feed that is the most requested in questionnaire about technical training to laboratory network on Animal Feed Safety in Asia and the Pacific.

On request, certificates of virtual training on pesticides in feed were issued to participants. The video was posted on WOA's website.

As regular reports described in the ToR of the laboratory network, we asked network members for reports on the recent state of animal feed safety and conducted a questionnaire for considering the content of future Technical Workshop (TW).

8. Did your Collaborating Centre provide scientific and technical training, within the remit of the mandate given by WOA, to personnel from WOA Members?

Yes

a) Technical visit : 20

b) Seminars : 104

c) Hands-on training courses: 4

d) Internships (>1 month) : 0

TYPE OF TECHNICAL TRAINING PROVIDED (A, B, C OR D)	CONTENT	COUNTRY OF ORIGIN OF THE EXPERT(S) PROVIDED WITH TRAINING	NO. PARTICIPANTS FROM THE CORRESPONDING COUNTRY
B	FAMIC Virtual Training on Pesticides in Feed. [on-line workshop]	Australia, Bangladesh, Bhutan, Brunei Darussalam, China, Iran, Japan, Malaysia, Mongolia, Myanmar, New Caledonia, New Zealand, Singapore, Sri Lanka, Taiwan, Thailand, Timor-Leste, United States	66
B	2023 1st technical training on feed safety inspection [on-line]	JAPAN	38

A	"Strengthening Safety Management System of Agricultural Products" JFY 2023	Philippine, Cambodia, Laos, Bangladesh, Tonga, Ukraine, Georgia	8
C	2023 2nd technical training on feed safety inspection	JAPAN	4
A	NAQS - FAMIC meeting on feed sector	Korea	4
A	NAQS - FAMIC meeting on feed sector (GMO)	Korea	8

TOR8: SCIENTIFIC MEETINGS

9. Did your Collaborating Centre organise or participate in the organisation of scientific meetings related to your main focus area on behalf of WOA?H

Yes

NATIONAL/INTERNATIONAL	TITLE OF EVENT	CO-ORGANISER	DATE (MM/YY)	LOCATION	NO. PARTICIPANTS
International	FAMIC Virtual Training on Pesticides in Feed	WOAH-RRAP	2023-02-01	online	66
National	46th Special Committee on Pesticide Residue Analysis	Pesticide Science Society of Japan	2023-11-13	Nagano, Japan	100
National	ISO/TC34/SC9 National Countermeasures Committee	Japan Food Research Laboratories	2023-12-06	Tokyo, Japan	8

TOR9: DATA AND INFORMATION DISSEMINATION

10. Publication and dissemination of any information within the remit of the mandate given by WOA?H that may be useful to Members of WOA?H

a) Articles published in peer-reviewed journals:

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KISHIMOTO M., FURUKAWA T., HAYASHI N., KARASAWA T., MORIMITSU Y., YABE K. and KUSHIRO M. (2023) Whole agar dish culture extraction method to assess the survival of aflatoxigenic fungi in soil samples, JSM Mycotoxins, 73(1), 1-5.

NOMURA M., SHIDARA K. and YASUDA I. (2023) Inter-laboratory study on simultaneous quantification of ten trichothecenes in feed, Mycotoxin Research, 39(2), 95-108.

b) International conferences:

0

c) National conferences:

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OKUTOMI Y., SAKAI T. and YAMAGAMI Y. Development of Simultaneous Determination Method of Thiophanate, Thiophanate-methyl, Benomyl and Carbendazim in Feed by LC-MS/MS. 46th Special Committee on Pesticide Residue Analysis. 2023.11/13-14.

FUNAKI N., KOBORI T. and SEKIGUCHI Y. Inter-laboratory study of Simultaneous Determination Method of seven sulfonyleurea herbicides in Rice Straw, Whole-crop Rice Silage and Paddy Rice for Feed by LC-MS/MS. 46th Special Committee on Pesticide Residue Analysis. 2023.11/13-14.

d) Other (Provide website address or link to appropriate information):

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Research Report of Animal Feed No. 48 has been posted on FAMIC website.

http://www.famic.go.jp/ffis/feed/rraf/rraf_48.html

FAMIC's WOA?H-CC website

<http://www.famic.go.jp/ffis/woah/indexe.html>

FAMIC Virtual Training on Pesticides in Feed

http://www.famic.go.jp/ffis/woah/sub1/sub1e_meeting.html

Scheme and data from JVARM (Japanese Veterinary Antimicrobial Resistance Monitoring System) has been published in English on HP of NVAL.

https://www.maff.go.jp/nval/yakuzai/yakuzai_p3.html

11. What have you done in the past year to advance your area of focus, e.g. updated technology?

FAMIC have done to develop and improve analytical methods of feed. Updated methods are as follows.

Development of Determination Method of Azimsulfuron, Bensulfuron-methyl, Cyclosulfamuron, Ethoxysulfuron, Flucetosulfuron, Halosulfuron-methyl and Imazosulfuron in Rice Straw, Whole-Crop Rice Silage and Paddy Rice for Feed by LC-MS/MS

FAMIC asked each members of the Lab Network to report on the status of feed inspection in each country.

12. Additional comments regarding your report:

FAMIC's main operations are analysis and inspection of animal feed. We also develop and improve analytical methods of animal feed in consultation with the Ministry of Agriculture, Forestry and Fisheries(MAFF). The developed and improved analytical methods are reviewed by experts in various fields in Japan. The analytical methods which have passed the expert review are reported to the MAFF. And then, the analytical methods are published as Japanese official methods and their English versions are posted on the FAMIC website.