

rolling proof 2018

Module cereals and pulses

Cereal based composite feed P1803-RT



Summary

The entire report is made available to participants only.

Designed, realised and evaluated by

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rolling proof is developed to support laboratories in meeting the requirements of accreditation bodies. According to advisory document EA-4/18:2010 analytical laboratories are requested to establish a PT participation plan for accredited analytical methods. **rolling proof** is an on-going scheme of ring tests.

The module “cereals and pulses” of **rolling proof** is focused on the commodity group “high starch and/or protein content and low water and fat content” (SANTE 11945/2015, Annex A), which consists of the commodity categories

- dry legume vegetables/pulses (e.g. dried beans and lentils), and
- cereal grain and products thereof (e.g. grains, rice, breakfast cereals, bread).

With respect to the module “cereals and pulses” the ring tests of **rolling proof** are performed on a one test per year basis. The matrix of the test material is chosen of the commodity categories above.

In 2018, a cereal based composite feed is selected as representative commodity of the commodity category “cereal grain and products thereof”.

The module “cereals and pulses” covers all in all a minimum of 150 of the most relevant pesticides. The scope of pesticides covered by **rolling proof** is defined in a provided list. All pesticides are tested within a period of five years. Thus, the laboratories that take part in **rolling proof** are able to test their pesticide multi-methods for a large number of pesticides and a variety of matrices within one cycle of accreditation. However, it is up to the participants to join all tests of the 5-year programme of **rolling proof**, or to book the tests individually.

The performance of laboratories in the test is evaluated according to:

- the correct identification of the spiked pesticides.
- the comparability of the results. The evaluation of the comparability is based on the z-score model. The z-score should be at least $\leq |2|$.
- the trueness of the results. The trueness is expressed as the coverage of the spiked level in %. The coverage should be at least between 70 and 120 % of the spiked level.

Eight laboratories across three countries (Austria, Germany, and Spain) took part in the test.

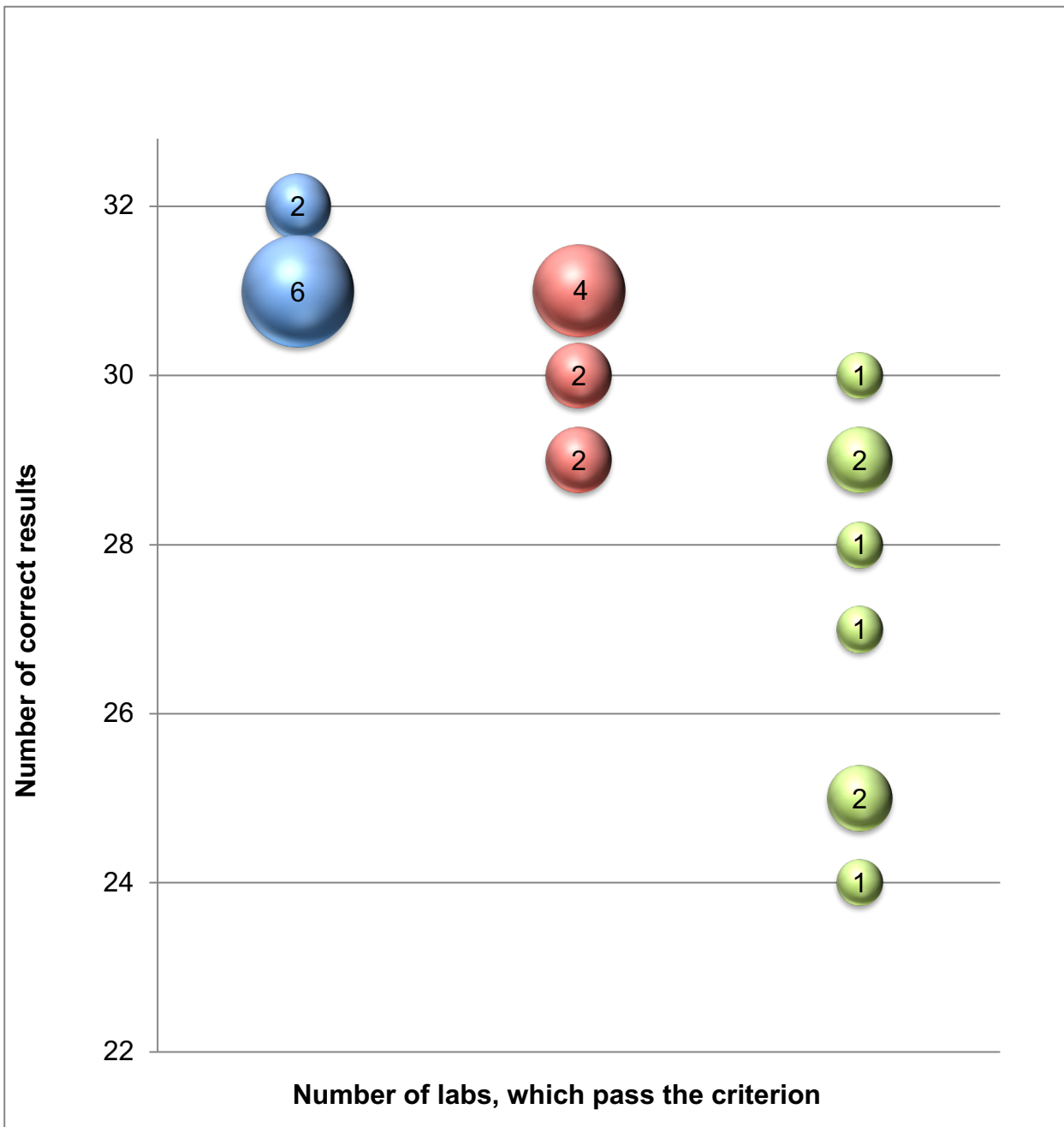
The test material is prepared of organic cereal based feed. The raw material is milled to a fine powder, homogenised, tested for incurred residues and spiked with 32 pesticides thereafter.

The analytical challenge is to identify and quantify 32 pesticides in the test material. The identity of the pesticides, the spiked levels and a summary of the overall performance of the laboratories are provided in the table below.

Summary of results

Pesticide	Spiked level [mg/kg]	Assigned value [mg/kg]	Total number of results	Comparability criterion: no. of participants, which pass the criterion (z-score \leq 2)	Trueness criterion: no. of participants which pass the criterion (70-120 % recovery of the spiked level)
2,4'-DDE	0.025	0.0261	8	8	7
4,4'-DDE	0.032	0.0309	8	8	8
Acrinathrin	0.033	0.0314	8	8	8
Bitertanol	0.022	0.0250	8	8	6
Cadusafos	0.038	0.0403	8	8	6
Chlorothalonil	0.086	0.0461	8	7	Not evaluated
Clopyralid	0.14	-	4	-	3
Diazinon	0.056	0.0573	8	8	7
Dichlorvos	0.077	0.0694	8	8	7
Endrin	0.042	0.0454	8	8	6
Esfenvalerate	0.11	0.108	8	8	7
Fenpropidin	0.12	0.124	7	7	7
Fenpropimorph	0.091	0.0919	7	7	7
Haloxypop (free acid)	0.026	0.0260	8	6	6
Imazalil	0.076	0.0727	8	8	8
Imidacloprid	0.066	0.0666	8	8	7
Mecarbam	0.034	0.0329	8	8	8
Metalaxyl	0.058	0.0628	8	7	6
Metconazole	0.081	0.0840	8	8	7
Myclobutanil	0.049	0.0515	8	8	7
Parathion	0.053	0.0531	8	8	8
Picoxystrobin	0.071	0.0779	8	8	6
Piperonyl butoxide	0.037	0.0365	8	8	8
Pirimiphos-methyl	0.10	0.101	8	8	8
Procymidone	0.044	0.0438	8	8	8
Spiroxamine	0.066	0.0701	8	8	8
Tebuconazole	0.027	0.0281	8	8	8
Tetraconazole	0.026	0.0254	8	8	7
Triadimefon	0.047	0.0476	8	8	8
Trichlorfon	0.039	0.0422	8	8	7
Trifloxystrobin	0.084	0.0901	8	8	7
Vinclozolin	0.068	0.0693	8	8	6

Summary of the performance of the laboratories:



Total No. of labs: 8